A Knowledge-based Theory of the Firm To guide Strategy Formulation

Article for Journal of Intellectual Capital vol 2, Nr4.
Journal of Intellectual Capital Highly Commended Paper Award for 2001.
Final draft

www.sveiby.com
karlerik@sveiby.com

Towards a Knowledge-based Theory of the Firm

In the last two decades of the 20th century a resource-based theory of the firm (Hamel G. & Prahalad C.K, 1990), (Blackler, 1995), (Wernerfelt, 1995) has received attention as an alternative to the traditional product-based or competitive advantage (Porter, 1980) view. The resource-based perspective promises to improve understanding of strategy formulation also in firms, which are dependent on intangible resources, (Hall, 1992), such as, the rapidly growing knowledge-based services and knowledge-intensive industries (Sveiby, 1992).

(Venzin, Krogh&Roos,1998) make a distinction between three epistemologies that may guide practice and research under an epistemological perspective: the *cognitivist*, (represented by Simon 1982), the *connectionist* represented by (Zander & Kogut, 1995) and the *autopoietic* introduced by (Maturana & Varela, 1980). The cognitivist perspective assumes organisations to be open systems, which develop knowledge by formulating increasingly accurate ñrepresentationsò of the world. The more data and information organisations can gather the closer the representation will be. Hence most cognitivist perspectives equate knowledge with information and data.

According to the connectionist epistemology the organisation still ñrepresentsò its outside world, but the process of representation of reality is different. As in cognitivist epistemology information processing is the basic activity of the system.

Autopoietic epistemology provides a fundamentally different understanding of the input to a system. Input is regarded as data only. Knowledge is private, a notion which comes close to (Polanyiõs,1958) concept of ñpersonalò knowledge. Autopoietic systems are both closed and open. Open to data, but closed to information and knowledge, both of which have to be interpreted inside the system. Autopoietic systems are self-referring; the world is not seen as fixed and objective. It is constructed within the system and it is therefore not possible to ñrepresentò reality. An organisation can be seen as a group of individuals who have created an emergent common frame of reference.

Both (Nonaka & Takeuchi,1995) and (Sveiby,1997) come close to an autopoietic epistemology even if neither authors build their foundations on autopoeisis. Building on Plato and arguing against the Descartian body/mind spit, (Nonaka & Takeuchi,1995) and (Krogh, Ichijo and Nonaka, 2000) define knowledge as *a justified true belief*: *When somebody creates knowledge, he or she makes sense out of a new situation by holding justified beliefs and committing to them.* (Krogh &al.,2000). The emphasis in this definition is on the conscious act of creating meaning.

Building on (Polanyi,1958) and (Wittgenstein,1995), (Sveiby,1994,1997) defines knowledge as a *capacity-to act*, (which may or may not be conscious). The emphasis of the definition is on the action element: *A capacity-to-act can only be shown in action.* Each individual has to re-create his or her own capacity to act and reality through experience ï a view which is akin to constructivism (von Glaserfelt,1988).

Knowledge defined as a ñcapacity-to actò is dynamic, personal and distinctly different from data (discrete, unstructured symbols) and information (a medium for explicit communication). Since the dynamic properties of knowledge are in focus, the notion *Individual Competence*[1] can be used as a fair synonym.

A Knowledge-Based Theory for Strategy Formulation

The word ñStrategyò is usually associated with activities and decisions concerning the long-term interaction of an organisation with its environment. While competitive-based and product-based strategy formulation generally makes markets and customers the starting point for the study the resource-based approach tends to place more emphasis on the organisationôs capabilities or core competences.

A knowledge-based strategy formulation should thus start with the primary intangible resource: the competence of people. People are seen as the only true agents in business; all tangible physical products and assets as well as the intangible relations are results of human action, and depend ultimately on people for their continued existence. People are seen to be constantly extending themselves into their world by both tangible means, such as craft, houses, gardens and cars and intangible corporate associations, ideas, and relationships.

(McLuhan,1967), calls these intangible extensions ñmediaò. Inspired by McLuhan, (Sveiby,1997) suggests that people in organisations create *structures* in order to express themselves. Structures are not objects. Structures should be seen as constructed in a constant process by people interacting with each other, (Weick 1977, 1983). If one looks for a structure one will not find it. What one will find are events linked together. These sequences, their pathways and their timing are the forms we tend to make into objects. Most ñthingsò in organisations are such dynamic relationships, so verbs such as ñknowingò and ñorganisingò are better descriptions than the nouns knowledge and organisation.

People can use their competence to create value in two directions: by transferring and converting knowledge *externally* or *internally* to the organisation they belong to. When the managers of a manufacturer direct the efforts of their employees internally, they create tangible goods and intangible structures such as better processes and new designs for products. When they direct their attention outwards, they will in addition to delivery of goods and money also create intangible structures, such as customer relationships, brand awareness, reputation and new experiences for the customers.

Three "Families" of Intangible Resources[2]

The *External structure* can be seen as a family[3] of intangible relationships with customers and suppliers, which form the basis for the reputation (image) of the firm. Some of these relationships can be converted into legal property such as trademarks and brand names. The value of such intangible resources is primarily influenced by how well the company solves its customers´ problems, which involves an element of uncertainty. Reputations and relationships can be good or bad, and can change over time. They are partly independent of individuals.

When people direct their actions internally they create an *Internal Structure*. The family of Internal Structure can be seen to hold patents, concepts, models, templates, computer systems and other administrative more or less explicit processes. These are created by the employees and are generally "owned" by the organisation. However, the organisation can legally own only a small part of the Internal Structure. The informal powerplay, the internal networks, the "culture" or the "spirit" can also be regarded as belonging to the internal structure. It is useful to include also the competence of individuals in the Internal structure family, such as support staff, accounting, IT, HR and management in the Internal Structure family, since it is not possible to separate the internal structure from it's creators.

