Chief Knowledge Officers and Other Knowledge Management Executives Effect on Strategic Intent, Intellectual Capital Generation, and Firm Performance? An Empirical Research Study of Chief Knowledge Officers and Knowledge Executives in the USA

Harold Dennis Harlow
Professor of Management
Wingate University, North Carolina, USA
h.harlow@wingate.edu

Abstract: The purpose of this empirical research study is test the relationship between strategic intent (mission, vision and goals) intellectual capital (i.e. human capital, structural capital, relational capital), and business performance targeting the sample of CKOs of 30 technology firms in the United States. A research instrument was developed from prior research and used to survey 30 CKO, CIO and VP of Knowledge Management executives from a random sample by CKO, CIO and VP of Knowledge Management title. The research approach was a correlation/multiple regression. Strong statistical support was found for the hypothesized relationships. Research limitations/implications –The sampling was a convenience sample and may not represent all CKOs in all industries. Practical implications – Intellectual capital measurement is of primary interest for senior executives of a cross section of firms in the USA and this sample is a basis for a larger study. Originality/value – The research reported is the first to investigate the issue of intellectual capital from a cross section of CKOs and other knowledge titled executives in the USA and the first to study directly the intellectual capital issue from the CKO viewpoint which is from the strategic intent perspective.

Keywords: Business performance, Intellectual capital, Human capital, Strategic Intent, Chief Knowledge Officers, strategic knowledge management

1. Introduction

The research target for this particular study is unique since the *targeted sampled population* is *Chief Knowledge Officers* and other knowledge titled executives whose expertise in this area is unique and insightful and is strategically focused. The expected contributions of this research are as follows: (1) This study while researching performance measures includes strategic intent *from the standpoint of the CKO and CLO and top level knowledge chartered executives*. The intervening variables presented in prior studies are also included to increase the usefulness of this study to practitioners; (2) There is no apparent study which uses this CKO/CLO top management expert targeted approach to relate financial measures and strategic intent and thus this study offers a novel perspective; (3) This research is an extension of the study conducted by Harlow (2014) whose results are contradictory to the commonly held assumptions of solid gains in financial outcomes as patents are granted and used. This is confirmed in part by prior studies (Sharabati et al 2010) of negative impact of intellectual property; (4) This study extends research by Sharabati, Naji and Bontis (2010) into the realm of strategic focus on intellectual capital and business performance.

Business scholars agree that intellectual capital is a source of both competitive advantage and increased firm performance (Drucker 1999; Barney 1991). However, most organizations recognize that there are few ways to directly measure, or value the source of that value (Harlow, 2014). One of the first to report on these intangible yet important assets was Sveiby (1989). He was the first to recognize the need to measure human capital. He pioneered accounting practices for intangible assets, and in 1989 published the results of the Konrad working group in the book *The Invisible Balance Sheet*, proposing a theory for measuring knowledge capital by dividing it into three categories: *customer capital, individual capital, and structural capital.*

Intellectual capital crosses most disciplines of business from management to marketing and operations. The "multidisciplinary nature of intellectual capital lends itself to both a richness of perspective as well as a difficulty for valuation (Bontis et al, 1999) and 'relevance' (Booker et al, 2008)". Bang (2007) has developed a valuation measure of intellectual capital within the accounting statements of the firm. Globalization with its

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intense competition has developed a strong recognition of that intellectual capital is a critical force driving economic growth and company dominance (Huang and Liu, 2005).

2. Literature review

2.1 Chief Knowledge Officers

A chief knowledge officer (CKO) is an organizational top leader who is responsible for ensuring that the organization maximizes its "knowledge" practices and processes within the organization. The CKO usually reports to the CEO of the company. The CKO is responsible for strategic management of intellectual capital and developing the suite of Knowledge Management methods within an organization. CKO is not just a different way of saying "chief information officer" - the CKO role is much broader in that it encompasses information technology as well as other processes and methods of providing knowledge in an organization. “CKOs can help an organization maximize the returns on investment in knowledge (people, processes and intellectual capital), exploit their intangible assets (know-how, patents, customer relationships), repeat successes, share best practices, improve innovation, and avoid knowledge loss after organizational restructuring (Boyd, 1997)”.

Parker (2011) suggests a new organizational structure that is developed for firms that are information rich but knowledge poor. The replacement of the CIO by a CKO is suggested as a way to remove obstacles that often pit the CIO and CFO against the development of new knowledge capture and retention systems. A recent article in the Economist suggest that there are too many executives in the “C” suite and that too many chiefs dilute strategies and performance from the mission and vision of the chief executive officer (Economist, 2010).

