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Contents

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Innovation and Knowledge Sharing - Essentiality in Today's Business World

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Dear Readers, The EBS Review you are currently holding is quite different to previous issues. This time the process of putting the journal together was much longer and more time consuming.

Our approach to the scope of the journal has changed. We now have a permanent editorial board consisting of well-known and distinguished academics and specialists in their fields. This team, from around the globe, now assists us with the review, evaluation and selection of articles worthy of publication. As the members of this new board are all high-level specialists they demand high standards, and therefore, each article is now reviewed a number of times before being accepted. This presents us with something of a problem however, because from among the 25 papers submitted, only 9 were selected as being suitable. We hope you find these articles both interesting and useful.

This particular issue is about innovation and knowledge sharing – significant topics in today's business world. We have all entered a new era and everything around us is changing so rapidly and in such an atmosphere innovation plays an important part in every field of human activity. Without innovation it is difficult to cope, to remain competitive and to succeed, but without sharing knowledge we are loosing the opportunity to learn from others.

The articles gathered in this issue all explore the notion of innovation and new knowledge – innovation in marketing, in accounting, in leadership, in professional development, in education, etc. We find sharing this with you being important and that is why these articles are written from various perspectives by the authors coming from different countries and write about the results of their endeavours as they apply to their own specific context.

The first article 'Developing the International Technology Transfer Potential of Innovative SMEs' written by **Tiit Elenurm, Erik Terk, Alasdair Reid** and **Silja Kurik,** explores the relationships between innovation, marketing and knowledge sharing in the context of East-West technology transfer. In the article, the potential of innovative SMEs for international technology transfer is treated as the combination of a number of specific areas – technology transfer and networking needs, entrepreneurship capabilities and market focus, innovative capabilities, knowledge sharing, networking and learning capabilities. This approach serves as a departure point for an EU-supported project – "Development of the innovative entrepreneurship potential of SMEs as knowledge-sharing trans-national technology transfer partners (EW ISME)". The paper presents the theoretical background of the topic, compares pre-survey results in Estonian SMEs with similar results from SMEs in five West-European nations participating in the EW ISME project and discusses some key questions for further research. Comparative analysis enables us to highlight specific development needs in Estonian SMEs that can be taken into consideration during subsequent stages of the EW ISME project.

It seems that innovation is being promoted everywhere we look – in the EU, in national governments, within regional development programs and by business leaders. Governments seek to improve employment prospects through positions that add value, whereas firms hope to ensure a sustainable future in an ever more competitive landscape.

'Market Understanding as a Determinant of Innovation Success in SMEs' written by **David Birchall** and **Malcolm Armstrong** presents findings derived

from a European survey and compares these findings with models and opinions from recent literature. Particular focus is placed on the relationships between individual elements of market understanding as well as on innovation performance. The authors show that successful innovative executives are capable of balancing the need for processes and procedures while appreciating the more ephemeral aspects of behaviour and culture. Their results suggest that organisations should adopt an explicit innovation process. This should be a mix of processes and procedures as well as particular behaviours. The authors believe that many organisations may simply see this as being part of the marketing function, or the role of the executive board, but it needs to go beyond simply tracking changes in customer needs and preferences to include the geopolitical landscape as well as technological trends.

'Regional Long-Term Development of Innovative Capability in SMEs' is based on the view that the innovative capability of small and medium-sized enterprises is most efficiently supported by regional innovation services that combine 'fast action' and 'strategic co-operation' measures. The authors **Risto Pulkkanen, Matti Lintuniemi** and **Kari Kempas**, present a summary of results from a survey undertaken in 2002 among client companies to find out about their views and experiences of the service model. Their regional model corresponds to the goals of the Finnish national innovation system, and is thus also consistent with EU innovation policies. As an illustrative case, their paper discusses the regional innovation service model developed at Helsinki University of Technology – Lahti Centre, for the Lahti Region in southern Finland.

The article 'Innovative Technologies and Right Pricing Decisions in Marketing' by **Cezar Scarlat,** presents a model for establishing the right pricing strategy in marketing – a model that is most useful when innovative new technology emerges. This model is based on the author's original method, DISTEH (i.e. technical distance), for assessing the level of technical performance and he asserts that the result is applicable across a broad range of business contexts.

Brent McKenzie in his paper 'The Impact of Culture on Retail Service Quality Measures in Estonia' finds that the continuing need to expand and extend the external validity of marketing principles and constructs beyond the major economic regions of the West continues to be a challenge for marketing researchers. He suggests that cross-cultural studies help provide a response to the criticisms raised by academic researchers that in order to extend and validate developed Western (predominantly American) models and survey instruments, empirical research must be broadened to encompass non-Western regions. The aim of his study is to address this issue by looking at one particular marketing phenomenon, retail service quality, in a non-western market, the Republic of Estonia, through established cross-cultural research. This is supported through consumer retail service quality data that was collected using a two-part qualitative research methodology–the critical incident technique (CIT) and research focus groups–in the Republic of Estonia.

For any organization to thrive in today's business environment, it must deal effectively with global competition and the rapid pace of technological change. It has become evident that the Internet has played a vital role in transforming business in the new millennium. As an innovative tool, the Internet is gradually entering our lives and improving cost effectiveness, catalyzing disintegration and increasing convenience for businesses and their consumers.

The focus of 'E-Broking as an Innovative Tool for Marketing Financial Services' – an article by **Madan Lal Bhasin** – is the "marketing of financial services," with special emphasis on 'e-broking'. The author states that there are certainly challenges for e-broking but despite these, the industry seems like a sector set to grow day-by-day. He concludes that paperless environments, virtual organizations, mass customizations, and the Internet-based customer services are some of the hallmarks of organizations in the new millennium.

Innovation as a process providing improved capabilities and opportunities is essential in every field of human activity. In the article – 'Leadership Style as a Determinant of Creativity Profiles in Estonian Organizations' – the authors **Ruth Alas** and **Krista Tuulik** state that at the beginning of the 21st century, in the economic context, we have to speak about competitive advantage. In marketing and sales the key words are "being competitive", but this is also an essential aspect in human resource management, production management, etc. Basically, the core concept is – being competi-

tive. Competitiveness is related to the management of constant change, innovation, creativity and leadership, and the latter being related also to values.

In this hyper competitive environment we have to admit that colleges and universities are also facing increased competition from the growing number of education providers. This competition is present both in traditional and electronic or online forms. Society is demanding new services and students are constantly seeking the most promising workforce training available. E-business is a type of "radical innovation" and presents opportunities for external growth as well as internal efficiencies.

The article 'Innovation in Education: The Concept of Radical Innovation Adoption' by **Mary Beth Klinger** addresses how educational institutions can most effectively integrate e-business practices and processes into their institutional framework to more effectively serve their stakeholders. The article examines the relationship between four organizational capabilities – organizational learning, market orientation, business process orientation, and technological opportunism – to determine if educational institutions who are more aligned with these capabilities are additionally more likely to utilize e-business and radical innovation adoption in their organizations.

Last but not least, **Marja-Liisa Tenhunen** has written an article about the professional growth of accounting agency entrepreneurs. The author explains that the accounting agency profession in Finland is undergoing major changes and currently the development of the accounting agency system has advanced further in Norway than in Finland. Her study highlights elements of the profession such as value chain considerations in professional services, market protection showing the maturity of the profession and the internal professional monopoly in the area of accounting agency entrepreneurs. And the results of the study provide new insights into the development needs of Finnish and Norwegian accounting agency fields from the points of view of business and educational sciences. The beneficiaries of the results are accounting agency entrepreneurs and the national accounting organisations in both countries as well as several educational institutes.

This ends my short introduction to the articles gathered in this issue. They have all gone through a time consuming process of review and evaluation, and the authors have risen to the new requirements set for this publication. We consider the topics covered to be important and hope, dear readers, you can find something interesting to discover. We would also like to show our gratitude to the authors, editors and partners, indeed to everybody who has helped us to prepare this issue for our readers. Wishing you all a pleasant and stimulating read.

On behalf of the editorial board

Mari Kooskora
Editor-in-Chief

Developing the International Technology Transfer Potential of Innovative SMEs

Tiit Elenurm, *Estonian Business School*
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Abstract

Keywords: technology transfer, market orientation, East-West co-operation, innovative capabilities, knowledge development needs

This paper explores relationships between innovation, marketing and knowledge sharing in the context of East-West technology transfer. The potential of innovative SMEs for international technology transfer is treated as the combination of: technology transfer and networking needs, entrepreneurship capabilities and market focus, innovative capabilities, knowledge sharing, networking and learning capabilities. This approach served as a departure point for an EU-supported project "Development of the innovative entrepreneurship potential of SMEs as knowledge-sharing trans-national technology transfer partners (EW ISME)". The present paper provides the theoretical background of the topic, compares pre-survey results in Estonian SMEs with results of SMEs in five West-European nations participating in the EW ISME project and discusses some key questions for further research. Comparative analysis enables us to highlight specific development needs in Estonian SMEs that can be taken into consideration during subsequent stages of the EW ISME project.

Introduction

Innovative SMEs and their development partners in five West-European states and in two new East-European member states are involved in the project, "Development of the innovative entrepreneurship potential of SMEs as knowledge-sharing trans-national technology transfer partners (EW ISME)", launched in Autumn 2003. The project is co-ordinated by the Executive Training Centre of the Estonian Business School. Other project team members include: Estonian Institute for Future Studies, Aide a la Decision Economique S.A. (ADE s.a.) from Belgium, Thames Valley Technology and Henley Management College from the United Kingdom, Helsinki University of Technology – Lahti Centre, Hungarian Computer and Automation Institute MTA SZTAKI, National Institute of Technology from Norway and DemoCenter s.c.a.r.l. from Italy.

One objective of EW ISME is to develop, implement, validate, and disseminate the new methodology for integrating assessments of the innovative and knowledge-sharing potential, action research and the learning cycle into one process by using demonstration projects that specify entrepreneurial and managerial competence profiles for trans-national technology transfer. An essential part of the project is to develop and test a tool for assessing innovative and technology transfer capabilities of SMEs. Innovative SME-s are interpreted as firms in so-called technology driven sectors such as IT or biotechnology, as well as SME-s in other sectors, whose involvement in or dependence on technological innovations is higher than average.