Internal structure is thus partly dependent, partly independent of individuals. Even if the most valuable individuals leave a company that depends heavily on them, such as a consultancy firm, at least part of both the internal and the external structures (the brand name) will probably remain intact and can serve as a platform for a new start, (Sveiby & Lloyd, 1987).

The *Individual Competence* family consists of the competence of the professional/technical staff, the experts, the R&D people, the factory workers, sales and marketing – in short all those that have a direct contact with customers and whose work are directly influencing the customers view of the organisation.

The distinction between professional/technical staff and support/managerial staff is made because their different roles determine both how they relate to each other and how they relate to the external world. Such classification so it is useful for strategy formulation and action planning. The divide between professional experts and administrative staff commonly found in knowledge-intensive firms (Sveiby 1987, 1992, 1997) is for instance explained by the theory as a lack of knowledge sharing between the two.

Leverage Knowledge Transfers/conversions to Create Value

To appreciate why a knowledge-based theory of the firm can be valuable for strategy formulation let us consider some of the features that differentiate knowledge transfers from tangible goods transfers. In contrast to tangible goods, which tend to depreciate in value when they are used, knowledge grows when used and depreciates when not used. Building up competence in a language or a sport requires huge investments in training and managerial competence takes a long time on-the-job to learn. If one stops speaking the language it gradually dissipates.

The manufacturing and transportation of physical goods from suppliers, via a factory to a buyer gave us the concept of the Value Chain. If we see the organisation as creating value from transfers and conversions of knowledge together with its customers the Value Chain collapses and the relationship should better be seen as a Value Network (Allee, 2000); an interaction between people in different roles and relationships who create both intangible value (knowledge, ideas, feedback, etc) and tangible $-value.

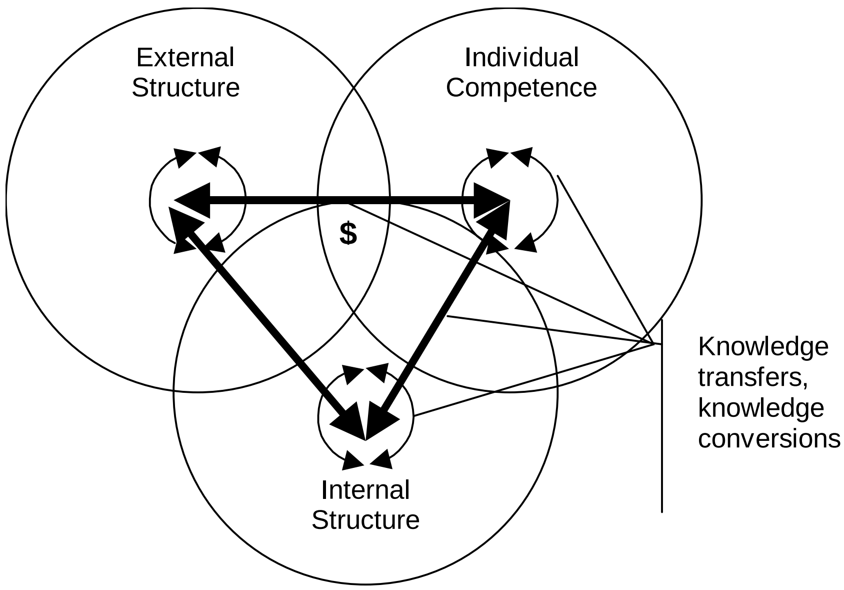

Figure 1 The Firm from a Knowledge-based Perspective[4]

In contrast to the Value Chain the intangible value in a Value Network grows each time a transfer takes place because knowledge does not physically leave the creator as a consequence of a transfer. The knowledge I learn from you adds to my knowledge, but it does not leave you. Thus, from an organisational viewpoint the knowledge has effectively doubled. *Knowledge shared is knowledge doubled*. From an individualȇs point-of-view the perspective however, is different. Here knowledge shared may be an opportunity lost if the effect of the sharing becomes lost career opportunities, extra work and no recognition. Knowledge shared can be competitiveness lost. Fear of dismissal or competition are commonly cited reasons why individuals do not share what they know or what they create.

While the above primarily is concerned with transfer of existing (often hidden and/or underutilised knowledge), another issue is the creation of entirely new knowledge. (Nonaka & Takeuchi, 1995), argue that new knowledge is created in the conversion of explicit/tacit knowledge from one type to another.

The strategy formulation issues are concerned with how to utilise the leverage and how to avoid the blockages that prevent sharing and creation of new knowledge. The key to value creation lies with the effectiveness of such transfers and conversions.

The choice of the words ñtransferò and ñconversionò may suggest one-directional movements of knowledge. This is not the intention. Knowledge transfer between two individuals is a bi-directional process, which tends to improve competence of both and teamwork tends to be a co-creation of knowledge involving the whole team. Moreover, transfer of competence depends on conversion from tacit to explicit and back to tacit again in an endless spiral (Nonaka & Takeuchi, 1995). However, it helps strategy formulation and action planning to distinguish directional components of the activities, hence the choice of words.

A resource understood as a capacity-to-act cannot be discussed without reference to people and how to motivate individuals to share and create. A long tradition of research in creativity and creative action, summarised in (Ford C. & Gioia D. ed., 1995) suggests that managerial approaches aimed at managing environments or a ñcoachingò style (Sveiby, 1990) are more appropriate than command-control of individual behaviours. (Krogh, Ichijo, Nonaka, 2000) uses the term *enabling* to describe the managerial style required.