In many large and medium-sized firms, a new “C” level executive is emerging that encompasses the learning and strategic knowledge management of the firm (Earle & Scott, 1999). From a study of 20 CKOs by Earle and Scott (1999), there were three points of agreement as to what a CKO affects and what this “C” level executive can affect as follows: (1) Knowledge is necessary for sustainable competitive advantage and in this era of highly turbulent changing environments the dissemination, creation of new knowledge, and the ability to embed it in new products is an essential part of sustaining competitive advantage; (2) companies are not good at managing knowledge in that they do not know what they have as knowledge, they may deter or inhibit knowledge creation and sharing, and they underinvest in knowledge creation; and (3) companies have embarked on designing techniques for knowledge creation, protection, and reuse as well as designing and creating environments to discover and release knowledge and finally to articulate the purpose and nature of managing knowledge.

2.2 Intellectual Capital

Intellectual capital *has been used as a proxy for knowledge and as a proxy for tacit knowledge as well.* All of the definitions of intellectual capital imply that knowledge is both known to management and can be converted into value (Edvinsson and Sullivan, 1996) and is about knowledge and knowing capability of a social collectivity (Nahapiet and Ghoshal 1998), packaged useful knowledge (Stewart, 1997), “ and Intellectual capital= competence × commitment” (Ulrich, 1998). From this notion that management knowledge can be converted into value the idea of an intellectual property strategy can be developed.

It is not sufficient to have *knowledge assets, patents, or other marketable intellectual property.* In a knowledge creating company, managers have the responsibility to unleash that knowledge into value-creating actions aimed at customers and to generate and exploit that knowledge-either public or proprietary-more effectively than their competitors. In addition, managers are also responsible to generate and exploit current firm knowledge better than their competitors and to use public knowledge better than their rivals (von Grogh et al, 2000). Von Krogh et al (1994) suggest that there are essentially only two strategies used and that those two are 1) advancement and 2) survival.

The late Peter Drucker (1999) said that “knowledge has become the key economic resource and the dominant- and perhaps even the only-source of competitive advantage.” The firm specific concept of intellectual capital was introduced in the early 1990s which connected the idea of a firm’s knowledge to the concept of firm intellectual capital to address valuation of intangibles and to further explain the idea of value creation and its relationship to firm performance (Roos et al,1997) Since this time, researchers have attempted to understand how intellectual capital is generated at firms and what effect this intellectual capital has on firm performance.

Understanding how intellectual capital can be converted into metrics/methodology and which methods produce the most valuable tacit knowledge has been presented in prior work (Harlow 2008)

The *firm specific concept of intellectual capital* was introduced in the early 1990s which connected the idea of a firm's knowledge to the concept of firm intellectual capital to address valuation of intangibles and to further explain the idea of value creation and its relationship to firm performance (Edvinsson & Malone 1997; Roos and Roos 1997; Stewart 1997; Sveiby 1997). According to a survey conducted by the International Center for Business Information, 97% of executives in eleven countries considered knowledge an essential part of value creation (ICBI 1997)**.** According to Krogh, Ichigo and Nonaka (2000), "the first responsibility of managers is to unleash the potential of an organization's knowledge into value creating activities". Knowledge creating actions form a basis for the strategic intent of CLO/CKO executives' plans and are represented in this paper as both strategic intent actions and results of actions (see Research Model Figure 1 below).

As an intellectual property strategy, a strategic knowledge framework with the role of knowledge in survival can develop by creating trade secrets or using public knowledge in ways that competitors cannot easily duplicate. Processes associated with this type of *strategic intent* are knowledge sharing and transfer as well as continuous improvement.

A firm's overall economic, strategic, and innovation performance is dependent on the degree to which the firm can use all of the knowledge created by the firm and turn this knowledge into value-creating activities (Krogh, 1998*). Strategic knowledge management* is a process, the desired goal of which is to harness the value of information by integrating it with processes that govern the manipulation of intellectual assets (Loshin, 2001). The use of KM enables firms to have more effective decision-making processes and enables firms both to create new knowledge and to apply this knowledge to generate more innovation in products, strategy, and processes (Probir, 2002). Greater levels of innovation and improved processes in turn lead to enhanced market and financial performance.

2.3 Strategic Knowledge Management

A strategic knowledge management approach was developed by Ehms and Lange (2002). They have proposed a Knowledge Management Maturity Model (KMMM) based on Capability Management Model developed from software engineering. The KMMM model consists of five (5) levels of maturity which includes those activities which an organization is currently doing. *Level 1* of the KMM consists of knowledge processes that take place in every organization such as exchange, generation, usage and loss. No control of these processes is evidenced. *Level 2* consists of organizations which have recognized the importance of knowledge management and have developed processes which are at a low level of organizational acceptance but pioneer for later more organizational wide deployments "*At level 3* ("defined") there are stable and "practiced" activities which effectively support the KM of individual parts of the organization. These activities are integrated in the day-to-day work processes and the corresponding technical systems are maintained. Individual KM roles have been defined and filled". *Level 4* sees the development of a common strategy and standard approaches for knowledge management. Organizational-wide approaches are implemented and measured throughout the organization. *At level 5*, the organization has evolved toward an adaptive mode and can readily use and measure their knowledge management systems for strategic purposes and control. This model in its last two stages develops strategic focus and intent.