The paper discusses opportunities and challenges for developing and implementing such methodology from the point of view of understanding the

link between technology transfer needs and capabilities of SMEs from new EU member states in the international technology transfer process. Pre-survey results of Estonian enterprises are compared with the West-European results in order to reflect differences that are relevant for understanding development challenges for the innovative capabilities of SMEs in new EU member states. The basic conceptual framework for the pre-survey was developed by Tiit Elenurm and further refined by Alasdair Raid, Jacek Walendowski, Erik Terk and Silja Kurik. The pre-survey was carried out by EW ISME consortium members in seven countries on the basis of questionnaires that were compiled by Alasdair Raid and Jacek Walendowski at ADE s.a. in Belgium. The Estonian SME information was collected and processed by Silja Kurik at the Estonian Institute for Future Studies and by Marius Kuningas co-operating with the Executive Training Centre of the Estonian Business School.

The present paper has two objectives:

- to explain the conceptual framework that has directed our efforts to create a tool for assessing the innovative and technology transfer capabilities of SMEs;
- to analyse basic differences between pre-survey results in Estonian innovative SMEs and the results for SMEs of five West-European countries from the point of view of developing their international technology transfer capabilities in the European Union.

Innovative Capabilities in the East-West Technology Transfer Context

Innovative capabilities of new member states in the enlarged European Union have been studied in a national innovative capacity framework that organises indicators into four groups: research and development supply, demand (market pull) for R&D and innovation, capacity to absorb new knowledge and capacity to diffuse innovations. New East–European member states all have, at present, a low demand for R&D, but absorptive and diffusion capacities are higher in Estonia, Slovenia, Czech Republic and Hungary (Radosevic, 2003). Gaps in the innovation infrastructure and framework conditions in Estonia are connected to limited access to capital for new technology based firms, limited number of intermediary organisations to support technology transfer and innovation, weaknesses in quality management testing, quality of training in new technologies and also the lack of pro-active diagnosis and advice services that could link technology to business performance (Reid 2002). A pro-active diagnosis assumes an understanding of the institutional and competitive environment of business actors. Assessing organisational capabilities and factors that shape these capabilities are however, equally important assumptions for diagnosing and improving the competitiveness of enterprises.

Obtaining and sustaining competitive advantage through the development of specific organisational capabilities has become an important focus in the field of corporate strategy. Core competencies in organisations are linked to business concept innovation and reframing value chains as the main way of competing for the future (Hamel and Prahalad 1994; Hamel 2000; Normann 2001). The organisation's ability to achieve innovative forms of competitive advantage is referred to as dynamic capability. It is the ability to integrate, build, and reconfigure internal and external competencies to address rapidly changing environments (Teece et al 1997). Dynamic capability requires constant knowledge flow within and outside the organisation and a continuously updated knowledge repository. Overcoming spatial boundaries of organisations, smoothing knowledge flow, promoting cross-functional and inter-organisational interaction as the primary methods of sharing tacit knowledge and introducing flexible structures have been pointed out among enablers of dynamic capabilities (Wang & Ahmed 2003). The capacity to innovate has been treated as a key driver in the management of innovation and includes: a culture that encourages innovation, internal processes capable of integrating information from different sources and the capacity to understand the business implications of technological and market trends (Neely *et al* 2001). EW ISME is focused on understanding and developing dynamic capabilities of small and medium-sized enterprises that are interested in international technology transfer and are involved in product or process innovations. A tool for assessing the innovative and technology transfer capabilities of SMEs should assist their managers in relating their technological know-how and development ambitions to entrepreneurial strategies, market position and organisational practices that form the bases of their core competencies. Understanding relationships between innovative performance, processes and barriers is another important path that has to be followed.

The adaptability of an organisation can be defined as the organisation's ability to capitalise on emerging market opportunities that will imply changes in its strategic posture (Oktemgil and Greenley 1997). Adaptability is facilitated by technology, market, and organisation related factors (Tidd *et al* 1997). It has been suggested that a superior learning environment will leverage the use of all resources that accompany a market orientation (Baker and Sinkula 1999), and that market-oriented organisations are more innovative in introducing new products (Lukas and Farell 2000). Positive interplay between an organisation's adaptability and ability to innovate through new product commercialisation has been found to be linked to global market monitoring, commitment of employees, and customer and technology linking. As such, market-driven business logic can, however, have a negative association with the ability to innovate if technology searching and monitoring is not an essential part of the business logic (Tuominen *et al* 2003). Managers have to understand how technology-driven industries mature through the creation stage with high vendor power and emerging dominant design to the stage where power shifts from vendors to customers (Kampas 2003). One challenge of the EW ISME project is to deepen understanding of the interplay between technology-driven and market-driven development drivers taking into consideration the different resources and market positions of innovative SMEs in Eastern and Western Europe. East–European SMEs have to assess their realistic business opportunities to reach early adopters at the creation stage in order to attain high vendor power for an innovative product or process versus following the dominant design and introducing incremental innovations in a more customer-focused and adaptive way than their competitors

The values that a company chooses can also be treated as part of its distinctive competencies (Argandona 2003). Managers in externally focused cultures tend to perceive a relatively higher proportion of strategic problems than managers in internally focused cultures. Managers in organic process cultures tend to perceive a relatively higher proportion of unstructured problems than managers in mechanistic cultures. Organisational culture and memory are two central and interrelated aspects of collective learning (Berthon *et al* 2001).

On the organisational level, the ability to process new information is influenced by the distribution of prior related knowledge residing in individual members of the organisation and by ability to diffuse information across these individuals. If the members of an organisation have more diversified external sources of information, they have more information inputs for developing and commercialising innovations. Development mechanisms of strategic enterprise networks, learning and innovation in these networks have become a topical research field (Hyötöläinen 2000). The more connected members of the organisation are in relation to each other, the more likely that this information will be communicated to relevant actors or decision makers within the organisation (Lenox 2002). The culture and values of innovative SMEs may influence the reasons for the development and introduction of innovations, but also the readiness for co-operation and knowledge sharing with international partners. Potential value-driven barriers in the knowledge sharing process may be especially relevant to learning communities trying to involve SMEs from countries that in addition to variety of national cultures represent different development stages of the market economy.

The resource-learning view of an organisation emphasises organisational capacity to deploy both tacit and explicit knowledge (Nonaka 1994). In technology-driven innovative small enterprises, the role of tacit knowledge may be crucial in the field of technological and product know-how where this constitutes the basis of its core competence. Participation in the international technology transfer processes assumes that part of this know-how is made transferable in the format, where intellectual property rights can be protected. The vision of future core competencies and their essential elements should be made explicit inside the management teams of innovative SMEs, and if there is enough trust, also between the partners of the East-West learning community of SMEs.

When analysing innovative firms and their inter-organisational relations, geographical proximity has been seen as a prerequisite for the creation of close inter-firm relations based on trust and reciprocity, facilitating the transfer of complex knowledge (Storper, 1997). Facilitating technological co-operation and innovative co-operation between enterprises in different European Union member states assumes the development of less proximity-dependent trans-national collaboration and learning networks of innovation that make use of

information and communication technology. A tool for assessing innovative and technology transfer capabilities should assist managers to identify knowledge gaps in their SMEs, but also knowledge development needs that can be satisfied through co-operation in international networks. It should also deal with knowledge sharing assumptions and attitudes in organisations.

Pre-survey Concept and Methodology

The pre-survey was the first step in developing and testing the tool for assessing innovative and technology transfer capabilities. Results of the pre-survey served three goals**:**

- To assess technology transfer needs of specific SME-s to be introduced by the project consortium participants as potential technology transfer partners and their added value for the knowledge sharing network;
- To produce new knowledge about factors which influence the development of the innovative entrepreneurship potential of SME-s and its application in the knowledge-sharing technology transfer network;
- To collect preliminary data for specifying training and consulting priorities for further stages of the project.

The pre-survey has to be seen as part of the broader action research and development process that demonstrates to participants, through self-assessment, benchmarking, training and consulting inputs, the weak points in their market focus and capabilities, but
simultaneously enables them to specify technology transfer needs and opportunities for learning and knowledge sharing (Figure 1).

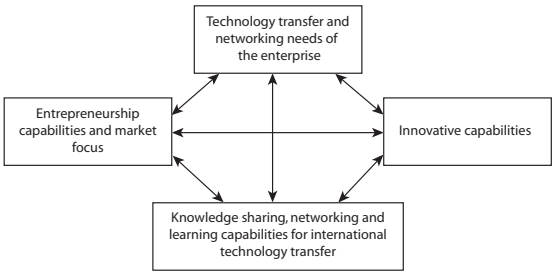

Figure 1. Relationships that were Studied in the Pre-survey

Evert Gummesson (Gummesson 2000, 35) treats action research/action science as the most advanced step in qualitative research compared to interviews and observations. The full potential of action research can, however, be used if the researcher manages to act as the change agent during the whole cycle of diagnosing the management problem, generating, assessing, selecting and implementing new solutions, checking outcomes of actions and introducing corrective actions. A change agent for innovative SMEs has to match the core competence visions of the company and new development opportunities that could make sense in this context. Pre-survey is an important tool for supporting critical self-assessment and benchmarking in this cycle.

The survey was based on a questionnaire that was structured as three modules. The first module started with assessments of entrepreneurial strategies and organisational practices that enable innovative activities. The competitive position of the enterprise and market trends were also assessed. In the second module the main parameters of innovative activity in the enterprises describing the output and process of the innovation were studied, as well as aims and motives for innovation, success factors in this field and the main barriers to success. Sources of ideas for the development of new products and processes and modes of technology transfer practised by enterprises were also assessed in this module. It may be said that the second module deals with innovation and technology activities. The third module focuses on knowledge sharing and development capabilities. Important core competence components were specified first. A list of 26 knowledge development fields was used for identifying existing knowledge gaps and potential gains from international learning networks. Knowledge sharing assumptions and virtual networking experience were assessed at the end of this module.

The pre-survey was conducted as face-to-face or phone-to-phone sessions with managers of SMEs. In addition to answers to the questionnaire, additional comments from respondents concerning situation and development challenges in their enterprise also constituted important information.

Pre-survey Results: Comparing Estonian and Western SMEs

Sixty-six companies were involved in the pre-survey (Belgium 6, United Kingdom 6, Italy 6, Finland 11, Norway 10, Estonia 19 and Hungary

8). SMEs interested in developing their capabilities for international technology transfer and analysing related organisational capabilities were selected for the survey as potential participants of the EW ISME project.

In this paper we will only discuss the main differences between the average results from surveys of Estonian SMEs and the average results from SMEs in 5 West-European countries.

