MANAGING INTELLECTUAL CAPITAL FOR A SUSTAINED COMPETITIVE ADVANTAGE IN THE IRISH TOURISM INDUSTRY.

Catherine Gannon.
Waterford Institute of Technology (WIT),
Cork Road,
Waterford.
cgannon@wit.ie

Dr. Patrick Lynch.
Waterford Institute of Technology (WIT),
Cork Road,
Waterford.
plynch@wit.ie

Dr. Denis Harrington
Waterford Institute of Technology (WIT),
Cork Road,
Waterford.
dharrington@wit.ie

ABSTRACT

Two central questions explored in the tourism literature on organisations and competitiveness are “Why do some tourism firms compete more successfully than others?” and “What can firms do to enhance and sustain their competitive advantage?” Within the extant strategy literature, explanations of performance difference between firms have shifted from industry level external factors to a firm’s internal components. Indeed, the source of sustained competitive advantage is increasingly being associated with the utilisation of the firm’s valuable internal intellectual resource pool (Wernerfelt, 1984; Peteraf 1993; Runyan et al., 2007). Drawing on the resource based (Barney, 1991) and dynamic capabilities views of the firm (Teece et al., 1997), the proposed paper aims to develop a framework for explaining how companies utilise and process the human, relational, and structural capital elements within Intellectual Capital (IC) to generate sustained competitiveness.

It is this paper’s contention that as valuable as the knowledge is within these three capital resources, using them in combination alone will not achieve competitive advantage; rather they must go through a transformative process, which relies on the knowledge management capabilities of the firm to achieve a sustained competitive advantage through IC (Grant, 1996). The author perceives that a firm’s knowledge management capabilities are critical to a firm’s resource deployment and reconfiguration capacities, by acquiring, disseminating and utilising the IC knowledge throughout the organisation and is the link that bridges intellectual capital with sustained competitive advantage (Bontis, 1996). More specifically, the authors see the organisation as a knowledge processing entity that utilizes its IC to generate sustained competitiveness.

However, while a significant amount of empirical work has focused on researching either KM or IC, scant attention has been directed at confirming the basic relationship between the two as a means of generating competitiveness. What has been done relates more to examining the relationship between single dimensions of IC (e.g. social capital) and KM as a means for explaining competitiveness. Therefore the proposed paper will make a unique contribution to a very significant gap in the

capabilities and business strategy literature, by conceptualising a holistic model that elucidates the connections between the organizations intellectual resource and its knowledge management capability to generate firm competitiveness. Due to the scarcity of research and interest in this area, it is perceived that our ongoing study will contribute substantially to academic knowledge and practice and should highlight key areas warranting investigation going forward.

INTRODUCTION

The tourism industry is at a significant turning point in its evolution. Due to unparalleled economic growth, the industry has seen a “significant loss in competitiveness, which if not redressed, will undermine the capacity of the industry to benefit from the strong economic growth envisaged in international tourism in the years ahead” (Tourism Policy Review, 2003: 40). Moreover, while the tourism industry has matured, it still is characterised by the dominance of individual, small to medium sized enterprises competing in an increasingly global international tourism marketplace. The consequence is that there is weak access to market and operational intelligence, a lack of management resources and market power and little or no financial institutional backing. A frequent response that continuously appears in supranational and national economic policy strategy (Forfás, 2004; Tourism Policy Review, 2003) is that in order for small tourism firms to surmount the detrimental effects of losing competitiveness emphasis must be directed at utilising and maximising the tourism firm’s internal resource base to create competitive advantage.

This line of reasoning is consistent with the current thinking in the extant resource based view and dynamic capability literatures: explanations for small firm competitiveness has shifted from industry level external factors to an organisation’s internal components, where the source of sustained competitive advantage is increasingly being associated with the effective utilisation and management of the firm’s valuable internal resource pool (Wernerfelt, 1984; Peteraf 1993; Runyan et al., 2007). Indeed, an implicit assumption of theoretical contributors within this literature is that distinctive, firm-specific, valuable, imperfectly inimitable and rare resources, can confer a competitive advantage on the firm that possess them, when the capability for deployment and reconfiguration is present (Hoffman, J.J., et al, 2005; Moustaghfir, 2008). Since competitive advantage can flow from unique knowledge resources (Erickson and McCall, 2008), it is logical to assume that firms will benefit from better management of its intellectual capital, which is the point of knowledge management (Choi and Lee, 2003). Although it has been recognised for a long time that competitive advantage comes from intellectual capital – and its useful application (Teece, 1998), the emphasis on it is relatively new and there has been little empirical investigation within the tourism and hospitality sector (Engstrom et al, 2003; Nemec Rudez, 2007; Erickson and Rothberg, 2008) and particularly within SMEs (Morrison et al, 1999).