2.4 Strategic Intent

Strategic intent (as differentiated from strategic fit) is important as top managers seek answer the question of what exactly is this intangible asset. It is not sufficient to have knowledge assets, patents, or other marketable intellectual property. In a knowledge-creating company, managers have the responsibility to unleash that knowledge into value-creating actions aimed at customers and to generate and exploit that knowledge-either public or proprietary-more effectively than their competitors. In addition, managers are also responsible to generate and exploit current firm knowledge better than their competitors and to use public knowledge better than their rivals (Von Grogh, Ichigo & Nonaka, 2000). All of these actions rely heavily on intellectual capital to generate the advantage.

The link of strategic intent to strategic management is that intent develops the capability to deal with the lack of future visibility and uncertainty by defining processes and a way of meeting future goals (Montanari et al, 1990). Strategic intent was first described as the long term goal and aims of an organization (Prahalad & Doz,

1991) "Strategic leaders take a long term (10-20 years) view of their purpose and goals set out the way getting there which they referred to as 'strategic intent' (Hamel & Prahalad, 1989)". Strategic intent is a useful concept for purpose of continuity in an *organization adapting to internal and external pressure*. It represents a "proactive mode of strategizing, a symbol of being futuristic (Mantere and Sillince, 2007)".

Strategic intent is often confused with strategic fit (Hamel and Prahalad (1994) and the comparisons are that strategic fit adapts current resources to current markets and opportunities while strategic intent adapts by creating knowledge and knowledge creating processes to meet changing environments (Prahalad & Hamel, 1994). Strategic intent has the aspects of greater flexibility and changing with the environment to meet long term goals by establishing the essence of winning, a firm intentional goal, stability and sets goal-setting that requires personal commitment.

Strategic intent envisions a desired leadership position and establishes the criterion organizations will use to chart its progress (Smith, 1994). Strategic intent is an ambitious and compelling attempt that provides emotional and intellectual energy for the future. Strategic intent should not be confused with two other words used in strategic management namely vison and goal in that vision represents the stretch goal of the company out 15-20 years and goals are midpoints to achievement and not programs to achieve the strategic intent of the company.

The role of knowledge in an advancement strategy is much different and includes new product or process knowledge and transferable new knowledge. Processes associated with the advancement strategy strategic framework include new knowledge creation, R&D, radical innovation and strategic relationships with customers, suppliers and partners. . The goal of this *strategic intent* strategy is to attain higher than industry average future profitability (von Krogh Ichiri & Nonaka, 2000). Firms differ in their industry life cycle stage and future direction so employing one of these *strategic intent* strategies over another depends on the firm's strategic thrust and may be based on one of Porter's generic strategies (1980) or the Miles and Snow (1978) strategy topology.

A firm's knowledge and intellectual capital can be dynamically deployed and redeployed to form a basis for competitive advantage (Teece, 2004). Strategic frameworks have been proposed to relate the role of knowledge to strategy (Von Krogh, Ichijo, & Nonaka, 2000) with astute management of the value in a firm's competence and knowledge base is a central issue in developing firm strategies (Teece, 2000). Business has recognized that not all knowledge yields competitive advantage (Von Krogh et al., 2000). The Intellectual Capital Services (IC Index), originally developed in Scandinavia and Australia by Johan and Göran Roos (1998), identifies four categories of intellectual capital: relationship, human, infrastructure and innovation; it then looks at the relative importance of each, and also at the impact of changes in intellectual capital.

Stewart (1997) defines intellectual capital as the intellectual material-knowledge, information intellectual property, and experience that can be put to use to create wealth: it is formalized, captured, and leveraged to create wealth by producing a higher-valued asset. It is also the "sum total of everything everybody in the company knows that gives it a competitive edge (Stewart, 1998)". This it furthers the model of management directing the intellectual capital accumulation and use toward business outcomes.

"Much of the literature on intellectual capital stems from an accounting and financial perspective (Bontis, 2001)". Many of these quantitative oriented researchers are interested in answering the following three questions:

1. What is causing firms such as IBM and Microsoft to be worth so much more than their book value?
2. What specifically is in this intangible asset?
3. What are the relationships between strategic intent, intellectual property, and firm performance and intangible asset book values?