Internal managerial and organisational practices in Estonian and Western innovative SME-s are not very different from each other. Such features as easy and regular access to managers, orientation towards fulfilling the aims of the project, practising team work, adopting new ideas inside the organisation seem to be a common pattern of features for innovative SME-s both in Estonia and in Western countries. However, these positive elements of organisational culture in Estonian firms are, in general, a little bit less developed than in Western companies. Estonian firms gave lower scores than their Western counterparts to the following statements: "a high degree of personal commitment exists in the company" and "we all like completing a project". Cross-functional co-operation of groups is also less advanced than in Western SMEs. These results could suggest a cultural difference influencing empowerment and project-based teamwork that is essential in innovative activities. Previous surveys have shown that the general educational level of SME leaders is not lower in Estonia than in present EU member states, but this may not have an impact on the level of organisational culture (Kurik *et al*, 2002). This especially concerns modern flexible cooperation practices in enterprises.

Assessment of competitive advantage shaping the competitive position of the company reflects the beliefs held by Estonian SME managers that their competitive advantage could be related to the quality of products offered and to their potential for adopting up-to-date technologies. Having their own marketing strategy and the capacity to recruit the required personnel were assessed by Estonian SME managers as weaknesses more often than by their counterparts in the EU. Western companies value their staff's personal commitment, work satisfaction and motivation to learn as a result of satisfaction more highly.

Estonian managers are more optimistic than their Western colleagues when assessing the "location of the firm and the availability of logistics and transport infrastructure" and the "tradition and well-known name of the firm". However, it is not clear how much the competitors are seen as local or foreign enterprises and to what extent they are international companies. At least some of the surveyed companies are still acting mainly on the local market. Considering that the local Western markets are much bigger than the Estonian market, we might presume that estimations of the competitiveness of Estonian firms were a bit exaggerated, especially if we consider the increased competition due to accession to the EU.

As to market trends, the vast majority of the managers interviewed do not believe that their market is mature and that these trends represent a small threat for the firm's operation. Estonian companies agreed more with the statement that "market trends can be described as demanding in ability to forecast customers' preferences" than Western companies. This may indicate increased competitive pressure from innovative and 'client-oriented' foreign firms in Estonia. Estonian SMEs are making efforts to understand the changing preferences of Western clients as part of their development vision. The significant importance of gaining new markets was assigned to new product development both in Estonia and in Western countries.

The majority of the companies assessed their innovative performance compared to competitors as above or well above average. The main innovative activities both in Estonian and Western companies were in internal R&D and the acquisition of external know-how directly related to product/process development. The differences between Estonia and the West came from limited cooperation between research institutions and the business sector in Estonia. At the same time training directly related to product/process development is a much common activity in Estonia, probably because of the higher importance of the acquisition of equipment in innovative activities.

Regarding the motivation to innovate and strengths and weaknesses for innovation, the Estonian and Western companies are very similar. The client-oriented approach is the main driver for innovation and the most important strength supporting the ability to innovate derives from high staff quali-

fication. Estonian companies even tend to believe that their strengths also lie in a better ability to adapt to market needs than Western firms.

Common factors hampering innovation in the East and West relate to financing innovation projects. Innovation projects are expensive for SMEs everywhere. However, the difference is in the availability of financial resources, which is a more pronounced problem in Estonia than in West-European countries.

Considering innovative performance, about two-thirds of respondents have introduced new or improved products/services to the market and about one-third have introduced new or improved processes both in Estonia and in Western countries. However, as with other surveys (Kurik et al, 2002), managers from the East-European partner countries have put more emphasis on the simple acquisition of new equipment as a source of technology transfer and innovation. In the future, they see more opportunities for technology transfer via staff training or work experience abroad. Commercial cooperation agreements and also licence agreements are important technology transfer channels for partners on both sides. Estonians would also like to attract more foreign investment as a channel for their technology development in the future.

Interest in technology transfer among Western companies mainly involved exploiting their own new technology or technological solutions commercially (83% of respondents) or out-sourcing part of the existing production to another firm (60%). Another half (51%) wanted to provide the know-how and training in the field of the new equipment or solutions developed by them. Estonian companies are mainly (39%) interested in providing their own new technology or solutions or (equally) providing the know-how in this field. It seems that Western companies have a much clearer view of technology transfer issues than Estonian firms, who have a strong interest in technology transfer, but no clear vision on how to deal with it.

Pre-survey results also indicate that West-European SMEs are more focused on those competencies supporting development of new technology and new products, whereas Estonian firms concentrate on improvements in process quality and productivity and cooperation with partners in the supply chain.

Estonian managers rank product development know-how, followed by (equally ranked) know-how for production process quality and productivity and co-operation experience and trust with partners in the supply or value chain as the most important elements of their future core competence vision. Know-how about the existing and future needs of international clients is also considered to be important. The lowest position in the ranking given by Estonian managers is the legal protection of intellectual property, which is given a higher ranking by Western managers. The latter also tend to give a high ranking to new product and technology development know-how. At the same time know-how for production process quality and productivity and co-operation experience and trust with partners in the value chain are assessed as more important by Estonian than Western company managers. Turning to the assessments of features of their existing core competencies, the pattern is quite similar to that of the vision. New product development know-how is seen as the strongest element among existing core competencies followed by co-operation experience and trust with partners in the supply or value chain and know-how for production process quality and productivity. Estonians rank co-operation experience and trust with partners in research institutions, universities and consultancies as weaker elements of their core competencies than Western respondents.

In order to identify perceived training needs among companies interested in participating in the EW ISME project, respondents were asked to assess the present knowledge of their staff on the basis of a checklist where 26 knowledge fields for undertaking international technology transfer were listed. Estonian SME managers gave a relatively high assessment to the present knowledge level of their staff on the five-point scale in the following fields (Table 1).

Table 1.
Fields of Relatively High Knowledge Level in Estonian SMEs

Using information sources, databases and internet for monitoring new technology trends and identifying potential partners	3.4
Creativity, new idea generation techniques	3.4
Presenting your company know-how and business opportunities	3.3
Developing contacts with business partners and studying their background and motives	3.1

Knowledge in the field of using information sources, databases and the Internet for monitoring new technology trends and identifying potential partners is even assessed on a higher level in Estonian companies than in Western companies. On the other hand, Estonian SME managers recognised the most serious knowledge gaps of their staff in the following fields (table 2):

Table 2. Knowledge Gaps of Estonian SMEs

Risk analysis in international technology transfer	1.6
Conducting international market research on a target market	1.6
Role of intermediaries and brokering in technology transfer	1.8
Managing international technological co-operation projects	2.0
Protection of industrial property: trademarks, purchasing and selling licences	2.2
International joint ventures and strategic alliances	2.4

Western SME managers shared this perception of knowledge gaps in the field of risk analysis, the role of intermediaries and brokering in technology transfer and conducting international market research in a target market. Although, their ranking of the existing knowledge of their staff was higher than that given by Estonian respondents.

International joint ventures and strategic alliances, managing international technological co-operation projects and protection of industrial property were among knowledge fields where Estonian managers gave lower rankings for the knowledge of their staff than their Western colleagues. They also gave lower rankings than the Western respondents for their knowledge of national and EU support for innovative entrepreneurs and technology transfer activities, export-import and agent contracts, assessing the company potential for outward technology transfer, managing and transferring knowledge in organisations and projects and creating and managing technology development teams

Estonian managers considered the potential gain from co-operation in the international learning network to be most important in the following knowledge fields: developing contacts with business partners and studying their background and motives, managing international technological co-operation projects, national and EU support for innovative entrepreneurs and technology transfer activities, and presenting your company know-how and business opportunities

In the pre-survey, seven statements concerning knowledge sharing assumptions and attitudes in their organisations were presented to respondents to agree or disagree. Estonian SME managers expressed the highest degree of agreement (4.2 on 5-point scale) with the following statements: electronic databases are more valuable sources of information than paper documents, our organisation has integrated electronic knowledge bases and full-text search tools that are actively used by employees for monitoring and sharing knowledge, our staff is used to searching for information in electronic data banks, web-based forums and discussion groups. Trust between employees and disclosing mistakes are also considered to be features of an Estonian innovative organisation (3.6 points). All these statements are more strongly supported by Estonian managers than their Western colleagues. This indicates that the information technology infrastructure for knowledge management is relatively developed in many Estonian companies belonging to the sample. Estonian managers also have a substantially higher degree of agreement with the statement: we have plenty of social occasions (dinners, visits, sports) for informal knowledge sharing.

Estonian managers however agree a bit less than Western managers with the statement that people in their companies are used to the free circulation of information, and technological, market and client information is easily accessible for all staff members. We can conclude here that there is still room for developing the support culture for knowledge management and knowledge sharing inside organisations and between innovative enterprises.

Such a comparison of knowledge sharing practices in Western and Eastern SMEs leads to the conclusion that among Estonian SMEs, experience with using virtual forums and e-learning environments is more widely spread than in Western SMEs participating in the project. However, they lack a systematic approach to participation in virtual learning communities.

Implications for Subsequent Stages of the Project

The pre-survey results were discussed with the participating companies and will be used as input for training and group consultations. The final aim is to develop an action-oriented methodology that enables the collection of research information in the process of identifying SME priorities for fur-

ther co-operation in learning networks. This tool will be used as the diagnostic departure point that supports dialogue between consultants and SME key personnel and also as a self-assessment tool for SMEs. The pre-survey facilitated the design of specific training and support activities, which will be organised during the future stages of the EW ISME project.

An essential assumption of the learning process is to understand what you really know and where to find knowledge gaps. Wisdom starts from recognising the limitations of one's knowledge. An important challenge of the EW ISME project is to develop the action learning process, where participants gradually broaden their understanding of the role of social, economic and cultural factors, business planning and other knowledge fields that are essential for understanding "the big picture" and for making sound strategic choices for successful technology transfer. The relevance of "soft" topics, such as creativity and new idea generation techniques in the broader innovative context, has to be demonstrated through learning by doing in order to overcome narrow interpretations of creativity as a phenomenon mainly limited to research and technology.

As pointed out in the group work during the awareness-raising seminar in Estonia at the beginning of the EW ISME project, in the narrower field of professional research, invention and technological development some innovative SME managers strongly believe that acting creatively mainly relies on their intuition without any special creative techniques. In the international learning community it is relatively easy to demonstrate that presenting your company know-how and business opportunities is complicated, if partners represent differing cultural backgrounds and business experience. Creativity techniques may facilitate joint efforts for finding new business opportunities.