Indeed, most research has been dedicated to identifying and explaining these knowledge assets rather than illustrating how these assets can be incorporated into existing organisational processes in a practical manner.

The purpose of this paper is therefore to address this knowledge gap in the capabilities and business strategy literature by conceptualising a holistic model that elucidates the collective elements of IC and KM. The rest of the paper is structured as follows. Next, a synthesised discussion on the most salient aspects of the literature on the resource base view, intellectual capital and knowledge management that led to this investigation is presented. Based on the foregoing, a conceptual framework for explaining how companies utilise and processes their Intellectual Capital (IC) to generate sustained competitiveness is presented. In the concluding section, observations are drawn for future empirical development in the field.

RESOURCE BASED VIEW

The resource based strategy paradigm emphasises distinctive firm specific, valuable, imperfectly inimitable, non-substitutable and rare resources and capabilities that confer a competitive advantage on the firm that possesses them (Barney 1991). Resources relate to the “stocks of available factors that are owned or controlled by the firm” (Amit and Schoemaker, 1993: 35) and “inputs into the production process” Grant (1991; 118). According to Andriessen (2001) resources can be categorised under the following groups: 1) tangible assets, 2) financial assets and 3) intangible assets. Tangible assets (e.g. plant and machinery) and financial assets (e.g. shares and funding) give a firm a temporary competitive advantage under these conditions (Hitt and Ireland, 2002). Nevertheless, this is insufficient in the long term, as competitors will soon begin to acquire the necessary resources through imitation or substitution thus eliminating these valuable characteristics (Vanderkaay, 2000). Stahle and Hong (2002: 180) encapsulate this concept within the following statement: “Innovations can be copied, whereas innovativeness cannot”. For Roos et al (1997b) intangible assets are the only type of assets that has the ability to be valuable, rare, inimitable and non-substitutable, and is therefore a source of sustained competitive advantage (Roos et al, 1997b).

Nonetheless, resources alone are not enough to create a competitive advantage; they need to be leveraged through capabilities. (Eisenhardt and Martin, 2000). Working in combination with one another, resources are the "stocks of available factors that are owned or controlled by the firm" and capabilities are the "firm's capacity to deploy resources" (Amit and Schoemaker, 1993: 35). Resources are the "inputs into the production process" and capabilities are "the capacity for a team of resources to perform some task or activity" (Grant, 1991: 119). Indeed the underlying RBV concept is of the understanding that "resources are the source of a firm's capabilities" and that "capabilities are the main source of its competitive advantage" (Grant, 1991: 119).

For Stalk et al., (1992) capabilities are strategic business processes that are understood, utilised and fully comprehended by the organisation. These processes are capable of transformation in that they use the resources available to them and convert them into a competitive output (Dutta et al, 2005). This implies that capabilities are the "firm's capacity to deploy resources usually in combination, using organizational processes, to affect a desired end". However, what is noteworthy about the discussion on the interrelationships between resources and capabilities is the lack of the human element inherent in managing and merging these resources with capabilities. For Mahoney and Pandian (1992: 365) "A firm may achieve rents not because it has better resources, but rather the firm's distinctive competence involves making better use of that resource". Indeed, deployment and leveraging of these resources to acquire maximum efficiency and effectiveness needs "an ability to constantly reconfigure, accumulate, and dispose of knowledge resources to meet the demands of a shifting market" (Moustaghfir, 2008: 11). This dynamic capability refers to "the capabilities with which managers build, integrate, and reconfigure organisational resources and competencies" (Adner and Helfat, 2003: 1012). The resulting effect of this has been the creation of the concept 'Dynamic IC' which includes the management of IC present within the firm and the continuous development of potential IC in the future (Stahle and Hong, 2002: 177). Although IC can be a source of competitive advantage, management should not become complacent and assume that this advantage is sustainable.