The second question of 'what is this intangibles asset' leads to the definition and construct of intellectual capital from many researchers including Bontis (1999;2010), O'Donnell et al. (2004; 2006), Sallebrant et al. (2007), Curado and Bontis (2007) as:

1. Human capital
2. Structural capital
3. Relational capital

These *three constructs of intellectual capital* encompass the intelligence found in humans, organizational routines and both internal and external network relationships respectively. A potential confound in this construct is that the field of intellectual property typically looks at "organizational knowledge as a static asset in an organization (Bontis, 2010)". This may have an actual impact as the knowledge of an organization and the capital is constantly changing. The behavior of knowledge-seeking individual and groups within the organization and the field of knowledge management relates at this point since it "focuses on the flow of information (Curado et al Bontis, 2006)". *Human capital* is further defined as the accumulated value of investments in the employee's training and competence (Edvinsson et al, 1997). It also contains the competence, skills, and intellectual agility of the individual employees (Roos et al, 1997). Zambon (2002) adds that human capital includes the collective knowledge, creativity and innovativeness of people within an organization.

2.5 Knowledge and Resource-based Views of the Firm

It is further apparent that organizational routines and systems, processes and *intentional knowledge creation* enable intellectual property generation. Prior organizational knowledge theory has been proposed by Nonaka (1994) and furthered in Nonaka and von Krogh (2009). They researched the resource-based view of the firm showing the importance of knowledge alongside other hard to imitate resources (Barney 1991, Reed & DeFillippi, 1990, Conner & Prahalad, 1996).Barney (1991) poses four questions in his VRIO framework to evaluate a firm's competencies:

1. *V*alue: Does it provide customer value and competitive advantage?
2. *R*areness: Do no other competitors possess it?
3. *I*mitability: Is it costly for others to imitate?
4. *O*rganization: Is the organization organized to exploit this resource?

The resource-based view (Peteraf, 1993) of the firm uses the VRIO model to develop the firm level and strategic business unit level strategies to exploit opportunities and develop internal strengths, including firm specific tacit and explicit knowledge.

Both tacit and explicit knowledge within the framework of the resource view of the firm provide competitive advantages to firms. Some examples of resources include brand names, knowledge of technology, industry contacts, patents, trade secrets and copyrights. In order to confer strong competitive advantages resources should be rare and hard to imitate and when compared to competitors should be distinctive

Organizational knowledge is further based on the concept of tacit knowledge sought by organization knowledge-seeking strategies such as strategic intent. Important in understanding this organizational intentional tacit knowledge creation is that tacit knowledge is the type of knowledge that is unarticulated and based on understanding inputs from the "senses, movement skills, physical experiences, intuition or implicit rules of thumb"(Nonaka & von Krogh, 2009).

The development of a knowledge-based view of the firm began with from work by winter (1987) which argued that tacit knowledge was a "source of competitive advantage". This work initiated a line of inquiry in strategic management often referred to as the knowledge-based view and included strategies for managing knowledge assets (e.g., Boisot 1998; Chou et al 2004; Nonaka et al, 2000; 2005; Teece, 1998; 2000; Bowonder and Miyake, 2000; Chen & Edgington, 2005)(Kogut & Zander, 1992). Other researchers furthered the "knowledge-based view of the firm" using a strategic framework including organizational knowledge (e.g., von Krogh et al, 1994; Spender et al, 1996; Tsoukas, 1996; Spender, 1996; Szulanski, 1996; Gupta & Govindarajan, 2000; Foss, 1996).

Authors empirically tested the implications of these knowledge-based view of the firm strategies for firm performance (e.g., Bierly and Chakrabarti, 1996; De Carolis and Deeds, 1999; Dröge et al, 2003; Poppo and Zenger, 1998; Sabherwal and Sabherwal, 2005; Choi and Lee, 2002). These empirical tests provided empirical support for Winter's (1987) original hypothesis. As this was occurring, Teece (1997) "created a theory of firms'

dynamic capabilities". In contrast to the resource-based theory of the firm, this framework highlighted the importance of dynamic processes".

A key to understanding *intellectual capital* resident in an organization is that those organization members must be able to recognize and express how that intellectual capital (unique knowledge) is expressed and how that core competence can be measured. A core competence is a necessary building block of world-class performance and ranking. It is defined as a collection of competencies that cross divisional boundaries, is widespread within the organization (e.g., knowledge), and is something that the organizations does exceedingly well (Pralahad & Hamel, 2006).