Taking into consideration the survey results and the principles of adult learning, the first stages of the training programme should not be limited to the rule "from general issues to specific topics" only. It is essential, already during the first training events, to meet the specific perceived training needs of participants and to offer hands-on solutions to practical problems already identified by participants. Combining cases of technology transfer based on practical experience with topics of risk analysis and expert advice in the field of legal issues related to international technology transfer and methods of international market research would enable an effective start to the learning process. Training should also be combined with sessions for bringing together potential partners from the East and the West. Contact building steps can be supported by appropriate training input in order to equip participants with tools for discussing their co-operation visions in more systematic ways. A combined training, consulting and contact building process should produce synergy and create assumptions for developing the international learning community of innovative entrepreneurs.

Discussion and Conclusions

Some results of the present survey that reflect the perceptions of managers about the knowledge gaps among their staff have similarity with the survey of export-related training needs in Estonian companies that was carried out in 1998. This earlier survey demonstrated that SMEs representing the sub-contracting type of export operations are at the first development stage focused on the lack of institutional knowledge represented by legal aspects and customs requirements of foreign trade. They saw finding new business partners and clarifying contract-related legal issues as the main learning challenge. Only after accumulating some practical export experience did they start to understand the need to broaden their strategic business and management knowledge. Export potential assessment, strategy and planning will gain higher priority if the organisation manages to grow and develop its resource base (Elenurm 2000). The sample in the present pre-survey represents the perceptions of Estonian managers, the majority of whom are equipped with good research competencies or technological knowledge. Their managerial experience, however, has been in many cases limited to reacting to business proposals initiated by occasional partners or to generate cash flow on the basis of quick-fix solutions.

SMEs that participated in the pre-survey do not represent average Estonian companies. As part of a broader action research process and development programme of SMEs it can, however, produce more meaningful insights than a cross-sectional survey that would try to represent all Estonian SMEs, the majority of which are not related to the East-West technology transfer agenda. In action research the researcher has to capture a pre-understanding and

the sense making patterns of managers. Comparing the quantitative results from the pre-survey and qualitative information about the specific problems and needs of SMEs participating in the EW ISME project is one way to do this.

In the pre-survey it was possible mainly to analyse the starting conditions for innovation and international technology transfer. The real dynamics of Estonian innovative SMEs will be only clarified in the future, in the process of real innovative activity, where the EW ISME project could also have a supportive role. There are two important aspects for future research. Firstly, the issue of the survival of innovative SMEs in the new conditions of Estonian EU membership. This means from one side, the more rapid increase of the price of production input factors; and from the other side, it may bring higher trust towards Estonian companies and better possibilities for networking with Western companies. It is important to understand the real behaviour of Estonian companies inside more complicated forms of technology transfer and international cooperation in general. There are good opportunities for studying this topic during the further stages of the project.

The next steps in the EW ISME project will provide tools for discussing the core competence concept in more detail. The present beliefs of Estonian SME managers recognise the importance of client input and learning from the supply chain partners on the basis of experience acquired through direct business transactions. Opportunities to develop core competencies through co-operation with other types of partners, including universities, consultancies and special SME networks for knowledge-sharing have to be discussed in the context of the broadening strategic horizons for Estonian innovative SMEs.

References

Argandona, A. 2003. Fostering values in organizations. *Journal of Business Ethics*, Vol. 45 (1), 15.

Baker, W.E., Sinkula, J.M. 1999. The synergistic effect of market orientation and learning orientation on organizational performance. *Journal of the Academy of Marketing Science.* 27 (4), 411-427.

Berthon, P., Pitt, L. F., Ewing, M. T. 2001. Corollaries of the collective: The influence of organizational culture and memory deployment on perceived decision-making context. Academy *of Marketing Science.* Vol. 29 (2), 135-150.

Elenurm, T. 2000. Export-related training needs of Estonian companies in the process of internationalisation. *Proceedings of the University of Vaasa*, Reports 57, 122-142.

Gummesson, E. 2000. *Qualitative Methods in Management Research*. London: Sage Publications.

Hamel, G., Prahalad, C.K. 1994. *Competing for the Future.* Boston: Harvard Business School Press.

Hamel, G. 2000. *Leading the Revolution.* Boston: Harvard Business School Press.

Hyötöläinen, R. 2000. *Development mechanism of strategic enterprise networks: learning and innovation in networks.* Espoo: VTT Publications 417.

Jonsson, O. 2002. Innovation processes and proximity: the case of IDEON firms in Lund, Sweden. *European Planning Studies*. Vol 10 (6).

Kampas, P. 2003. Shifting cultural gears in technology-driven industries. *MIT Sloan Management Review*, Winter 2003, 41-48.

Kurik, S., Lumiste, R., Terk, E., Heinlo, A. 2002. *Innovation in Estonian Enterprises 1998-2000.* Innovation Studies 2/2002. Tallinn: Foundation Enterprise Estonia.

Lenox, M. 2002. Organizational design, information transfer, and the acquisition of rent-producing resources. *Computational & Mathematical Organization Theory.* 8, 113-131.

Lukas, B.A., Ferrell, O.C. 2000. The effect of market orientation on product innovation. *Journal of the Academy of Marketing Science.* 28 (2), 239-247.

Neely, A. Filippini, R., Forza, C., Vinelli, A., Hii, J. 2001. A framework for analysing business performance, firm innovation and related contextual factors: perceptions of managers and policy makers in two European regions. *Integrated Manufacturing Systems*, Vol. 12 (2), 112-124.

Nonaka, I. 1994. A dynamic theory of organizational knowledge creation. *Organization Science*, Vol. 5, (1), 14-37.

Normann, R. 2001. *Reframing Business.* Chichester: John Wiley & Sons.

Oktemgil, M., Greenley, G. 1997. Consequences of high and low adaptive capability in UK companies. *European Journal of Marketing*, Vol. 31 (7), 445-466.

Radosevic, S. 2003. A Two-Tier or Multi-Tier Europe: Assessing innovation capacities of the Central and East European countries in the enlarged EU. Working paper http://www.ssees.ac.uk/economic.htm http://www.ssees.ac.uk/economic.htm, 14.04.04

Reid, A. 2002. Estonian innovation policy in a comparative perspective: options and priorities with a view to EU accession. Presentation of the CIS III results. Tallinn 05.12.2002.

Storper, M. 1997. *The Regional World*, *Territorial Development in Global Economy*. New York: Guilford.

Teece, D. J. Pisano, G. Schuen, A. 1997. Dynamic capabilities and strategic management. *Strategic Management Journal,* Vol. 18, (7) 509-533.

Tidd, J. Bessant, J., Pavitt, K. 1997. *Managing innovations: integrating technological, market and organizational change*. New York: John Wiley & Sons.

Tuominen, M. Rajala, A. Möller, K. Anttila, M. 2003. Assessing innovativeness through organisational adaptability: a contingency approach. *International Journal of Technology Management,* Vol. 25, (6/7), 643-658.

Wang, C.L., Ahmed, P.K. 2003. Structure and structural dimensions for knowledge-based organizations. *Measuring Business Excellence*, Bradford, Vol.7, 51-63.

Market Understanding as a Determinant of Innovation Success in SME's

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Introduction

Innovation is being promoted by the EU, by national governments, within regional development policies and by business leaders. Governments are seeking to increase employment prospects in higher added value jobs, whereas firms are seeking to ensure a sustainable future in an ever more competitive landscape. But much informed opinion appears to accept that the pursuit of innovation is a high-risk strategy (see for example the work of Campbell *et al*, 2003). Whilst there is much interest in the measurement of innovation performance, including its positioning within the widely used balanced scorecard (Kaplan *et al*, 1992), there are clearly issues concerning measurement. This may help explain why the number of organisations reporting a quantifiable benefit from innovation is quite small. However, it is not for the want of trying that these benefits have proven elusory, therefore some other cause of failure must be found.

The importance of the customer in the innovation process is recognised in standard texts (see for example Tidd *et al*, 2001). The latter point out that it is not just the end consumer but also industrial and business users that need consideration. An understanding of customer requirements can be translated into development needs utilising techniques such as Quality Function Deployment (Birchall *et al*, 2002). This approach is particularly good at informing the introduction of product enhancements, but is less likely to result in radical innovations since the market place is unfamiliar with the product or service offering. Some would argue that working with the most demanding of customers has a direct bearing on innovation. These customers will constantly be driving down costs and also looking for increased value from the product. This is seen as improving the rate of supplier innovation as suppliers are constantly aware of the competition for business.

In seeking to bring about improvements in the rate of innovation, an understating of the process of innovation is imperative. It enables both researchers and practicing managers to review their organisation's performance and develop new insights into how improvements might be brought about. The significance of distinctive capabilities is of significance to future directions (Kay, 1993). We argue that only by understanding the firm's distinctive capabilities will those responsible for corporate direction be able to influence their own future.

In response to the issues raised, this paper reviews and develops a model of the innovation process and reports outputs from an exploratory study in relation to the model. The model has two functions. Firstly, it is a succinct expression of a number of the influences that have been cited by academics as impacting on the innovation process. Secondly, the model summarises the main domains that the survey interrogated.

The analysis of the survey data includes an examination of the relationship between an understanding of the customer and innovation. Overall, the results

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promote a discussion that suggests that there is a need for improved levels of managerial information. Further, the research findings indicate that the success of an organisation's innovation process is reliant upon the availability of management information, which can be employed by managers in order to make imaginative use of an organisation's resources. The implications for those involved in sales and marketing are clear, in that the knowledge they should be generating is such a vital component in the innovation process. Mechanisms for sharing are often far from effective.

Analysis of the Prevailing Literature

Van de Ven, a pioneer in innovation and creativity research, suggests that the adoption of a simple definition of innovation is advisable:

Innovation is "development and implementation" (van de Ven, 1986)

This definition allows for any change within organisations and suggests that much of the success of any innovation will be in the way that change is managed. But innovations can occur in the product or service or in the processes by which they are developed, produced or delivered.

Baden-Fuller and Pitt (Baden-Fuller *et al*, 1996) suggest that, from a strategic point of view, innovation can be achieved by focusing on positioning the organisation, resourcing the innovation process, encouraging corporate entrepreneurship and by the adoption of an incentivised reward system.

With more of an organisational focus Tidd, Bessant and Pavit (Tidd *et al*, 2001) direct managers and academics to consider the following factors as being of pre-eminence in the stimulation of innovation within organisations.

- Visionary leadership which demonstrates a willingness to share its aspirations
- An appropriate organisational structure within which the innovation process can be embedded.
- The recruitment of key members of staff with a positive attitude and complimentary skills. Such staff members are seen as having the ability to be trained and further 'stretched'.
- The organisation should demonstrate a willingness to be involved in innovation.
- The teamwork should be both effective and function within a creative climate.
- It is suggested that the organisation should be externally focused and exhibit extensive communication channels.
- The organisation must be prepared to learn and adopt a willingness to innovate itself and not just its products, services etc.