One feature of a knowledge-based theory of the firm is that it challenges perceptions about the boundaries of an organisation. What is indeed ñthe organisationò if customers and suppliers are included as families of the firm as in Figure 1? When the importance is placed on how effective the value creation is in the whole system, the issue of whether an individual is a formal employee, a customer, a contractor, a supplier or a customer becomes less of an issue as long as the relationship generates value. An ex-employee can for instance be more valuable as a customer than as an employee, a fact long exploited by the professional services firms.

The Ten Knowledge Strategy Issues

Given the framework above we can distinguish nine basic knowledge transfers/conversions, which have the potential to create value for an organisation. Activities that form the backbone of a knowledge strategy, are to be aimed at improving the capacity-to-act of people both inside and outside the organisation.

1. Knowledge transfers/conversions between individuals
2. Knowledge transfers/conversions from individuals to external structure
3. Knowledge transfers/conversions from external structure to individuals
4. Knowledge transfers/conversions from individual competence into internal structure
5. Knowledge transfers/conversions from internal structure to individual competence
6. Knowledge transfers/conversions within the external structure
7. Knowledge transfers/conversions from external to internal structure
8. Knowledge transfers/conversions from internal to external structure
9. Knowledge transfers/conversions within internal structure
10. Maximise Value Creation ï See the Whole

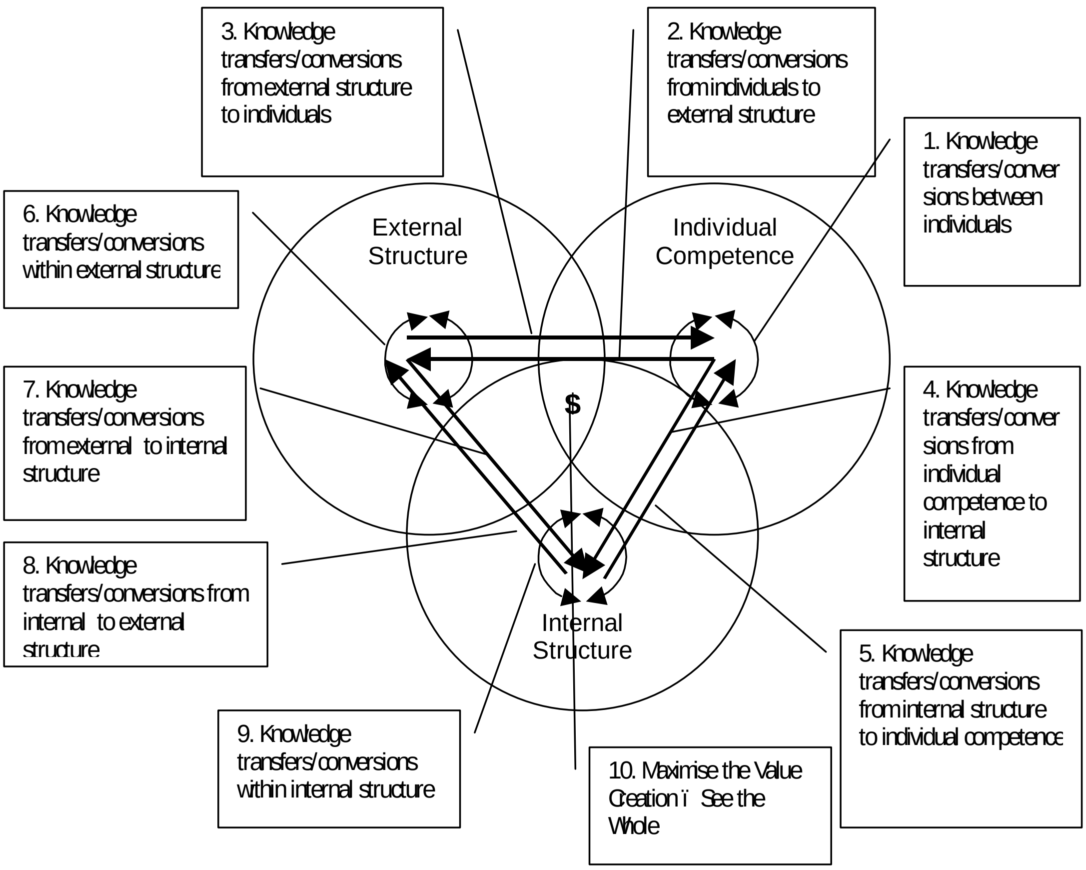

Figure 2. The Ten Knowledge Strategy Issues

1. Knowledge Transfers/Conversions Between Individual Professionals

Knowledge transfers/conversions between individuals are concerned with how to best enable the communication between employees within in the organisation and determine what types environments are most conducive to creativity. The strategic questions are: *How can we improve the transfer of competence between people in our organisation?* And: *How can we improve the collaborative climate?* The most important issues are probably concerning *trust* in the organisation. See for instance (Huener, Krogh & Roos, 1998). How willing are people to share their ideas and what they know? Answers to such questions lead towards activities focused on trust building, enabling team activities, induction programs, job rotation, master/apprentice schemes, etc.