The intellectual capital represents the sum total of all the unique and novel ideas that make the organization's capability and which taken as a whole determine the future of the organization. Accountants and financial analysts have avoided this area until recently because intellectual capital is an intangible that is only measured as the difference between book value and market cap. Even this indirect method is unsatisfactory since it is a static measure. "In the past, accountants have assumed a position which either ignores the problems or writes them off as impossible to solve (Luscombe, 1993). It is important to realize that intellectual capital is real and provides value (Andreou & Bontis, 2007)." The rise of the Unicorns in Silicon Valley illustrates this problem since many companies are going public at a one billion dollar market cap while having almost no revenues nor assets, other than intellectual property. This excess is thought to be the market valuation of the company's intellectual property.

Earl and Scott (1999) propose that the CKO's job is to maximize the creation, discovery and dissemination of knowledge within the organization. Harlow (2014) furthers that description with the strategic management role of discovery of core competencies capabilities and application of knowledge to meet the strategic intent of the firm.

3. Methodology

The survey instrument used Bontis' intellectual capital questionnaire (Bontis, 2010b) modified by strategic intent as an independent variable. This instrument was further validated through expert interviews within the knowledge management community. Strategic intent was the primary independent variable and was further developed into sub-variables on this main construct. Intellectual capital was sub-divided into three factor variables: human capital, structural capital and relational capital. Each sub-variable was operationalized with key variables that measured employees' perception of that variable. The dependent variable in the study was business financial and innovation outcomes measured by the factors listed in Table 3.1.

3.1 Study design

There is over 3000 names listed in the Dun and Bradstreet (2016) USA list of knowledge management executives and managers database. The different organizations listed represent a cross-section sample of industry and government knowledge professionals in the USA. Financial information was collected based on responses to the survey questions. Kannan and Aulbur (2004) analyzed over 100 academic papers and found that perceptual measures were the most often used techniques of measurement. Bontis (2004) also found a link between intellectual capital and firm performance in a study of the mutual fund industry. It is "common research practice to use proxy metrics and perceptual measures as this study does given the objective measurement difficulty of intangible assets (Kannan & Aulbur, 2004)".

The survey instrument used was based a prior research instrument (Bontis, 1998). Intellectual capital was sub-divided into three major constructs: human capital, structural capital and relational capital. Strategic intent was added to the survey and was subdivided as presented in Table 1. Finally, the firm outcomes were labeled in this research as innovation and financial outcomes with sub-variables measured as well. Each sub-construct was operationalized with ten items that measured employees' perception of that variable. The survey totaled 120 questions.

3.2 Sampling, Measurement and Approach

All items were measured with a five-point Likert-type scale. The published *validated* survey instrument was based on Sharabati, Naji and Bontis (2010) intellectual capital questionnaire and the results of that study were used to enhance the understanding of the research hypotheses and as a basis for this research. A two-stage

approach and experts' pretest (Delphi) was used in Sharabati's. Naji and Bontis' (2010) research was used to determine validity and reliability. The initial results were used to test and evaluate the normality, reliability and validity of the survey instrument. This instrument was assessed for internal consistency reliability and checks against the results of the Sharabati (2010) instrument with results that are comparable. The primary research in this study sample was a non-random survey sent to 190 knowledge management technology industry executives who were selected based on their executive titles (Vice President, Director or CKO, CLO) from a list of over 3,000 knowledge management industry professionals in the United States and Canada from Dun and Bradstreet's database (2016). This selection was based on their positon as "C" level officers of their firms and knowledge of the strategy associated with that position. Bias was not present and surveys were returned over a period of three weeks. The full responses were 30 CKO, CLOs and other knowledge management executives for a response rate of 16%. The sample was 27 male and 3 women from company size of 340 to over 5,000. Technology, manufacturing, banking and commercial firms were represented.

3.3 Variables

The main research construct independent and dependent variables are defined as:

- Strategic Intent (independent) (SI)
- Intellectual Capital-Dependent &Intervening*.(IC)
- Innovation-Dependent(I)
- Financial-Dependent (F)

*Intervening variable is a variable that explains a relation or provides a causal link between other variables. Also called by some authors "mediating variable" or "intermediary variable".

3.4 Research Model

The *strategic intent* of the firm is different than targeting financial outcomes directly (Prahalad and Hamel 1992). Although it might include profit targets, the *strategic intent* of the targeted group of CKOs and CLOs is to rise above the competition and gain market dominance. Rather than a sales goal there is a knowledge sharing or system of developing knowledge inherent in the strategy intent of knowledge officers. Raising the levels of the human, structural and organizational capital of the organization is the primary goal and defined purpose as a means to affect market dominance, productivity, profitability and market valuation.

Human capital is defined as the accumulated value of investments in the employee's training and competence (Edvinsson and Malone, 1997) (Becker, 1994). Zambon (2002) adds that "human capital includes the collective knowledge, creativity and innovativeness of people within an organization. It also contains the competence, skills, and intellectual agility of the individual employees (Roos et al., 1997) (Bontis, 2010)".