INTELLECTUAL CAPITAL (IC)

Knowledge has become increasingly recognised through national policies and media as a firm's most valuable asset. This endorsement has revolutionised business into the "information age" (Stewart, 1997: x). Although intellectual capital may be a relatively new term, it has a long lineage in various business areas such as management, accounting, strategy and sociology (Bontis, 1996, Stewart, 1997, Edvinsson and Malone, 1997). Its rationale is deeply rooted in the seminal works of Penrose (1959) and its increasing popularity over the last decade has encouraged authors to lay the foundations of Intellectual Capital in the hope of building a truly sustainable knowledge economy. Thomas Stewart has gained wide recognition for his input into IC as one of the first authors to publish literature in the area. He interprets IC as "the sum of everything everybody in a company knows that gives it a competitive edge" (Stewart, 1997: ix), while Edvinsson and Malone (1997: 44) considers a company's knowledge to encompass "applied experience, organisational technology and professional skills".

The literature on creating intellectual capital has developed into major streams of thought, explicitly the bottom up approach and a top-down approach (Marr et al, 2004a). The bottom up approach is in relation to the RBV and knowledge theory where the knowledge assets are initially identified and subsequently the firm attempts to unearth a market for these assets. The reverse scenario is the top down approach where the external environment is examined and the knowledge assets are created according to its market demands. Regardless of which approach is taken, it is the comprehension of what resources are needed to incorporate within IC that will create a competitive advantage. Nevertheless, much criticism has been given to the categorisation of the intellectual capital elements (Andriessen, 2001). Authors have grappled with the literature trying to establish various terminologies that will sufficiently encompass all the characteristics of these knowledge assets. Examples of such labels include 'customer capital', 'organisational capital', 'internal resources', 'external resources' and so on. Effectively, the literature is referring to the management of knowledge, whether it is explicit or implicit, tangible or intangible (Ordonez de Pablos, 2004). For the purpose of this paper this intangible knowledge asset will be categorised into the following categories: human, relational and structural capital and discussed individually.

Human Capital

Human capital (HC) is described by Roos et al (2001: 23) as the "competence, skills, and intellectual agility of the individual employees". Bontis (1996: 43) recognises that it is a "collective capability" that is required to extrapolate this knowledge at an individual level and embed within the firm. Human capital can be derived as more of a general definition to include HR systems, HR procedures, and even the culture within an organisation (Abhayawansa and Abevsekera, 2008). Nevertheless, it is important to refute these elements in the generation of a HC definition. These elements contribute to the enhancement and development of human capital; however, they are not necessarily part of the human capital definition per se. 'Human capital' should not be confused with the term 'human resource'; human resources are seen as the resources that have potential to be converted into human capital through proper management (Abhayawansa and Abevsekera, 2008). The human resource management (HRM) processes enable firms to exploit these resources and transform them into human capital (Coff, 1997).

Although human capital has been linked to increased firm performance (Ordonez de Pablos, 2003; Nielson et al, 2006), it is not sufficient alone to create a sustained competitive advantage (Tansley and Newell, 2007). The tacit nature of human capital is difficult to extract and codify and therefore difficult to capture (Bontis, 1996). Employee turnover is notorious within the tourism and hospitality industry and when these employees leave the firm, they take with them their stock of knowledge. Nevertheless, the collaboration of these views with dynamic capability theory gives HC the potential to be leveraged and deployed to counteract this problem (Eisenhardt and Martin, 2000).

Structural Capital

Structural Capital (SC) encompasses "processes, systems, structures, brands, intellectual property and other intangibles that are owned by the firm but do not appear on its balance sheet" (Roos et al, 2001: 23). It can be conceptualised as the fluid intangible assets such as processes, routines, culture, and the more formally crystallised structural capital is codified in an organisation's policies, procedure booklets, and intellectual property (Carson et al, 2004). Although Bontis (1998) argues that intellectual property (IP) is a tangible asset and an output of IC, and therefore should not be included in SC definitions.