Examples: Oticon, the Danish hearing-aid manufacturer established in 1905, has re-designed whole work areas to create an atmosphere of openness, flexibility, creativity and sharing. The company emphasizes ñliveò interaction. Stand-up coffee bars encourage impromptu meetings, and dialogue roomsò with a table and chairs help employees relax while solving problems or sharing knowledge. Oticon even locked up elevators so there would be more ñaccidentalò meetings in the stairwell. The company believes that paperwork hampers the exchange of information because it is slower and more formal than oral communication. The company therefore designated a ñpaper room,ò the only room where paper is ôsafe.ò Even electronic mail is discouraged in favor of face-to-face communication. These tactics have contributed towards live dialog becoming an integral part of Oticonôs business, so much so that other forms of communication are almost non-existent. (LaBarre, 1994)

Personnel rotation programs are common, and expose employees to expertise held locally and tacitly and are common. For instance every executive including the CEO at Southwest Airlines spends at least one day every quarter as a baggage handler, ticket agent, or flight attendant. This ñshop-floorò experience keeps the knowledge of the operation fresh in the minds of all employed. It also improves communication across all levels. (Fambare, 1989)

2. Knowledge Transfers/conversions from Individuals to External Structure

Knowledge transfers/conversions from individuals to the external structure are concerned with how the organisationôs employees transfer their knowledge to the outer world. The strategic question is: *How can the organisationôs employees improve the competence of customers, suppliers and other stakeholders?* Answers to such questions lead towards activities focused on empowering the employees to help the customers learn about the products, getting rid of red tape, doing job rotation with customers, holding product seminars, providing customer education, etc.

Examples: Consultants at McKinsey, the US based consulting firm, are encouraged to spend time on publishing their research and methods in order to build the reputation of the firm.
Baxter International markets healthcare products and has extended its offering to include service to hospitals. Baxter employees now mix drugs in intravenous solutions and act as brokers for other vendors. (Harari, 1994).

3. Knowledge Transfers/conversions from External Structure to Individuals

Employees learn a lot from customer, supplier and community feedback such as ideas, new experiences, feedback and new technical knowledge. Knowledge transfers/conversions from the external structure to individuals are concerned with how the organisation's employees can learn from the external structure. This is the counterpart of section 2. above. Organisations tend to have procedures in place that capture such knowledge (see section 7. below), but they are scattered, not measured and hence do not systematically influence strategy formulation. The strategic question is: *How can the organisation's customers, suppliers and other stakeholders improve the competence of the employees?* Answers to such questions lead towards activities focused on creating and maintaining good personal relationships between the organisation's own people and the people outside the organisation.

Examples: Adding an intangible dimension to traditional $-based sales and revenue reporting, enables an organisation to follow up such intangible revenues (Sveiby 1998). Employees at Betz Laboratories in Trevose, Pennsylvania, frequently participates in its customers' quality management teams in order to gain a better understanding of, and even anticipate, customer needs. This knowledge is used to develop products that will boost customer sales. Betz measures value added from this knowledge by tracking its customers' return on investment, and its own employees receive awards for outstanding efforts to increase these returns. (Garvin, 1993)

4. Knowledge Transfers/conversions from Competence to Internal Structure

Huge investments are currently being made in order to convert competence (often tacitly held) individual into data repositories. According to IDC worldwide KM services spending will increase at a compound annual growth rate (CAGR) of 41%, from $2.3 billion in 2000 to $12.7 billion in 2005, (IDC, 2001). The idea is that information in such repositories will be shared with the whole organisation. Indeed, the marketers of database software have been so successful that many managers believe that buying a database is equal to "Knowledge Management". My argument is that it is only one of nine possible strategic activities. To focus one's investments on databases and document handling etc. will realise only a fraction of the value of a more strategic approach based on a knowledge-based theory of the firm, which comprises all nine knowledge transfers/conversions.
The strategic question is: *How can we improve the conversion of individually held competence to systems, tools and templates?*

Answers to this question lead towards activities focused tools, templates, process and systems so they can be shared more easily and efficiently.

Examples abound: AI systems for medical diagnostics, intranets, document handling systems, databases, etc.

The key to create value from database or intranet system is not the sophistication of the technology but on the climate in the firm and the level of involvement from all agents in the system. The US chemicals manufacturer Buckman Labs is well-known for nurturing a collaborative climate despite the fact that its 1,300 associates are spread all over the world. The company has been using electronic means for capturing experiences and information since 1987. Itõs new products to sales ratio went from ~25% to >35% when it began involving the customers in their intranet in 1994 (Buckman, 2001).

5. Knowledge Transfers/conversions from Internal Structure to Individual Competence

This is the counterpart of 4. above. Competence ñcaptured in a systemò is information and this information needs to be made available to other individuals in such a way that they improve their capacity to act; otherwise the investment is a waste. IT systems can by definition only produce information. The key to value creation is whether the information generates competence. The strategic question is: *How can we improve individualsõ competence by using systems, tools and templates?*

Answers to such questions lead towards activities focused on improving the human-computer interface of systems, action-based learning processes, simulations and interactive e-learning environments.

Examples: IKEA, the Swedish furniture company, uses customised simulations for speeding up the learning of its warehouse employees.

The Copeland Corporation, a manufacturer of compressors, changed its entire manufacturing approach based on the results of a single demonstration effort, in which a multifunctional team designed a demonstration factory to manufacture a new product line. Experimentation, whether an ongoing program or a demonstration project, helps individuals move from superficial knowledge to a more basic understanding of its processesð from knowing about something to learning how and why. The corporation was able to transform from a high cost operation with marginal quality to a 25 percent market share in two years. (Garvin, 1993)

6. Knowledge Transfers/conversions within the External Structure

What do the customers tell each other about the services/products of a supplier? How are the products used? The conversations among the constituencies can have an enormous impact on a strategy of a company. Strategy formulation from a knowledge perspective adds a richer range of possible activities to traditional customer satisfaction surveys and one-way PR-activities. The company can support the competence growth of customers and influence how competence is transferred also between the stakeholders in the external structure. The strategic question is: *How can we enable conversations among the customers, suppliers and other stakeholders to improve their competence to serve their customers?*

Answers to such questions lead towards activities focused on partnering and alliances, improving the image of the organisation and the brand equity of its products and services; improving the quality of the offering; conducting product seminars and alumni programs.