Structural capital consists of the non-human storehouses of knowledge in an organization that is embedded in systems, databases and programs (Edvinsson and Malone, 1997). Unlike human capital, structural capital is an intangible asset that can be traded, reproduced and shared within the firm (Zambon, 2002).

Relational capital represents all the knowledge embedded in relationships with external parties such as customers, suppliers, partners and other external stakeholders (Roos et al., 1997). However Roos and his colleagues also describe an important distinction between the actual relationship between these stakeholders and the knowledge about these stakeholders. Zambon (2002) further extends this notion to include formal alliances, licensing and partner agreements as evidence of these external relationships.

The prior research in this field (Sharabati et al, 2010) developed the positive relationships between Intellectual capital and firm performance. However the *strategic intent* of the firm has been missing from this analysis. This research uses the prior research model and adds into this model (Sharabati Naji & Bontis 2010) the strategic intent. This model also adds factors and research questions to address the underlying business performance factors of productivity, profitability and market valuation that were retained from the Bontis model but in a more detailed factor form with additional research questions. The following modified research model is presented in Figure 1 and depicts the variables and hypotheses of this research:

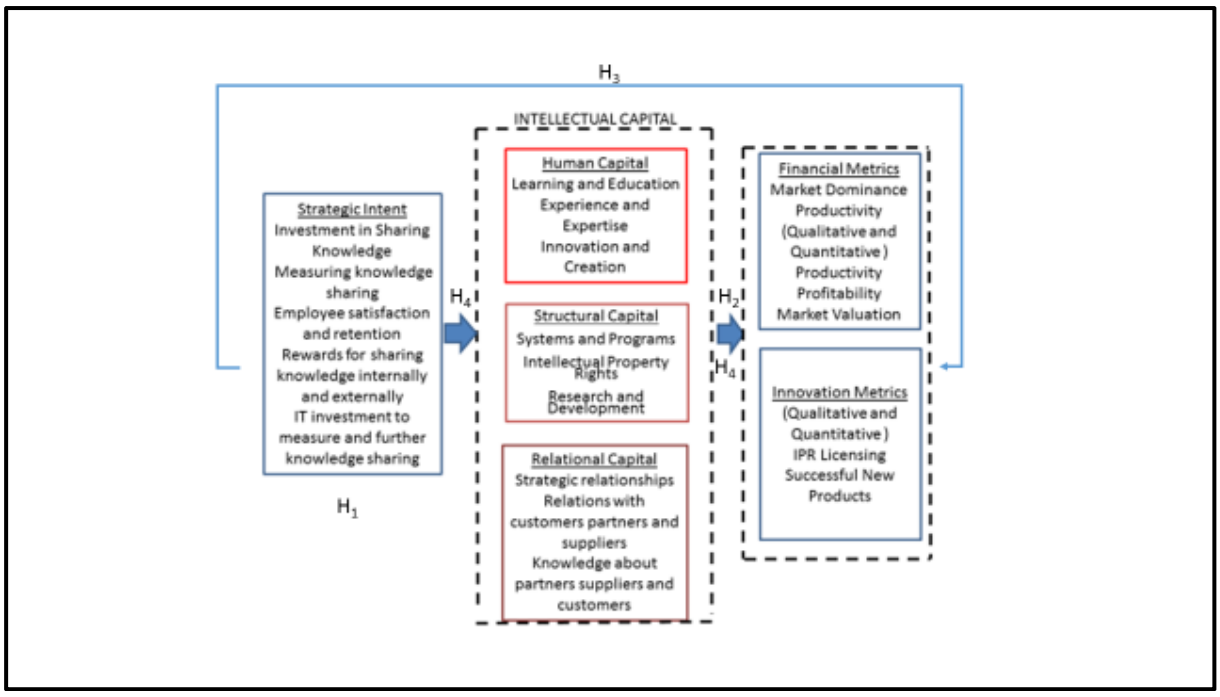

Figure 1: Research Model

3.5 Research Hypotheses

H1. Intellectual Capital is positively influenced by investment in knowledge sharing, measuring knowledge sharing, employee satisfaction and retention, rewards for sharing, internal and external knowledge, IT investment to measure and further knowledge sharing.

Where KS=knowledge sharing, MKS=measuring knowledge sharing, ESR-employee satisfaction and retention, RS=Rewards for sharing, IEK=internal and external knowledge, ITI =IT Investment, FKS=further knowledge sharing, All of the above variables are > 0.

RQ1. What is the effect of Strategic Intent on IC? Which SI item (factor) has the greatest effect?