Nevertheless structural capital is of great value to the firm in the long run; it is important to emphasise the fact that it is insufficient on its own in creating a long term competitive advantage. In order to develop human capital elements, such as employee competencies, skills and experience, structural capital must provide support mechanisms in the form of organisational routines, capabilities and a motivated attitude within the corporate culture for employees (Bontis, 1996). This supportive culture is necessary to motivate staff and encourage them to try new ideas even if they do fail (Bontis, 1996).

Similarly from an organisational perspective human capital contributes to the creation of structural capital (Ordonez de Pablos, 2004). It is ultimately the responsibility of management to extract this knowledge from its employees and codify it in a formal way so when employees leave the building after a day's work there is a record of this valuable knowledge and once embedded, it becomes structural capital (Roos et al, 1997a). Stewart (1997: 108) compares this process to the growth of a tree:

> *"Human capital, the sap flowing beneath the bark of a tree, produces innovation and growth, but that growth ring becomes solid wood, part of the structures of the tree. What leaders need to do....... is contain and retain knowledge, so that it becomes company property. That's structural capital".*

Relational Capital

"Relational capital encompasses the external revenue generating aspects of the firms" including "branding, reputations, strategic alliances, relationships with customers and suppliers" (Seetharaman, 2004: 524). Most authors in IC literature recognise relational capital as consisting of relationships that the firm has with customers and suppliers. Both Carson et al, (2004) and Viedma Marti (2004) suggest the inclusion of competitors within a firm's social network can lead to an advantage for both parties. Employees, management, shareholders, the public, institutions and associations are the other most notable relationships within the relational capital realm (Bueno et al, 2004).

If a firm is in tune with the demands of its marketplace, then they can become market leaders (Bontis, 1996). For this reason, it is crucial that management understands these relationships, how they are formed and the benefits it has issued upon the organisation. Nahapiet and Ghoshal (1998) argue that relational capital has three dimensions: 1) structural 2) relational and 3) cognitive. The structural dimension looks at the linkages between other parties; who they are communicating with and through which medium (Burt, 1992). Granovetter (1992) describes the relational dimension in terms of the personal relationships developed over a period of time. The final dimension, that being cognitive, is described by Tsai and Ghoshal (1998: 465) as "a shared code or a shared paradigm that facilitates a common understanding of collective goals and proper ways of acting in a social system".

According to Bontis (1999) relational capital is the most difficult of all the IC elements to codify due to its external characteristics. Despite literature representing a win-win situation for all parties concerned in this social context, this capital does have its downfalls. Like all capitals, its development comes with a cost; whether it is time, reciprocity or trust (Tansley and Newell, 2007). It's pertinent that a firm weighs up its options and considers whether the benefits gained from social capital will outweigh these costs (Leana and Van Buren, 1999; Adner and Kwon, 2002). Moreover, relational capital is meaningless in creating a sustained competitive advantage without the assistance of the other IC elements due to its intangible characteristics.