Examples: Danish biomedical producer Novo actively engages in building local communities to improve the image of its products in its local community. Book publisher Berrett-Koehler runs seminars for its book buyers featuring its authors as speakers.

7. Knowledge Transfers/conversions from External to Internal Structure

Knowledge Transfers/conversions from External to Internal Structure are concerned with what knowledge the organisation can gain from the external world and how such new knowledge can be converted into action. *The strategic question is: How can competence from the customers, suppliers and other stakeholders improve the organisationõs systems, tools & processes and products?*

Answers to such questions lead towards activities focused on empowering call centres to interpret customer complaints, creating alliances to generate ideas for new products, R&D alliances, etc.

Example: Frito-Lay, the US potato chips maker provides an interesting case of product differentiation of a commodity. The company uses its sales force to collect data about their customers. The data are analysed and fed back to their sales people empowering them with superior customer knowledge and competitive intelligence. Frito-Lay representatives not only use the information themselves, but they also give it away for ñfreeò provided the shop buys their potato chips rather than their competitiorsô

8. Knowledge Transfers/conversions from Internal to External Structure

This is the counterpart of 7. above. The strategic question is: *How can the organisationõs systems, tools & processes and products improve the competence of the customers, suppliers and other stakeholders?*

Answers to such questions lead towards activities focused on making the organisationõs systems, tools & processes effective in servicing the customer, extranets, product tracking, help desks, e-business, etc.

Examples: Ernst & Young has created a tax and legal database, ñErnieò, which allows its clients to tap into the data sources used also by its own consultants.

Ritz Carlton, the hotel chain renowned for its service, has installed a customer information database with global access. All staff are required to fill in cards with information from every personal encounter with a guest. These data plus guest profiles are stored and made available to staff in order to ensure personal treatment of all guests.

9. Knowledge Transfers/conversions within Internal Structure

The internal structure is the supporting backbone of the organisation. The strategic question is: *How can the organisation's systems, tools & processes and products be effectively integrated?* Answers to such questions lead towards activities focused on streamlining databases, building integrated IT systems, improving the office layout, etc.

Example: Again, this is a field dominated by Enterprise Systems and other company-wide IT solutions. KnowledgeCurve, PricewaterhouseCooper's intranet integrates several thousands of databases previously held individually or locally.

10. Maximise Value Creation – See the Whole

The nine knowledge transfers/conversions exist in most organisations. However, they tend not to be coordinated in a coherent strategy, because management lack the full perspective that a knowledge-based theory may give them. Most organisations also have legacy systems and cultures that block the leverage. Therefore many of good initiatives go to waste or neutralize each other.

Investment in a sophisticated IT system for information sharing is for instance a waste of money if the organisation's climate is highly competitive – only junk will be shared. Reward systems that encourage individual competition will effectively block efforts to enhance knowledge sharing. Lack of standards and poor taxonomies reduce the value of document handling systems. A program for knowledge sharing with customers is neutralised by red tape protecting commercial secrets. Efforts to use ex-employees for building marketing relationships are useless if people leave the firm alienated or alumni programs are delegated to the administrative function. Data repositories do not improve individuals' capacity to act unless the databases are made highly interactive.

The Affärsvärlden case (see below) illustrates how important it is to integrate all activities in a strategic framework, so they leverage each other and do not neutralise investments made in other areas.