H2: Firm Innovation and Financial Outcomes are positively affected by Intellectual Capital.
RQ2. What is the effect of Intellectual Capital on Firm outcomes?
RQ3. Which factor of intellectual capital is most important?

In the following hypothesis, Intellectual capital acts as a intervening and a dependent variable. Where KS=knowledge sharing, MKS=measuring knowledge sharing, ESR-employee satisfaction and retention, RS=Rewards for sharing, IEK=internal and external knowledge, ITI =IT Investment, FKS=further knowledge sharing, RC=relational capital, HC-Human Capital, RC=Relational Capital.

H3: Innovation and Financial Outcomes are positively affected by Strategic Intent.
RQ4: What are the effects of strategic intent (SI) on Innovation (I) and financial (F) business outcomes?

H4: Firm Performance is positively affected by the intellectual capital of the firm and the strategic intent.
RQ5: What is the effect of IC and SI on Firm Performance?

4. Results

The highest rated SI factors were knowledge sharing & collaboration (4.4), rewards for knowledge sharing (4.3) and IT investment (4.1). The resultant SI variable was one that combined the factors to affect the intellectual capital and was scored and a multiple regression performed of the resultant variable. All variables used in the multiple regressions were derived in this manner and result from scoring of the survey results.

Table 1 below depicts a significant finding of a moderate relationship between the Strategic Intent (SI) independent variable and innovation, R^2 =.378, with a lessor relationship to the financial variable, R^2=.273, in this study. This is consistent with Prahalad and Hamel's (1992) assertion that strategic intent is more related to gaining market dominance and developing strong knowledge generation and knowledge sharing systems. The SI has a moderate relationship to the IC variable, R^2=.344. The results indicate a moderate relationship between those firms that have a specific and recognizable strategic intent (SI) and firm performance as predicted in prior research (Prahalad and Hamel 1992). It also confirms relationship as being one which guides the proactive strategies of use of intellectual capital and positive adaptation to the environment(Mantere and Sillince, 2007)

Table 1: Multiple/Simple Regression of the Strategic Intent (SI) Independent Variable to the

Innovation (I) & Financial (F) Outcomes & Intellectual Capital (IC).

Dependent variable	*R*	R^2	Adjusted R^2	Beta	*t*	*p*
Innovation	.660	.378	.313	.660	9.278	0.001
Financial	.523	.273	.222	.523	8.192	0.001
IC	.587	.344	.282	.587	7.123	0.001

The following Table 2 presents the results of the regression of IC to the F and I variables. The results show a positive relationship and the R^2 values are moderate Innovation (R^2=.297) and F (R^2=.179).

Table 2: Regression of Intellectual Capital(IC) to Innovation (I) and Financial (F) Outcomes

Dependent variable	*R*	R^2	Adjusted R^2	Beta	*t*	*p*
Innovation	.545	.297	.213	.545	7.126	0.001
Financial	.423	.179	.182	.423	6.965	0.001

5. Results

The following summarizes the results of this research:

Hypothesis 1-There is a positive association between the strategic intent and intellectual capital. This hypothesis was accepted and the null rejected because there was a positive relationship between SI and Intellectual capital. RQ1: Knowledge sharing was the most important sub-variable of Strategic Intent.

This relationship further confirms that strategic intent develops the intellectual capital needed to deal with the lack of future visibility and uncertainty by defining processes and a way of meeting future goals (Montanari et al, 1990). Strategic intent is a useful concept for purpose of continuity in an *organization adapting to internal and external pressure*. It represents a "proactive mode of strategizing, a symbol of being futuristic (Mantere and Sillince, 2007)" which given this positive relationship confirms the importance of strategic intent in the strategic management model. The sub-variable of increasing the knowledge embedded in the human capital portion of intellectual capital by sharing knowledge is a core premise of knowledge management.

Hypothesis 2-Intellectual capital positively affects firm outcomes. This hypothesis was accepted and the null rejected since IC had a strong relationship to firm outcomes. RQ 2: There is positive effect of IC on firm outcomes. RQ3: The most important sub-variable was human capital.

*Hypothesis 3-There is a positive relationship between strategic intent and firm outcomes***.** This hypothesis was accepted and the null rejected and there was a moderate relationship between SI and firm performance. RQ4: There is a moderate positive relationship.

Hypothesis 4-There is a positive relationship between SI & IC and firm outcomes. This hypothesis was accepted and the null rejected and there was a relationship when both variables are acting simultaneously on firm outcomes.