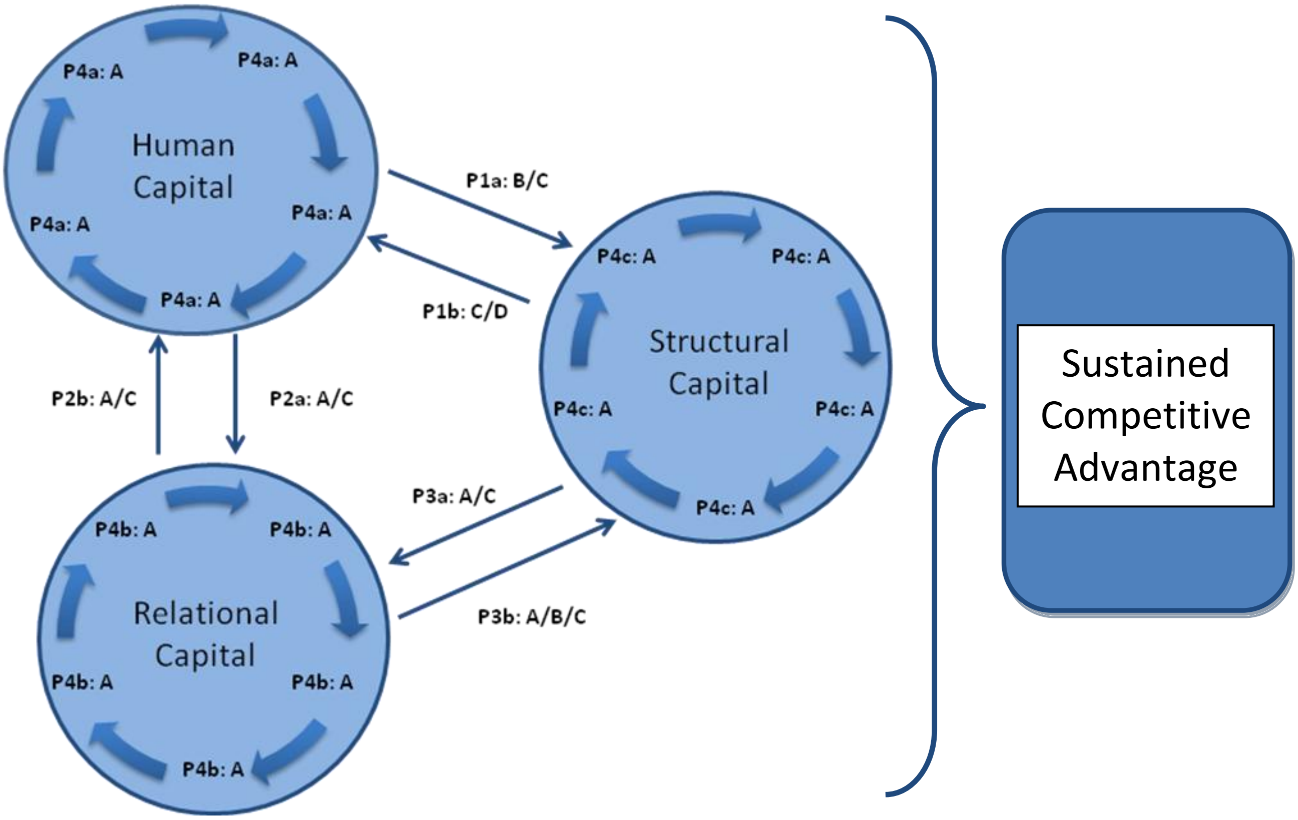
KNOWLEDGE MANAGEMENT (KM)

Knowledge management can be defined as the "collective phrase for a group of processes and practices used by organisations to increase their value by improving the effectiveness of the generation and application of their intellectual capital" (Marr et al, 2003: 773). The overall objective of knowledge management processes is "to create value and to increase and sustain competitive advantage" (Carlucci et al, 2004: 577). Therefore the act of managing knowledge is "how a firm acquires, stores and applies its own intellectual capital" while a knowledge management system (KMS) “is the information systems adopted and designed, which efficiently and effectively leverage the collective experience and knowledge of employees to support information processing needs” (Wickramasinghe, 2003: 298). A knowledge management system (KMS) involves four processes (Adams and Lamont, 2003; Alavi and Leidner, 2001; Huber, 1991). Firstly the *knowledge acquisition* process involves the “creation, codification and transfer” of knowledge internally within the firm and the “identification and absorption” of knowledge in the firm’s external environment. The second process involves the *storage of knowledge* which engages in the codification of the knowledge into the organisation’s structures, procedures, policies, manuals, etc. Thirdly, the act of *knowledge distribution* looks at the sharing of knowledge between organisational individuals, external groups and the firm (Alavi and Leidner, 2001) and finally, *knowledge retrieval* involves the capacity of employees to recover and retrieve knowledge within the firm when necessary.