Many authors list similar suggestions and guidance notes. For the most part such conclusions are derived from case studies, but several surveys have now brought a positivistic approach to this otherwise phenomenological domain (Dodgson *et al*, 1994).

The external environment is pre-eminently the preserve of strategists and marketeers and from this body of opinion come articles and books that put forward the following ideas. Competitors should be seen as a source of inspiration as well as a source of threats (Johnson *et al*, 1993), and customers are as much partners as recipients of goods and services (Blanchard *et al*, 1998). The acquisition of technology is cited as a barrier to entry, authors such as Anderson, Fears and Taylor (Anderson *et al*, 1997) predict that a lack of up-to-date technology can damage an enterprise's competitive advantage. Considerations relating to an industry sector and the market place have encouraged writers such as Harris (Harris, 1996) and Bartlett and Ghoshal (Bartlett *et al*, 1998) to conclude that organisations limit their growth patterns by focusing on a parochial horizon.

The internal environment is the focus of literature that addresses organisational change, organisational behaviour and organisational culture. In relation to innovation, comment abounds with respect to the best culture for innovation, the best structure for innovation and the best teams for innovation. Staff involvement and the support of both the management structure and the organisation's climate are often seen as the main concerns within the organisation (Tidd *et al*, 2001). McCosh (McCosh *et al*) investigated innovation from the point of view of a managerial 'wish list' and concluded, in experiential terms, that innovation requires a supportive culture, creativity that is directed towards the market, a willingness to learn and an ability to foster innovative competencies. At a slightly less psychological or sociological level, the organisation's strategy and the way that it utilises its internal technology is cited as a determinant of the success of an organi-

sation to secure a productive innovation process (Martin, 1997).

At the heart of the innovative organisation is the innovation process. This process is not an isolated system, it is a dynamic integral part of organisational life. An awareness of the vital role that the process plays in the present and future prosperity of the organisation is important (Grulke *et al*, 2001). The subordinated innovation strategy that links to the corporate strategy is supported and monitored through an intricate system of tacit and espoused communications systems (Davison, 2002). The process passes through several iterations, during which prototyping is common, before it culminates in the successful implementation of the innovation whether this is the adoption of a new corporate system or the launch of a new product or service (Tidd *et al*, 2001).

The corporate glue that binds the disparate parts of the innovative organisation together is itself the ability to manage change and developments. The systematic decision-making that is facilitated by managers is made more meaningful by the continuous learning that takes place (Senge *et al*, 1994). The structure of the organisation must be supportive and should not hinder exchanges that take place across functions and between teams (Tidd *et al*, 2001). Invariably the social profile of an innovative organisation is redolent with expressions of a willingness to be involved and a motivation that is based on emotional rather than economic rewards (Amabile *et al*, 1996).

Finally, the literature seems to suggest that innovation is most likely to occur if the organisation can either attract or give birth to entrepreneurs. These individuals are people who can go beyond leadership (Bass, 1985) and exhibit all the characteristics of a 'Corporate Christ' (Finan, 1998).

In conclusion the foregoing review is nothing if not inclusive. It would appear that academic opinion may differ with respect to the focus that should be adopted when undertaking a study of innovation, but there is tacit agreement that the innovation phenomenon is both complex and invites enquiry (Edler *et al*, 2001).

The Research Model

At a high level of abstraction the literature suggests that four domains of active variables contribute to the successful execution of an innovation. This conclusion was substantially supported by the authors of a number of recent innovation surveys (Bean *et al*, 1998, 1999; Guimaraes *et al*, 2001; Sivadas *et al*, 2000).

The domains have been assigned the following designations:

- The External Environment - Factors that impinge on the ability of the organisation to pursue an innovation. For the most part these factors are indicative of the prevailing economic environment and the general industry sector within which the organisation either trades or attempts to exercise its strategic vision.

- The Internal Environment – Factors over which the organisation can exercise managerial control. The innovation and corporate strategy, core and peripheral technology, Team constitution and dynamics and reward systems.

- The Innovation Process – Factors that are directly involved in the administration and prosecution of the Innovation Process. The management style employed in support of the innovation process and the behaviours exhibited by the personnel closely involved with the project.

- The Management of Developments – An understanding and an appreciation of the dynamics that are involved in managing within and between the tacit boundaries associated with the three primary Factors. This would indicate the organisation's learning capacity and its store of intellectual capital.

The following schema (Figure 1) over-simplifies the relationship between the factors that influence an innovation, but it aids managerial understanding as it focuses attention on the scope of concerns that have to be addressed when an innovation is being considered.

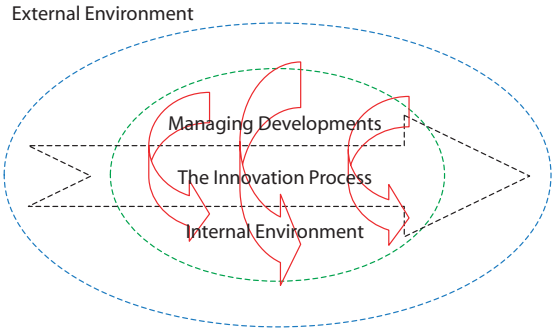

Figure 1. The Arrangement of the Primary Innovation Factors

The external oval defines the limits of the organisation's environment. The internal oval denotes the boundary within which the organisation has direct control. The arrow represents the innovation process. This process is somewhat vector like in nature in that it has both impetus and direction. Finally, the three curved arrows indicate the cyclic and iterative nature of the management of learning and organisational development.

The boundaries between the domains have been indicated as dotted lines to convey an impression of permeability. Rigid demarcations between the process and both the internal and external environments tend to reduce responsiveness and place barriers between the market's demands and the organisation's fulfilment of such demands (Tushman *et al*, 1988).

The arrow that represents the passage of the innovation process through the organisation commences in the External Environment and eventually returns to this domain. It is commonly accepted, (Collins *et al*, 1998; Henry *et al*, 1991; Tidd *et al*, 2001), that innovations are stimulated from the demands of the market place and gain impetus from the available creativity both inside and outside the organisation.

The External Environment contains all the social, economic and technological influences that constitute the business environment of commercial organisations. In some ways most organisations are described by their external environment and become an abstraction of them. Changing the way that an industry sector is perceived can be an innovation in itself and ignorance of an organisation's sector based foibles can limit an enterprise's scope for success.

The Internal Environment may be classified as the corporate culture or the innovation climate but several writers have suggested that it is more chaotic than concepts such as culture and climate convey (Sackmann, 1997). The internal environment may be considered as a soup of changing influences that promote, and at times, confound the innovation process.

Finally, the Managing of Developments is seen as a unifying factor, an ability of the organisation rather than a presentment. Developments should be seen as the ability to learn and understand both through experience and conceptually; the ability to communicate across functions and through hierarchies. Developments are the ability to define what is important and differentiate it from the trivia and noise that tend to be the background to corporate or organisational life. The management of these abilities causes a reduction in conflict and a consequential increase in efficiency. Coupled with this is the achievement of gaining alignment within the organisation in general and the innovation process in particular, which in turn implies a constant process of organisational learning (Tovstiga *et al*, 2002). Ultimately, managing developments is an ethos, which unites the organisation's resources in an effort to achieve the declared innovation strategy (DTI, 1998).

The innovation process itself might be seen as taking an idea from conception through to commercial fruition. It involves a front end loading system that derives initial inputs from both the internal and external organisational environments. Specifically these inputs may coalesce from the R&D department, steps toward business development or even from corporate and technological acquisitions. Stage-gates are often used in the process to move initial concepts through to realisation (Cooper, 1999). Project management, with its systems and procedures, is often adopted in order to achieve timely outputs to specifically comply with allocated budgetary strictures (Wheelwright *et al*, 1992).

The high level constructs indicated above would be difficult to interrogate due to their complexity. In the interests of parsimony, researchers have to content themselves with the acquisition of a limited amount of relatively refined knowledge at the expense of gaining knowledge of a broader nature. The development of a limited model of innovation would fail to convey the reality of the phenomenon, which suggests that some degree of confusion and complexity has to be accepted in order to capture the essence of innovation.

The research under review would imply that innovation could be understood by investigating the internal and external forces that impinge on an organisation and comparing these with the issues that arise from concerns involving processes and people.

The Measurement of Innovation Success

Sivadas et al (Sivadas *et al*, 2000) and Bean et al (Bean *et al*, 1999) examined the factors that contributed to an organisation's successful development of new products and R&D benchmarking respectively. Their studies concluded that the measurement of the success of an innovation could be ascertained by collecting data that pertained to the following:

- The total corporate expenditure on R&D.
- New and improved products launched in a given period were taken as being indicative of the output from the innovation process.
- The numbers of patents registered in a given period of time.
- In this era of rapid advance and greater levels of complexity the virtues associated with the employment of individuals who possess higher degrees is being taken as an indicator of the innovativeness of an organisation
- The presence of R&D divisions that are devoted to basic research, applied research and or developmental research are taken as being indicative of the expected success of an organisation's innovation process.
- Following on from the previous observation successful outputs have been associated with the satisfaction of customers and the general image that the business maintains in the marketplace.

In the case of small to medium sized enterprises it should be noted that certain of the above measures have little or no relevance in that they do not have specific R&D capability and their level of technological acquisition is limited by financial constraints. Further, such businesses tend to have a limited level of interaction with the competitors and customers, which in turn limits their ability to form alliances and set up networks.

Ultimately, success can only be seen in relation to the espoused aims and objectives of the organisation under investigation. But with respect to innovation, most businesses see innovation success as a function of their ability to sustain their presence in a market and to exploit their competencies to the fullest extent. In reality this measure of success should be tempered by the fact that this is management's perception of success.

The Innovation Survey and the Analysis of Data

As previously stated the survey was part of an exploratory study to assist in the development of an approach to reviewing the performance of an organisation's innovation management and to assist executives to gain an improved understanding of their approaches compared to those of other businesses. The researchers adopted a quantitative approach, albeit that they acknowledged that the complex and dynamic environment of an organisation tends to be phenomenological in nature.

The relationship between a series of predictors (the innovation critical success factors, ICSF's) and a series of criterion variables (the innovation success criteria, ISC) is presented as being of particular interest in this research in which success factors within the control or direct influence of management will contribute to successful innovations.

The instrument battery (available from the authors) contained 90 items describing the critical success factors (ICSF's). The ICSF's were subject to exploratory factor analysis in order to establish the underlying structures and create categories of success factors.