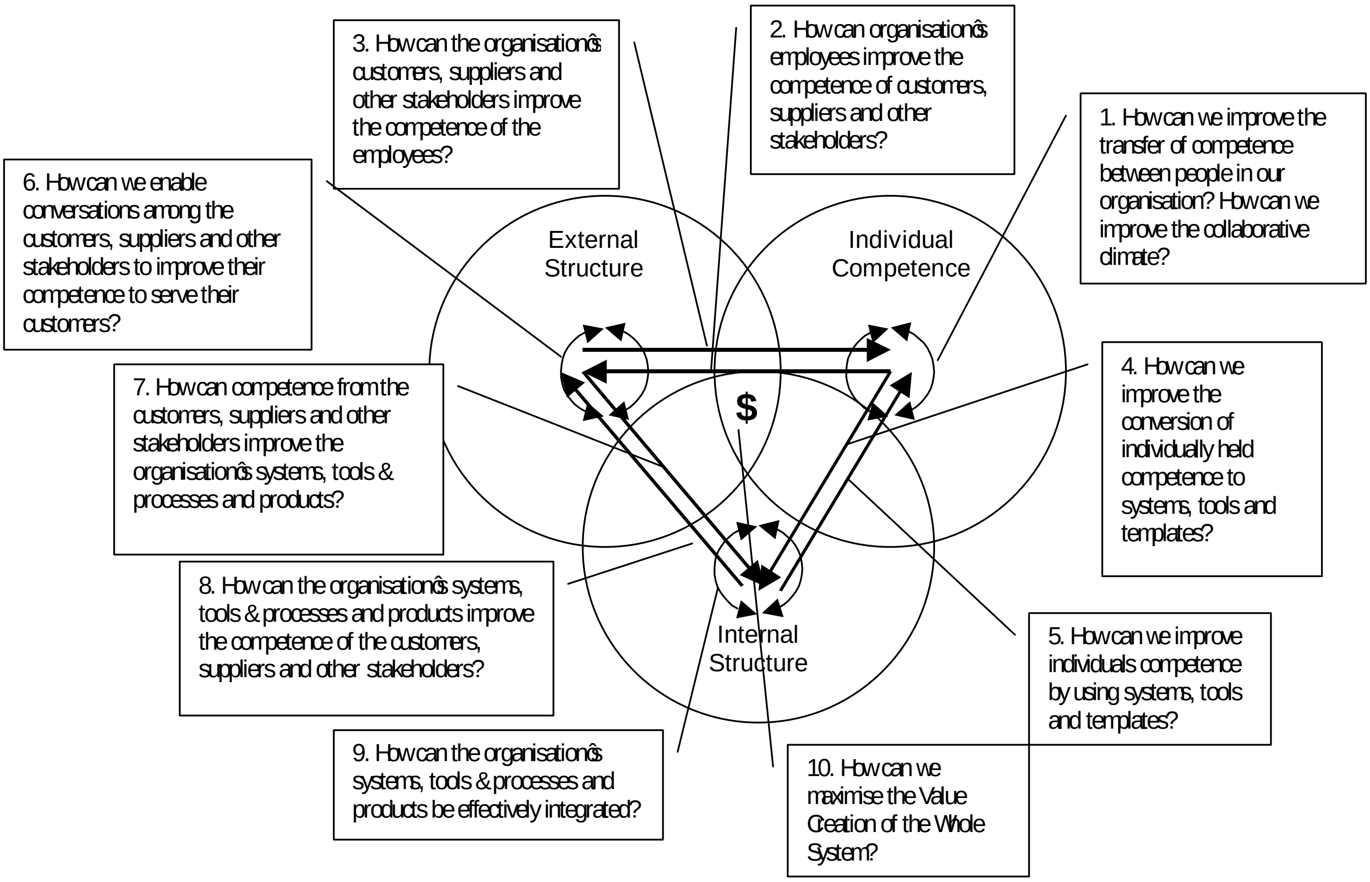

Figure 3. The Ten Knowledge Strategy Issues

Affärsvärldenôs Knowledge-based Strategy

The competition between the two weekly Swedish business magazines Affärsvärlden (AFV) and Veckans affärer (VA) offerôs a vivid illustration of the value of a knowledge-based strategy in publishing, one of the oldest industries on earth. There are substantial advantages of scale in the printing process, since loading the press with plates and paper and adjusting it represents a large fixed cost; after that, the marginal cost of printing the second copy is no more than maybe 10% of the average cost. Thus the larger the imprint, the lower the cost per page. The leverage is not as extreme as copying a CD, but not far from it.

The cost advantage enjoyed by a larger paper enables it to hire good journalists and maintain a higher overall level of editorial quality. This can be a ticket to a virtuous circle of more readers who provide more resources, which enable better quality, which attracts more readers, etc.

Even if the smaller magazine keeps lower prices than the larger, the larger and (for the magazine) more profitable advertisers tend to prefer to place their ads in a large magazine, because it gives them access to a larger audience. Publishers know that, once established, the largest newspaper or magazine in a market is a licence to print money.

AFV, being less than one tenth the size of VA was close to bankruptcy in 1977. The printing costs alone were 30% higher for AFV, even though its pages contained only half as much full-color print as VA´s. The journalõs new owners in 1978 thus faced a formidable competitive barrier and had no alternative but to try a different strategy than VA. AFV adopted a more *knowledge based strategy.*

Affärsvärlden´s Knowledge Strategy

The knowledge strategy gave Affärsvärlden a distinct competitive advantage on the market for financial information. The strategy and some of the activities went against ñcommon senseò in publishing, but its ultimate success made Affärsvärlden a ñcult publicationò in the 1980s and created a following among other journals and publishers in the country. A summary of Affärsvärlden´s knowledge strategy is found in Figure 4. below.

Sveiby (1994) identified two features that contributed most of the difference in margin during the period 1980 - 1993:

1. **High editorial productivity.** In 1983-84 the AFV journalists wrote twice as many pages as their colleagues on the VA staff (133 compared to VA´s 62). This difference in editorial productivity was sustained for 15 years. The knowledge-based strategy initiatives were:
   - ♦ <u>Recruit highly educated staff</u>. AFV journalists had access to more expertise in-house because they all had MBAs or higher, whereas VAõs journalists rarely held such degrees. Higher education also gives competence in information processing.
   - ♦ <u>Create Collaborative climate.</u> No individual by-lines on the articles reduced the traditional competitive climate among journalists. Articles written by teams, ñpiggy-backingò at interviews and master/apprentice model supported tacit knowledge transfer. Open office design (also in sales departments and for managers) supported informal information knowledge transfers/conversions.
   - ♦ <u>Build flat organisation.</u> Visible managers, employee ownership and profit sharing contributed to a shared vision and the collaborative climate.
   - ♦ <u>Invest in new editorial technology</u>. AFV was at least one year faster than the competitor VA, sometimes 2 years, in implementing the new technologies that revolutionised publishing during the 1980s.
   - ♦ <u>Computerise analytical models</u>. AFVõs analysts were early in computerising their analytical models and basic number crunching. Computerisation freed up time to do more qualified analyses.
2. **Low Staff turnover.** The financial markets in the 1980s were exploding (such as the IT markets in the 1990s) and AFVõs financial analysts were prime targets of the investment bankers. The *ownership model* and the *collaborative culture* were the strategic initiatives

that worked as ñgolden handcuffsò and kept the staff turnover at 5-7% throughout the whole period, while VA suffered at least twice the turnover.