MANAGING INTELLECTUAL CAPITAL

Based on the foregoing, a tentative *priori* conceptualisation for understanding the complexity inherent in managing intellectual capital is presented (see Figure 1). Although the conceptual framework was developed *ex post* from analysing reviewed literature, it is probably heuristically useful to provide an introductory overview of its major components, before launching into its more detailed discussion. The conclusion that emerged from the literature analysis is that as valuable as the knowledge is within the three capital resources of human, social and structural, using them in combination alone will not achieve competitive advantage; rather they must go through a transformative process, which relies on the knowledge management capabilities of the firm to achieve a sustained competitive advantage through IC (Grant, 1996). As illustrated in Figure 1, the firm’s knowledge management capabilities are critical to a firm’s resource deployment and reconfiguration capacities, by acquiring, storing, disseminating and retrieval of IC knowledge throughout the organisation (Bontis, 1996). However in order to understand how knowledge management process leverage and deploy IC resources, the knowledge flow relationships between these resources must be comprehended in order to apply the appropriate knowledge management tool (Marr et al, 2004b). Figure 1 maps these knowledge flows between resources and how they interact to maximise knowledge efficiency and value. Subsequently, the authors

Figure 1: The interrelationships between the IC elements and the corresponding knowledge management processes.



PROPOSITIONS

P1a: Proposition 1a

P1b: Proposition 1b

P2a: Proposition 2a

P2b: Proposition 2b

P3a: Proposition 3a

P3b: Proposition 3b

P4a: Proposition 4a

P4b: Proposition 4b

P4c: Proposition 4c

KNOWLEDGE CAPABILITIES

A: Knowledge Acquisition

B: Knowledge Storage

C: Knowledge Distribution

D: Knowledge Retrieval

put forward propositions relating to the knowledge flow relationships between human, relational and structural capital and how these relationships can be managed through the utilisation of knowledge capabilities. It is important to realise from the outset that the model is an iterative process that needs the firm to build, integrate, reconfigure and remove knowledge relationships when necessary to create a sustained competitive advantage.

Human capital is a necessary resource to build structural capital. Although the knowledge and skills of these employees are of worth, they are not as valuable to a company when they are embedded within the employee’s mind. Embedded knowledge is work-related practical knowledge, which is neither expressed nor declared openly, but rather implied or simply understood and is often associated with intuition (Brockmann & Anthony, 1998). Moreover, it is non-codifiable knowledge that is not easily catalogued because it is ingrained into the work practices and expertise of employees (i.e. human capital) and could only be expressed and conveyed through proficient execution and through forms of learning that involved demonstrating and imitating (Fleck, 1997). Often referred to as tacit knowledge (Howells, 1996), it needs to be extracted from HC and codified through various knowledge management processes (Carson et al, 2004). What is noteworthy is that knowledge does not lose value when shared; indeed, its value grows when distributed. Therefore, only when this knowledge is embedded within the organisation can the company gain value from it and use it as a source of innovation.

> **Proposition 1a:** Human capital (HC) is a vital source of knowledge that can be extracted from individuals, and distributed and stored in the organisation’s structural capital (SC). (P1a: B/C)

In reversal roles structural capital is a necessary resource to develop the competencies and skills of its employees. The competencies and capabilities of employees are not sufficient without the support of structural capital (Bozbura, 2004). Indeed it is structural capital that enables individuals to retrieve information when required. In addition, it facilitates the transfer and distribution of knowledge regarding training, company policies and procedures (Carson et al, 2004) through such processes as human resource management (Abhayawansa and Abevsekera, 2008). This is of benefit to the employee's career at an individual level and so it is essential that the firm has a supportive culture in which employees can learn through trial and error and not have to be disciplined accordingly (Bontis, 1998).

> **Proposition 1b:** Structural capital (SC) is a necessary resource to support human capital development through the distribution of knowledge and retrieval of knowledge. (P1b:C/D)

The network literature highlights that relationships with external actors provides the opportunity for employees to distribute and acquire knowledge. For instance, opinions and comments from suppliers and customers can provide constructive feedback in which employees can use to enhance their skills and competencies (Sveiby, 2001) and for the firm to take advantage of business opportunities. Nevertheless, the extent to which the knowledge is tacit (complex) or explicit (readily understood) impacts the flow of the knowledge transfer. For Hansen (1999: 88) "when the knowledge being transferred is non-codified and dependent….an established strong interunit relationship between the two parties to the transfer is likely to be most beneficial". Why? because in a close relationship, actors are more likely to spend time expressing and conveying the non-codifiable knowledge. Inkpen and Tsang (2005: 162) comments succinctly pinpoint the inter-relationship between human capital and relational capital in terms of knowledge distribution "…for effective transfer of tacit knowledge between network members, individual social capital must be developed, because the transfer normally requires intimate personal interactions". This implies that relational capital is therefore necessary for human capital to develop (Carson et al, 2004). Based on the forgoing, the following propositions are put forward.