The criterion variables comprising 8 items were also subject to exploratory factor analysis in order to establish the underlying structures and create innovation success criteria (ISC).

Linear regression was used to establish the impact of the different ICSF's on the ISC.

The research is based on data collected from 240 companies in 7 European countries. Respondents were in positions of some authority in relation to their enterprise (directors or general managers) and considered well placed to respond to questions about innovation performance. They were mostly employed in SME's, but some were in either a subsidiary of, or a business unit within, a larger enterprise.

Data was collected about personal circumstances as well as company position, the nature of the business and its markets.

It was assumed that certain features of the innovation process are common across business sectors and cultures and that certain elements are evident regardless of the context and that by aggregating data from a wide range of company types and environments a generally acceptable set of success predictors would be derived. However, it is recognised that the actual means deployed to achieve this performance will vary across cultures.
The data was subject to analysis using SPSS version 10. The independent items (ICSF's) were subject to exploratory factor analysis using Principal Components Analysis with Varimax Rotation so as to establish the underlying structures with clearer separation of the factors than would be achieved with Quartimax (see Hair *et al*., 1998, p110)). Also this was done in order to establish uncorrelated factors for use in subsequent regression analysis.

The total of 90 predictor variables included in the analysis is more than that recommended by Hair et al for this approach to be adopted (see Hare et al, pg.103 for explanation (Hair et al., 1998)). But since it was anticipated that some items would be deleted during the process of analysis this was considered acceptable. Only Eigenvalues greater than one were accepted.

In order to achieve an acceptable Kaiser-Meyer-Olkin, KMO (a test of sampling adequacy) several steps were taken. First the outliers were removed following the initial run and then the structure was improved by removing those items that had little impact on the factor structure (loading less than 0.40) and those items loading on more than one component at that level. Given the overall sample size, with a complete set of data the loading of 0.40 was seen as more than adequate given that few items loaded on the factors loading between 0.40 and 0.50 (a level which according to Hair et al (pg. 111) is 'practically significant' with a factor loading of 0.35 significant at the 0.05 level). This resulted in 6 factors representing independent variables (ICSF's) that explained 64% of the total variance. A KMO of 0.903 was achieved with Bartlett's test of sphericity being highly significant. Only 6 of the factors weighted on more than 2 items were used in subsequent analysis (see Table 1 for the loadings and interpretation).

Table 1. ICSF's Resulting from Varimax Rotation

	ICS Factors							
Item	Empowering culture	Team focus	Technology responsiveness	Outward looking	Innovation process management	Technology followers	Externally influenced innovation	Explained variance
b42 People are encouraged to try new ways of doing things	0.78							30.5
b35 Employees are encouraged to develop their innovation capabilities	0.77							
b33 Ideas offered by employees are readily considered	0.77							
b55 The culture of the company promotes innovation	0.76							
b43 Innovation is supported and rewarded in our company	0.73							
b53 Innovators act as strong role models	0.72							
b31 Employees are involved in planning changes	0.72							
b34 The innovative activities of employees are monitored	0.72							
b54 Employees have a readiness to change	0.72							
b32 Employees are consulted on strategic matters	0.7							
b41 A high level of entrepreneurship exists in our company.	0.69							
b52 The company encourages open internal communications	0.66							
b23 Our strategy is communicated to all employees.	0.65							

b44 We have fast track decision making to take innovation ideas forward	0.64							
c15 There is a constant and free flow of ideas within the company	0.62							
b45 Everyone in the company recognises the importance of innovation	0.59							
c33 The strategy is demonstrated by the CEO's commitment to innovation.	0.57							
d45 Personal development is encouraged	0.55							
b51 We have a 'no blame' culture	0.54							
d22 There is involvement of production/operations in R&D		0.73						7.49
d25 We use multi-functional teams for innovation projects		0.72						
d21 The company has strong and regular contact between marketing and R&D		0.7						
d23 Employees are comfortable working across different disciplines		0.65						
d35 Inter-disciplinary teams are often used to develop creative responses		0.64						
d34 Innovation is achieved by different teams co-operating together.		0.63						
d33 Individual creativity is promoted within teams		0.57						
d31 In our company teams progress their own innovations		0.57						
b12 Our employees are generally technology literate			0.75					5.29
b21 Our overall strategy is built around our key technologies			0.74					
b11 Technology drives innovations in our company			0.67					
b13 We are good at absorbing the outputs from basic research into the organisation.			0.65					
d42 Employee training has a strong technical focus			0.64					
b15 Managers actively support technological change			0.59					
a25 We regularly carry out competitor analysis				0.69				4.72
a43 We carefully monitor competitive products and services				0.69				
c13 We have a system that tracks significant business trends				0.62				
c23 We have regular contact with technology leaders				0.59				
c24 All employees are aware of the latest developments in our main competitors				0.54				
a45 Market leadership is important to us				0.52				
d55 Managers are encouraged to keep within defined parameters					0.71			3.6
d54 PM techniques are used when integrating an innovation into the co.'s day-to-day ops					0.68			
d51 The innovation process is subject to cost -control monitoring					0.64			
d52 We use production/operations management techniques in the innovation process					0.61			
a22 Our main competitors make better use of emerging technologies than us						-0.77		3.3
a14 The technology of our competitors is generally better than ours						-0.67		
a34 Customers share knowledge with us							0.68	2.88
a32 Customers constantly demand product enhancement							0.52	
a44 Our market strongly influences our activities							0.51	
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.								

Those items omitted from the Principal Components Analysis were examined to identify any items, which by scoring high on the scale and with small standard deviation might be assumed to be present in most organisations and therefore a pre-requisite for innovation. These items would not explain innovation performance but if not present may well explain poor performance. We present those items with a mean in excess of 5.00 along with their standard deviations in Table 2.

Table 2. Items with a Mean Score in Excess of 5.00 Omitted from the PCA

	N	Minimum	Maxmum	Mean	Std. Deviation
b24 Our strategy is aimed at securing greater market share	221	1	7	5.55	1.418
c11 We continuously search for new opportunities related to current operations	221	1	7	5.41	1.445
a35 We carefully monitor changing customer needs	220	1	7	5.39	1.385
a31 Customers are increasingly taking actions to reduce their costs	220	1	7	5.39	1.597
b14 We have a high level of awareness of what technology we have in our company	222	1	7	5.36	1.441
b15 Managers actively support technological change	222	1	7	5.35	1.486
d24 Our company encourages the sharing of skills	217	1	7	5.24	1.467
a33 Customer pressure increases the use of just in time delivery	217	1	7	5.12	1.635
d41 We learn how to innovate mainly as a result of informal processes	216	1	7	5.01	1.583

It can be seen that two items score highly with a relatively low standard deviation – *'We carefully monitor changing customer needs'; 'Our strategy is aimed at securing greater market share'*. We draw the conclusion from this that these two characteristics are reported as applying in many businesses in our sample and that they are seen by executives as an important underpinning to the execution of business in general and therefore do not differentiate the better innovators from others.

The primary outcome variable selected as a measure of innovation success was the response to the question '*How does your innovation performance compare to primary competitors?*' This was considered adequate as an overall measure since most respondents were considered well placed to make an objective judgement and it also gives an external focus to the respondent's assessment.

Additional measures of innovation success were based on:

- Overall business performance. Whilst it is recognised that the link between overall business performance and innovation practices is complex, by focusing on a comparison with main competitors it was considered possible to get an assessment more related to the market conditions in which the firm operates.

- Stakeholder satisfaction. This measure aimed to get the executive's view on the firm's performance in meeting the expectations of a wider group of stakeholders than the business owners. It is assumed that successful innovation performance will be reflected in more generally satisfied customers, employees and community, as the firm's reputation will be generally strengthened.

- Patents awarded. Whilst patenting is a reflection of invention rather than innovation it is assumed that where companies are active in patenting they would also be active in taking inventions through to commercialisation by some route, whether internal to the organisation or through creating alliances, licences or outright sales.

- Continuous improvement. Innovations are more frequently manifest through on-going improvement of products, services and systems rather than via breakthroughs. However, it is recognised that continuous improvement usually refers to improvements to processes and procedures although this may also result in benefits to the customer.

The total of 8 outcome variables were subject to exploratory factor analysis as described for the ICSF's. This resulted in 3 factors representing dependent variables (ISC's) that explained 66% of the total variance. A KMO of 0.540 was achieved with Bartlett's test of sphericity being highly significant. One of the factors weighted on less than 3 items, but all three factors were included in the subsequent analysis since it was not intended to develop a scale from the items (see Table 3 for the loadings and interpretation).

Table 3: ISC Resulting from Varimax Rotation

	IO Factors		
Item	Business performance	Stakeholder satisfaction	Continuous improvement n patenting
Compared with main competitors, how do you rate growth in turnover	0.88		
Compared with main competitors, how do you rate growth in pre-tax profit	0.81		
Compared with main competitors, how do you rate growth in market share	0.74		
How satisfied are principal customers		0.84	
How satisfied are people in local community		0.8	
How satisfied are employees		0.71	
Company's continuous improvement process over past 12 months			0.89
How many patents			0.52
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.			

In table 4 we present the results of the analysis with ICSF's as criteria against the 4 ISC's. The first is based on the single measure. ISC 2 to ISC 4 is based on the factors reported in table 3. The weighting is shown by the Beta Coefficient with the percentage of variance explained by each ICSF as the R^2 change.

Table 4. Results of Regression Analyses

	How does your innovation performance compare to primary competitor			Business Performance			Stakeholder satisfaction			Continuous improvement and patenting		
Innovation Critical Success Factors (ICSF)	Standardized Beta Coeffi-	Sig.	R2 change	Standardized Beta Coeffi-	Sig.	R2 change	Standardized Beta Coeffi-	Sig.	R2 change	Standardized Beta Coeffi-	Sig.	R2 change
Empowering culture	0.3	0	0.1							-0.44	0.02	0.2
Team focus												
Technology responsiveness												
Outward looking	0.23	0	0.06									
Innovation process management	0.29	0	0.08				0.64	0	0.41			
Technology followers	-0.14	0.05	0.02									
Externally influenced innovation												

The analysis suggests that the critical success factors that predicate the confidence of executives that their organisation is innovative cluster under three over-arching concepts. Firstly an empowering cul-

ture, which is associated with a high responsiveness to individual employees, being supportive of their innovation efforts and placing value on the individuals who are involved in innovation. The second concept is an organisation that is outward looking, indicating a systematic attempt to understand features of the changing market place and general business environment and sharing that understanding across the organisation. These concepts primarily equate to 'soft' indicators of organisational behaviour. An important determinant of innovative success appears to result from the third concept, that of having in place a process for managing the innovation process. This concept is 'harder' in nature than the first two in that, being systematised and proceduralised, it lends itself more readily to measurement and can be gauged through benchmarking.