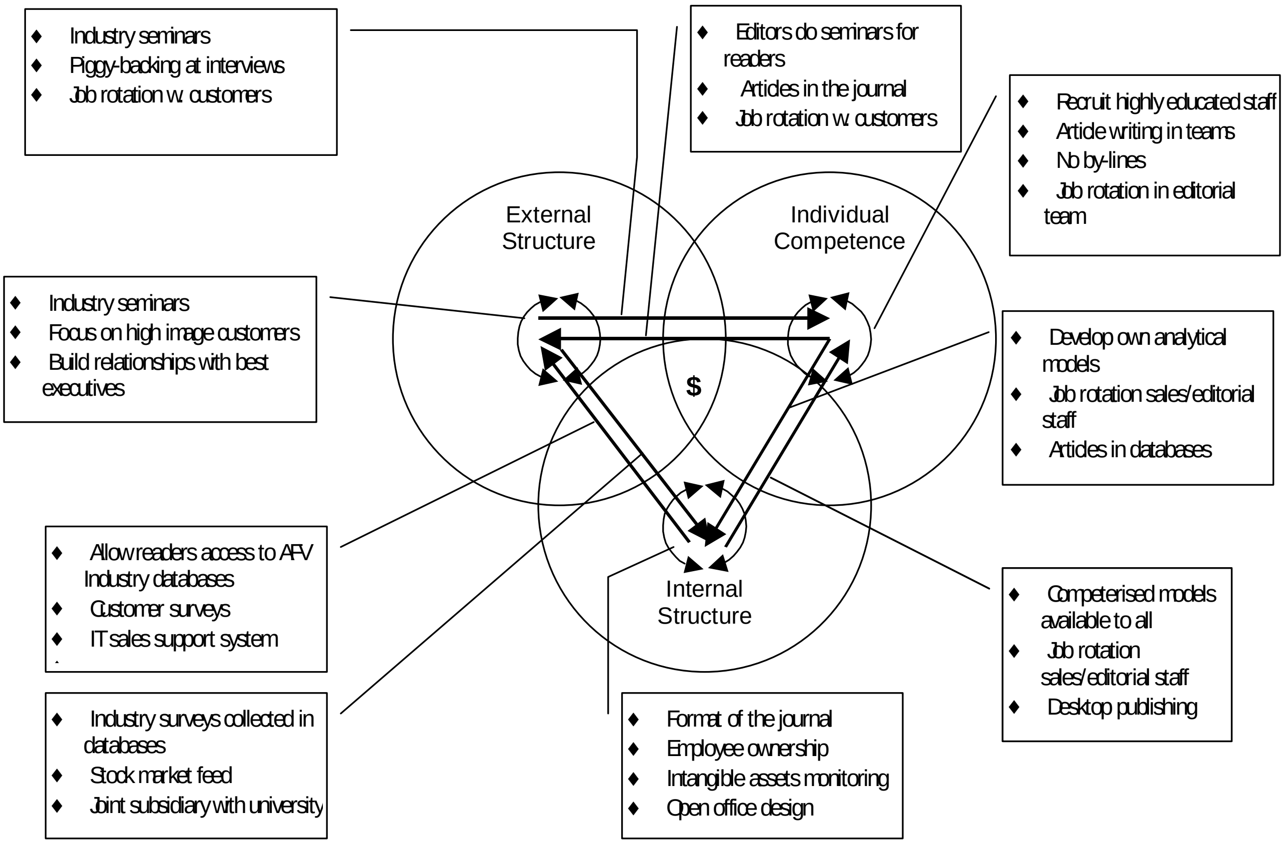

Figure 4. Affärsvärldenôs Knowledge-based Strategy

AFV proved the value of its strategy by being more profitable than VA almost the whole period, see below, figure 5.

When the depression of the nineties hit the Swedish financial markets, both magazines came under heavy pressure. VA was hardest hit because its editorial concept involved high fixed costs. AFV had lower fixed costs and a much more flexible concept and was thus able to adjust rapidly by reducing the number of pages and cutting down its fixed costs. AFV continued to operate at a profit while VA went into the red.

Veckans Affärer´s problems caused its publishers to decide, with effect from March 1994, to split it into two journals: a smaller, cheaper weekly with a different concept and a more expensive monthly.

After 18 years (!) of single-minded head-on competition, AFV had forced the leader to move out. Affärsvärlden continues to this day (year 2001) to be one of the most profitable weeklies on the Swedish market.

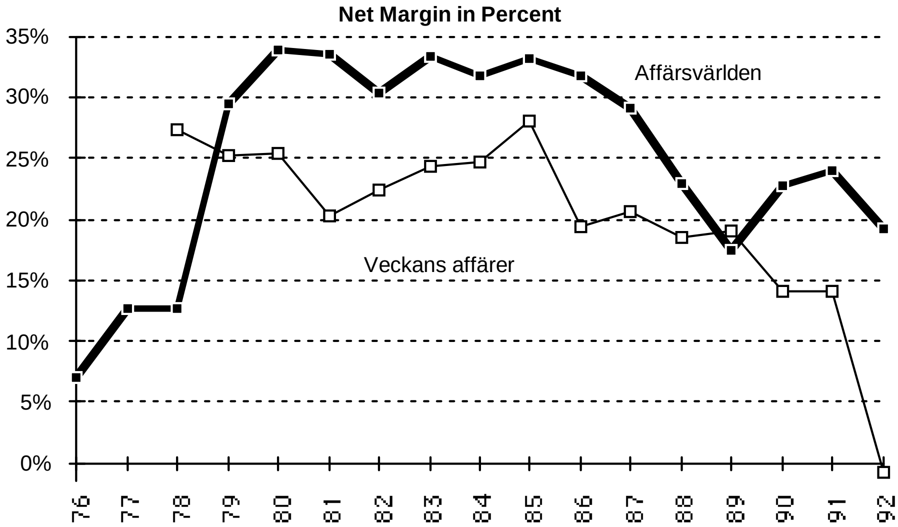

Figure 5. Affärsvärlden maintained a higher profitability than the main contender Veckans affärer during most of the period.