Prahalad and Hamel (2006) have connected strategic intent to intellectual capital and also to firm performance. Prahalad and Hamel (2006) differentiate strategic intent from competitive advantage in that intent is a long term winning-focused adaptive process that creates knowledge and knowledge creating processes that meet changing environments while competitive advantage is a shorter term static analysis of competitive forces as related to the current threats and opportunities in the external environment. The relationship of strategic intent to firm outcomes has been developed by Nonaka & von Krogh (2009) as a knowledge-seeking strategy which is a view of the firm driven by strategic intent and from that strategic intent, firm knowledge creating strategies and processes. This research model represented in Figure 1 presents the ideas of strategic intent, knowledge creation and use of intellectual capital to affect firm outcomes in its statistical analysis and the analysis has found moderate relationships in all major model variables.

Human capital has been researched in prior research and this is the most important component of intellectual capital as further indicated by my research confirms earlier empirical research by Becker (1994). The "qualities and abilities of people that make them productive is the most important part of human capital". Of these qualities of human capital, knowledge is the most important (Becker, 1994).

The three prior hypotheses & associated variables have a positive statistical relationship; SI is related to IC; IC affects firm outcomes; SI affects firm performance. If the prior hypotheses report positive relationships it is argued that a positive relationship between SI & IC and firm outcomes exists. The statistical analysis of this study confirms this relationship between these variables. Each hypothesis is supported by prior authors' research (Bontis, 2010) (e.g., Bierly and Chakrabarti, 1996; De Carolis and Deeds, 1999; Dröge et al, 2003; Poppo and Zenger, 1998; Sabherwal and Sabherwal, 2005; Choi and Lee, 2002)(Hamel, G., Prahalad, C, K., 1992).

Researchers have empirically tested the implications of these knowledge-based view of the firm strategies for firm performance (e.g., Bierly and Chakrabarti, 1996; De Carolis and Deeds, 1999; Dröge et al, 2003; Poppo and Zenger, 1998; Sabherwal and Sabherwal, 2005; Choi and Lee, 2002). These empirical tests provided empirical support for Winter's (1987) original knowledge-based view hypothesis of a positive relationship. This research furthers Winter's (1987) original argument and provides additional empirical results that strategic intent is positively related to the outcomes of the firm.

5.1 Limitations/Conclusions

The research model may need further development since the results are somewhat counterintuitive and it would seem that the model and intellectual capital accounts for a lower percentage of the performance of the firm than presented in other similar studies.

A *new conceptual framework is* presented to strategically drive the creation of usable intellectual capital along with the coupling of *strategic intent* to create new and novel products rather than expend resources and talent on broadly defined structural capital such as intellectual property protection (patents, patents of dubious quality and product/process extension patents). The results of this study and other studies (Harlow, 2014) indicate that patents may not be as valuable to performance as thought. A new approach is needed that incorporates human capital and other forms of intellectual property including the skills of the managers and employees of firms. Tacit knowledge measures have been developed that enable this type of model development (Harlow 2008) Further, a new model of intellectual capital development and strategic choice is needed for top managers that matches strategy with intellectual capital knowledge management capability. Development of an overall strategy combined with strategic intent is needed and a model for the components of that strategy is presented in this paper.

Increasingly the disruptive business models of the newest firms coupled with speed to market determine performance outcomes and firm success. This makes the relational capital generated in the business model value chain more crucial than the structural capital. The highest rated SI factors were knowledge sharing & collaboration (4.4), rewards for knowledge sharing (4.3) and IT investment (4.1). Knowledge sharing and rewards directly affect the Human and Relational Capital variables in the Figure 1 Research model.

Firms whose environments require more intellectual capital would be advised to develop a *strategic intent* incorporating the factors used in this survey such as knowledge sharing, rewards for sharing and investment in technology, In addition, the research results also showed a moderate relationship between firms that have a strategic intent and firm performance. Managers are now able to measure the level of programs and expenditures and the importance of the various sub-factors methods. This is a significant step because it sets the stage for more detailed studies with more definition of each of the variables and perhaps a look at how this measure affects firm strategy.

Other studies have indicated the absence of strong effect on performance by patents by patent leading companies such as IBM, GE and Microsoft (Harlow, 2014). In the case of General Electric there was a finding of a negative correlation between the number of patents and firm performance (Harlow, 2014). The indication that relational capital and human capital has more effect on performance is not surprising and confirms that tacit knowledge may be more important than explicit knowledge of patents and other IP.

*Strategic Intent measure*s should allow firms to make better strategic decisions, since firms that identify SI sub-variables as important make better decisions during the strategic decision-making process. The study by Harlow (2016) provided an integration of the cognitive and strategic literatures to show that knowledge development is accessible and how it plays an integral role in the context of strategic decision-making. Brock and Anthony (2002) proposed that better decisions would occur when strategic intent is employed overtly during strategy sessions. This leads to the creation of an overall knowledge strategy and development of the strategic intent and intellectual capital to drive business performance.

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