In respect to the relationship between business performance and innovation factors, we see that no clear links can be derived from our data. This is not too surprising since many factors not associated with innovation contribute to the overall performance of the business on a day-to-day basis. Innovation is unlikely to have any immediate impact, although a lack of it might. In an attempt to relate business performance and innovation Tidd et al (Tidd et al., 2001) in 'Managing Innovation' put forward an eclectic group of factors that influence the innovation process and its management suggesting that no particular set of factors can guarantee corporate success. In order to express such eclecticism, this paper has included the four-component model that sits at a high level of abstraction. (See Figure 1)

Received wisdom suggests that stakeholder satisfaction appears highest when the business has a strong innovation management process. The beta weighting is very high for this factor. This suggests that executives feel that stakeholders respond positively to the presence of strong management of what is often an uncertain process.

It is somewhat easier to describe and demonstrate a process than a culture, which is rather more intangible (Darroch *et al*, 2002). Interestingly, our respondents reported that an empowering culture was less likely to lead to continuous improvement and patenting. On the face of it this seems surprising. But respondents may well feel that a greater degree of discipline is needed in the process of continuous improvement than results where a strongly empowering culture is present. In practice, strong empowerment can lead to individualism and individuals identifying their own preferred work practices rather than conforming to strict processes and procedures. Unless attempts are made to share best practices and reinforce ways of working, which reflect output criteria, high levels of personal freedom may ultimately lead to lower levels of overall performance improvement. Continuous improvement clearly is a process that needs management action and an emphasis on individual empowerment could weaken management's position in this regard. Further, the result of high levels of empowerment could be 'single unit learning', centred on the individual rather than the team and organisation. In addition, the patenting process needs care over detail which suggests that processes and procedures have a strong role once the initial ideas have been formulated.

Some clear gaps emerged in the final analysis. Whilst an external focus was related to satisfaction with the level of innovation, those items in the survey relating to forming relationships with other parties did not form an element of the ICSF's. These items covered aspects such as involvement of customers and suppliers in the innovation process, the ability to absorb the outputs from basic research, regular contact with technology leaders and a proactive search for new ideas.

Further regressions were undertaken to assess the moderating effect of the business climate on the relationships between ICSF's and ISC based on the following questions. *How mature do you regard the markets in which you operate? How mature do you regard your industry? How mature do you regard the technology used by your industry?* These factors were not found to significantly impact on the relationships between ICSF's and ISC's.

Conclusions

The purpose of this paper was to present the findings derived from a European survey and to compare these findings with models and opinions that have been expressed in recent literature. A particular focus was on the relationships between elements of market understanding and an external focus on innovation performance.

The findings generally support the literature, but they do reflect two diametrically opposed concepts. On the one hand, innovation success requires the

empowerment of employees, which suggests that considerable freedom must be afforded to individuals in order to allow them to develop ideas. But on the other hand a managerially controlled process is seen to be of benefit. This initial conclusion, having been supported by the respondents, suggests that successful innovation executives are able, in practice, to balance the need for processes and procedures and to appreciate the more ephemeral aspects of behaviour and culture.

The notion of the importance of an external focus in influencing innovation performance was supported but most companies indicated that they believed themselves to be strongly customer focussed and well aware of pressures being brought to bear by customers.

The high level of abstraction of the innovation model, where factors such as external and internal environments are cited, was developed and expanded by associating these domains with lower level abstractions such as individual behavioural manifestations, decision making and learning processes. Although both the literature and the respondents seem quite confident that these factors have a direct influence on the innovation process it is interesting to note that there is still a degree of uncertainty with respect to the extent that the variables interact and give rise to moderating and mediating variables.

Managerial Implications

Where there is an accepted strategic need within the organisation for innovation success beyond the incremental continuous improvement scheme, our results suggest that organisations should adopt an explicit innovation process. In the model on which this research was based (Figure.1) the innovation management process has five components (Internal Awareness, Information Searching, Innovation Strategy, Implementation Process and The Ability to Prototype.). Without the definition of the process and general agreement about its appropriateness, those employers who have innovative capability are less likely to effectively deploy it. Without clarity with respect to the rules of the game, staff will be unclear about how they might effectively contribute. It is part of the responsibility of management to ensure such processes exist, are well understood and are regularly refined based on experience.

In contrast to putting in place processes and procedures and ensuring their adoption, creating an empowering culture often requires radically different behaviour on the part of management. Even where managers endeavour to change, it does not follow that employees will respond. Working practices are usually so deeply entrenched that changes initiated often have only a short-term impact with an early regression towards old behaviours. So partial steps may be taken to create opportunities for employees to apply their creativity in finding new solutions. Suggestion schemes with rewards for ideas is a well tried route but one which is 'transactional' in philosophy rather than based on a 'partnering' approach. Such schemes can be expensive to administer properly and have a limited life. More effective are approaches less centred around one-off suggestions by individuals and more on an on-going process that not only generates ideas but also contributes throughout the implementation process. Task groups are likely to be much more effective, particularly if well facilitated. Moreover the continual use of such groups can contribute to a culture shift towards greater empowerment. Where such task groups are interdepartmental they also offer learning and development opportunities to group members. However, management behaviours have to be well considered and consistent for a shift in culture to take place (Cook, 1999).

The process of external scanning is a mix of processes and procedures as well as particular behaviours. Many organisations would see this as being part of the marketing function, or the role of the executive board. But the scanning needs to go beyond tracking changing customer needs and preferences. It includes the geo-political landscape as well as technological trends.

Scanning and data collection is pointless unless it feeds into analysis and the innovation process. It is this latter facility that requires creative approaches as well as analytical processes. It also depends on the disposition of management to be open to challenges with respect to the status quo and work on the development of new views of products, processes and procedures.

The conclusions and discussion included in this section highlight the difficulties that beset researchers when they attempt to develop knowledge that is at one and the same time specific and general. Our specific conclusions suggest that there exist certain factors that act as critical success factors to the management of innovation in an organisation, but the development of a high level model based on the

prevailing literature suggests that a multiplicity of such factors exists.

Effectively, complexity may have to be acknowledged as the innovator's theoretical friend, but the practicing manager of innovation has to continue to search for the organisational 'best fit' model that yields results for his or her particular circumstances.

References

Amabile TM, Conti R, Coon H, Lazenby J, Herron M. 1996. Assessing the Work Environment for Creativity. *Academy of Management Journal* 39: 1154 –1184.

Anderson J, Fears R, Taylor. 1997. *Managing Technology*. Cartermill International: London, UK.

Baden-Fuller C, Pitt M. 1996. *Strategic Innovation*. Routledge: London, UK

Bartlett CA, Ghoshal S. 1998. *Managing Across Borders*. Random House: London, UK

Bass BM. 1985. *Leadership and Performance Beyond Expectations*. Free press: London, UK.

Bean AS, Einolf K, Russo MJ. 1998. Benchmarking your R&D: Results from the IRI/CIMS annual R&D survey for fy1996. *Research Technology Management* 41(1): 21-30.

Bean AS, Einolf K, Russo MJ. 1999. Benchmarking your R&D: Results from the IRI/CIMS annual R&D survey for fy1997. *Research Technology Management* 42(1).

Birchall D, Tovstiga G. 2002. *Future Proofing* (1 ed.). Capstone: Oxford, UK.

Blanchard K, Bowles S. 1998. *Gung Ho*. Harper Collins Business: London. UK.

Campbell A, Birkinshaw J, Morrison A, van Basten Batenburg R. 2003. The Future of Corporate Venturing. *Sloan Management Review* 45(1): 30-40.

Collins JC, Porras JI. 1998. *Built to Last*. Random House: London, UK.

Cook. P. 1999. *Best Practice Creativity*. Gower: Aldershot.

Cooper R. 1999. The invisible success factors in product innovation. *Journal of Product Innovation Management* 16(2).

Darroch J, McNaughton R. 2002. Examining the link between knowledge management practices and types of innovation. *Journal of Intellectual Capital* 3(3): 210-222.

Davison H. 2002. *The Committed Enterprise, How to Make Vision and Value Work*. Butterworth-Heinemann: Oxford, UK.

Dodgson M, Rothwell R. 1994. *The Handbook of Industrial Innovation*. Edward Elgar Publishing Ltd: Cheltenham, UK.

DTI. 1998. *Making It Fit: Guide to developing strategic manufacturing*. Department of Trade and Industry: London, UK.

Edler J, Meyer-Krahmer F, Reger G. 2001. Managing Technology in the top-R&D-Spending Compaies World-wide - Results of a Global Survey. *Engineering Management Journal* 13(1): 5-12.

Finan A. 1998. *Corporate Christ*. Management Books 2000 Ltd: Chalfont, UK.

Grulke W, Silber G. 2001. *Lessons in Radical Innovation*. Prentice Hall: London, UK.

Guimaraes TA, Borges-Andrade JE, Machado MdS, Vargas MRM. 2001. Forecasting Core Competencies in an R&D Environment. *R&D Management* 31(3).

Hair JF, Anderson RE, Tatham RL, Black WC. 1998. *Multivariate Data Analysis* (Fifth Edition ed.). Prentice Hall: New Jersey, US.

Harris N. 1996. *European Business*. MacMillan Press Ltd: London, UK.

Henry J, Walker D. 1991. *Managing Innovation*. Sage Publications: London, UK.

Johnson G, Scholes K. 1993. *Exploring Corporate Strategy* (3rd Edition ed.). Prentice Hall: London, UK.

Kaplan RS, Norton DP. 1992. The Balanced Scorecard--Measures That Drive Performance. *Harvard Business Review* 70(1): 71-80.

Kay J. 1993. *Foundations of Corporate Success*. Oxford University Press: Oxford, UK.

Martin BR. 1997. *Technology Foresight as a Tool for Strategic Management (in Managing Technology)*. Cartermill International: London, UK.

McCosh A, Smart A, Barrer P, Lloyd A. 1998. Proven Methods for Innovation Management: An Executive Wish List. *Creativity and Innovation Management* 7(4): 175-193.

Sackmann SA. 1997. *Cultural Complexity in Organisations*. Sage Publications: London, UK.
Senge PM, Kleiner A, Roberts C, Ross RB, Smith BJ. 1994. *The Fifth Discipline*. Nicholas Brealey Publishing Ltd,: London, UK.