> **Proposition 2a:** Human capital (HC) is a necessary resource for the creation and development of relationships and networks within relational capital (RC). (P2a: A/C)

Proposition 2b: Relational capital (RC) is a necessary resource for distribution of knowledge to employees and the acquirement of this knowledge can lead to the enhancement of human capital (HC). (P2b:A/C)

The information distributed to external parties can have a major effect on how the external environment perceives them (Bueno et al, 2004). For this reason most companies have included social and ethical statements as part of their corporate responsibility to the community (Spence et al, 2003). To ensure these parties understand and have the ability to acquire this information, organisational policies, procedures and other relevant information must be accessible and user friendly (Bollen et al, 2005). Services available that would complement this type of relationship includes customer care lines and websites (Sveiby, 2001). As a consequence, it is vital that structural capital provides a platform in which relational capital can be supported.

Proposition 3a: Structural capital (SC) is a necessary resource to provide a medium in which external parties can acquire knowledge and to give the firm an opportunity to distribute organisational knowledge. (P3a:A/C)

The distribution of feedback from customers, suppliers, trade associations, government polices etc, can enhance the firm's ability to absorb this knowledge through acquisition and consequently utilise this knowledge to enhance the procedures and systems within the firm (Bollen et al, 2005). Acquiring this invaluable external knowledge is invaluable and can be gathered though various methods such as customer surveys, customer service desks, government reports, etc (Sveiby, 2001). This knowledge can then be stored within the organisation through embedding this information into the organisation's structure.

Proposition 3b: Relational capital (RC) is a necessary resource to distribute knowledge to a firm and to give the firm the opportunity to absorb information from external parties and subsequently to store it within their organisation. (P3b:A/B/C)

Just as the relationships support each other and benefit from each other, so too does the individual elements benefit themselves. Human capital can grow through the distribution of knowledge to employees and through the acquirement of knowledge from employees (Lucas, 2005). Examples of this type of exchange can take place through formal training and mentorship (Pike et al, 2004) or a more informal approach such as meeting in the corridors or simply a chat at the water cooler (Edvinsson and Malone, 1997).

> **Proposition 4a:** Human capital (HC) is a necessary resource to reinvest in human capital through the distribution and accumulation of knowledge. (P4a:A)

Through various activities firms can indirectly influence the relationships and networking activities of external parties. This can be achieved through the firm interacting in various activities such as community involvement, strategic partnerships, joint product launches (Sveiby, 2001). These are activities that will encourage communication amongst those in the external environment about the firm (Pike et al, 2005).

> **Proposition 4b:** Relational capital (RC) is a resource that can be indirectly developed through organisational activities. (P4b:A)

Structural capital can develop in itself through the arrangement and codification of knowledge and intellectual property (IP) (Pike et al, 2005). Firms can continually update its procedures and policies to ensure efficiency throughout its systems. An example of how this can be accomplished is through the collection of data in one organisational database (Sveiby, 2001).

> **Proposition 4c:** Structural capital (SC) is a necessary resource to create efficiencies within the firm. (P4c:A)

CONCLUSION

We present a tentative conceptual framework that illustrates how all the elements of IC interlink and depend upon one another as well as contributing to the elements within their own resources. While it is possible that a tourism firm may not have relationships in all these elements, it is nevertheless advantageous to use the framework presented here to understand the interrelationships and the transformative knowledge management processes from one element to another and their value to the organisation. The management of these relationships can result in a sustained competitive advantage if the firm is capable of maintaining a balance among the nine relationships detailed in our propositions.

However, because our framework is a first attempt, and is only a starting point on the path to understanding the complexity of the dynamics that is occurring in managing IC, it has its shortcomings and raises perhaps many more questions than it answers. For instance, how does a tourism firm identify their intellectual resources and implement appropriate knowledge management practices? And how can firms manage the knowledge within resource relationships to ensure competitiveness? This article is part of an ongoing research project and building upon the model presented here is a key part of our future research agenda.

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