Implications for Future Research

This article is seeking to explore the practical implications of an epistemological approach to strategy formulation. In doing so it tries to expand the field of Knowledge Management and Intellectual Capital beyond its operational and often inwardly technological focus to encompass the possibility of a new theory of the firm. It is beyond the scope of a single article to more than scratch the surface of the far-reaching topic. Whether the approach is fruitful and whether the theories will stand a closer empirical and theoretical scrutiny are questions for future research.

END

References

Allee V. (2000): *Reconfiguring the Value Network*, Jrnl of Business Strategy, Vol 21, N 4,2000

Blackler F. (1995): *Knowledge, Knowledge work and organisations: an overview and interpretation.* Organisation Studies vol 16 (6) 1021-46

Buckman R. (2001): Presentation in Sekunda, South Africa

Fambare A. (1989): *The Trust Gap*, Fortune, December 4

Ford C. & Gioia D. (ed. 1995): *Creative Action in Organizations ï Ivory Tower Visions and Real World Voices*. Sage USA.

Garvin (1993): *Building a Leaming Organisation*, Harvard Business Review, July-August 1993

Glasersfeld E. von (1988): *The Constructon of Knowledge, Contributions to Conceptual Semantics.* Intersystems Publications, Salinas California.

Hall (1992): *The strategic analysis of intangible resources*. Strategic Management Journal, vol 13 pp135-144.

Hamel G. & Prahalad C.K (1990): *The Core Competence of the Organisation*. HBR May-June1990.

Harari O (1994) *The Brain-Based Organisation*, Management Review, June

Huener L, von Krogh G., Roos J. (1998): *Knowledge and concept of trust*. In Krogh, Roos, Kleine (ed. 1998) Knowing in firms, Understanding, Managing and Measuring Knowledge, Sage London

IDC (2000*): Worldwide Knowledge Management Services Spending Will Exceed $12 Billion by 2005.* http://www.idcresearch.com/Services/press/PR/GSV060501pr.stm

LaBarre P (1994): *The Dis-Organisation of Oticon*, Industry Week, July 18

Maturana & Varela (1980): *Autopoeisis and Cognition*. London Reidl

McLuhan M. (1967): *Media* . Pan Nordstedts.

Nonaka & Takeuchi (1995): *The Knowledge Creating Company*. Oxford University Press

Polanyi M. (1958): *Personal Knowledge*, Routledge&Kegan Paul.

Porter M. (1980): *Competitive Strategy* New York Free Press

Simon Herbert (1982): *Models of Bounded Rationality*. Volume 2. MIT Press.

Sveiby (ed 1989): *Den osynliga balansräkningen* (õThe Invisible Balance Sheetö), Affärsvärlden-Ledarskap

Sveiby (1992): *Strategy formulation in Knowledge-intensive industries.* In Hussey (ed) International Review of Strategic Management vol 3, 1992.

Sveiby KE & Risling A (1986): *Kunskapsföretaget*, (The Knowhow Company) Liber.

Sveiby KE & Lloyd T, (1987): *Managing Knowhow*, Bloomsbury London.

Sveiby KE (1990): *Kunskapsledning*, (Knowledge Management) Ledarskap Stockholm

Sveiby KE (1994): *Towards a Knowledge Perspective on Organisation*. University of Stockholm PhD dissertation.

Sveiby KE (1997): *The New Organisational Wealth ï Managing and measuring Knowledge-Based Assets.* Berrett-Koehler, San Fransisco.

Sveiby (1998): *Intangible revenues*. Article, www.sveiby.com/IntangibleRevenues.html

Venzin, von Krogh G., Roos J. (1998): *Future Research into knowledge management*. In Krogh, Roos, Kleine (ed. 1998) Knowing in firms, Understanding, Managing and Measuring Knowledge, Sage London

Zander, U., Kogut, B., (1995): *Knowledge and the speed of transfer and imitation of organisational capabilities: an empirical test.* Organisation Science 6 (1): 76-92.

Weick K. (1977): *Enactment Processes in Organisations* in Staw & Salancik (eds): New Directions in Organisational Behaviour, St Clair .

Weick K. (1983): *Managerial thought in the Context of Action* in Srivastava (ed) The executive Mind Jossey Bass .

Wernerfelt (1995): *The resource-based view of the firm: ten years after*. Strategic Management Journal 16:171-174

Wittgenstein L. (1995): *Philosophical Investigations*. (Orig 1953). Blackwell 1995

---

[1] The Latin root competo simply means that an actor has sufficient ability to fulfil his/her goals.
Competence is defined as know-how + the ability of reflection. It is the expertise of mastering the rules of the profession so well that they no longer need to be obeyed. Competence in Polanyi´s sense implies the ability of know-how within a certain domain and the ability not only to submit to the rules but also by reflection influence the rules of the domain or the tradition. Competence is thus not a property but a relation between individual actors and a social system of rules. A person is competent within a tradition:

In a competent mental act the agent does not do as he pleases, but compels himself forcibly to act as he believes he must.

Polanyi (1958) also makes an illustration of incompetence:

We draw here a distinction between two kinds of error, namely scientific guesses which have turned out to be mistaken, and unscientific guesses which are not only false but incompetent.

An individual is thus not competent per se, rather it is the individual in a role and in a context who is competent or not. In order to change the rules a competent individual needs a social or communicative knowledge in addition to know-how.

[2] The distinction between three classes of ñKnowledge Capitalò, dividing it into ñIndividual Capital, Customer Capital and Structural Capital was originally proposed in Sveiby (1989).

[3] The notion of *Family* was suggested by Wittgenstein (1995). A family is a grouping based on common properties. Its contrast is the *Category*, which is a grouping based on division between mutually exclusive properties.

[4] Who first came up with the idea to use a Venn diagram to depict the interactions between the three components is unclear. I would like to acknowledge Hubert St Onge and Charles Armstrong, both Toronto.