Sivadas E, Dwyer FR. 2000. An Examination of Organisational Factors Influencing New Product Success in Internal and Alliance-Based Processes. *Journal of Marketing* 64(1).

Tidd J, Bessant J, Pavitt K. 2001. *Managing Innovation: Integrating Technological, Market and Organisational Change* (2 ed.). John Wiley: Chichester, UK.

Tovstiga G, Birchall DW. 2002. Strategic knowledge sourcing, integration and assimilation: a capabilities portfolio perspective. In N Bontis (Ed.), *World Congress on Intellectual Capital Readings.* Butterworth Heineman: Boston, US.

Tushman, Moore. 1988. *Readings in the Management of Innovation*. Harper Business Ltd: London, UK.

van deVen A. 1986. Central problems in the Management of Innovation. *Management Science Quarterly* 32: 590-607.

Wheelwright S, Clark K. 1992. *Revolutionising Product Development*. Free Press: New York, US.

Regional Long-Term Development of Innovative Capability in SMEs

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Abstract

This paper is based on the view that the innovative capability of small and medium-sized enterprises is most efficiently supported by regional innovation services that combine 'fast action' and 'strategic co-operation' measures. Such services improve the strategic competence of companies by means of external expert services and focus on the implementation of specific innovation processes. As an illustrative case, the paper discusses the regional innovation service model developed at Helsinki University of Technology, Lahti Centre, for the Lahti Region in southern Finland. The paper also presents summary results of a survey undertaken in 2002 among client companies to find out about their views and experiences of the service model. This regional model corresponds to the goals of the Finnish national innovation system, and is thus also coherent with EU innovation policies.

Introduction[1]

The crucial matter in building company strategies is to achieve sustainable competitive advantage. Companies are strongly dependent on their past in seeking new trajectories for future prosperity, and the current position of a company is a result of the paths and trajectories it has travelled. Therefore, competitive advantage is strongly based on the existing resource configurations. These configurations have to be renewed over time in order to keep them competitive. In this paper, innovative capability is assessed as an essential dynamic capability in promoting the competitive advantage of a company.

Recent developments have emphasised the increasing role of non-linear innovation processes and incremental innovations placing special demands on the innovative capability of a company. Characterising innovation as a social, non-linear and interactive learning process raises the question of the role of socio-cultural structures in innovation processes. Companies do not act in isolation from their environment. The socio-institutional environment where innovations emerge plays an essential role in successful innovation processes. From a regional point of view, innovation is often understood as a locally embedded process that takes place within a regional innovation system.

This paper is based on the view that the innovative capability of a company is most efficiently supported by regional services that combine measures that improve the strategic competence (*strategic co-operation*) of companies with limited external expert services pertaining to the implementation of specific innovation processes (*fast actions*). Fast action activities support, firstly, the transfer of external expertise to companies, and secondly, the integration of those companies into innovation networks. However, fast action activities, as isolated occurrences, are insufficient to secure the enhancement of innovative capability in SMEs. In SMEs in particular, a demanding 'learning by doing' process necessitates adequate guidance, training and support at least in the beginning of the process. Therefore, long-term strategic co-opera-

[1] The authors thank Vesa Harmaakorpi for his contributions to an earlier version of the paper that was presented in the Symposium on the Entrepreneurship – Innovation – Marketing Interface, 9 – 10 October 2003, Karlsruhe, Germany.

tion supports the company's learning process and through this, its innovative capability.

As an illustrative case, this paper discusses the "regional innovation service model" developed at Helsinki University of Technology, Lahti Centre, for the Lahti Region in southern Finland. The model concentrates, in particular, on the improvement of the competence levels and innovative capability of companies. Improvements in these areas enhance the possibilities of a real increase in innovations in companies.

Building Innovative Capability in SMEs[2]

Characteristics of Innovative Capability

When the innovation process has been chosen as the central process of the company, awareness of the innovative capability is very important. Among other processes within the company, the innovation process requires appropriate capabilities to facilitate and develop the innovation process. These capabilities must also include the company's intangible resources. Traditionally, innovation research has mainly dealt with technical innovations, but as Schumpeter (1947) already said, production processes, new organisational forms, the opening of a new market, the development of new products, as well as new ways of marketing products are also innovations. These innovations may be even more valuable and important for the sustainable success of today's companies than technological ones (Schienstock and Hämäläinen 2001). However, even today, when measuring company innovativeness, the point of view taken is often too narrow, and new organisational innovations or new market concepts may be excluded from these measurements. One may end up with quite an inaccurate picture of the real innovativeness of companies.

Innovation is seen by many scholars as the most promising strategy for managing the uncertainty that typically characterises the rapidly-changing markets where companies operate. If companies are capable of continuously producing innovations, it is less likely that they will be caught by unexpected technological, economic or social developments (Schienstock 1975). The most typical reasons for the economic failure of innovation processes in SMEs have been divided into three groups (cf. Biemans 1992; Cooper and Kleinschmidt 1987):

- Inability of the company leaders to implement innovation processes;
- Company leaders' lack of knowledge of the markets and competitors;
- Inadequacy of the products.

The first and second categories concern the competences and abilities of the personnel in the company––in other words, the lack of innovative capability in the company during the innovation process.

Innovative capability refers to the qualities and management characteristics by which the company can define the resources which bring the company differentiating and sustainable competitive advantage (Dodgson and Bessant 1996; Teece and Pisano 1998). Innovative capability can be divided into three categories: tactical, strategic and meta-level capabilities (Kautonen, Kolehmainen and Koski 2001). Tactical capability means the company's ability to make observations regarding its business environment and to seek new information, technologies and markets, as well as implement changes in methods and strategies based on them. With strategic capability, a company is able to integrate different strategies and combine internal resources in a suitable way, with the objective of adapting to the changing business environment by creating new customer-based competitive advantage. Meta-level capability is usually understood as the company's ability to learn. The objective is to learn how to gain the best possible results, both short- and long-term, with the available (also external) resources.

Arnold and Thuriaux (1997), again, divide innovative capability into three categories: strategic, internal and external capabilities. The internal innovative capability is manifested in the development and management of material resources, such as products or production equipment, and immaterial resources such as knowledge and competence. A company's organisational capabilities like change management and technology management are of crucial importance. The external capability

[2] It is beyond the scope of this paper to discuss the various concepts and definitions related to innovative capability, such as the resource-based view to strategy building (see, e.g., Amit and Schoemaker 1993; Mahoney and Pandian 1992; Penrose 1959; Wernerfelt 1984), capabilities, competences (see, e.g., Javidan 1998), core competences (e.g., Prahalad and Hamel 1994) and dynamic capabilities (e.g., Teece et al. 1997, Eisenhardt and Martin 2000).

includes the company's ability to network and form relations with interest groups and other actors, which enables the expansion of knowledge and other resources for all the network companies in co-operation with other actors. Innovative capability manifests itself through the implementation of other processes in the company, not so much as an independent innovation process.

Building Innovative Capability in SMEs

In this paper, the focus is particularly on a company's general ability and willingness to develop and implement change processes. Innovative capability development is presented through *competence*, especially *core competence management* and *change leadership*. In addition to competences, it is a question of the company values, attitudes, methods of working, and the culture to which all the personnel functions are related. One main objective of the innovation process and the related innovative capability development is to create a positive attitude towards development and the implementation of changes. It is equally important to ensure and maintain the continuity of positive attitudes. Competence management, in this context, means support and encouragement for the readiness to develop the organisation together with the entrenching and cultivation of a positive attitude towards change.

When examining organisational competences, the point of departure can be knowledge of the basis of competence. Knowledge can be divided into four different levels (e.g., Quinn, Anderson and Finkelstein 1996): 1) *what-knowledge* is cognitive information learnt in basic training and studies, 2) *how-knowledge* is a developed skill; what-knowledge is first learnt and then converted into concrete performances, 3) *why-knowledge* is an understanding in which, as time goes by and experiences are gathered, the two previously mentioned elements are united, and 4) the most cultivated form, *the transfer of why-knowledge*. This is a willingness to act and an ability to act independently. For example, enthusiasm in a team can bring about an accumulation of results.

This fourfold division and the threefold division into *knowledge, competence* and *will* (or attitude) (Kirjavainen and Laakso-Manninen 2000), are partly overlapping but are basically congruent with each other. The deepest levels of knowledge––why-knowledge and the transfer of why-knowledge, as well as will––influence through values and attitudes. They are the most profound factors influencing human behaviour.

Competence Management

Knowledge management and competence management both mean influencing attitudes––an essential part of change leadership closely related to innovation processes and innovative capability. Transfer of why-knowledge consists of values and attitudes, which are also linked to the individual competences in a company and the collective competences in an organisation. The transfer of the values, ideas and attitudes of one single staff member can benefit the whole organisation.

Competence-based strategic management (e.g., Hamel and Prahalad 1994; Ulrich and Lake 1990) has a clear connection to the resource-based view of the company. Innovative capability in a company depends on how well and systematically some resources can be managed. Thus, it is essential in a successful innovation process that core competences and related competences are managed and directed parallel to the strategic future guidelines of the company. Competence management theory is a way of discussing strategies, environment and competition. The theory has contributed to the integration of personnel development as part of company strategy (Hamel and Prahalad 1994; Stalk, Evans and Schulman 1992).[3] When competences and their development are studied through competence management models, the term *strategic competence management* can be used. Competence is then integrated into the company vision and business plan, as well as knowledge-based resources and individual competences. Strategic competence management is the ability to manage and develop this entity (cf. Kirjavainen and Laakso-Manninen 2000). This paper focuses on innovation processes and innovation capability development based on the above-mentioned theoretical framework.

[3] Other related frameworks are knowledge management (e.g., Nonaka 1994; Davenport and Prusak 1998), intellectual capital management (Edvinsson and Malone 1997; Steward 1997) and learning organization (e.g., Argyris and Schön 1978).

To successfully distribute knowledge and competence to the whole organisation, the management is required to emphasise activities such as staff motivation and encouragement. This is accomplished through exemplary behaviour and actions with regard to the new policy. Such behaviour, motivation and encouragement are included in the concept of leadership. Comprehensive competence management consists of both management and leadership fields. The leadership field is emphasised more, but the management field cannot be ignored. Strategic competence management has typically centred on individual competences. An organisation's overall competence is more than the sum of individual competences. In personnel teams, supplementary competences interact, which increases the net competences in the company.

Change Leadership

The management may have a vision that in the future, they need policies different from the present ones. This means that in the future, personnel will need to have different attitudes, competences and behaviour. Change of action is necessary when the values, attitudes, culture and competences in a company inadequately support the implementation of an innovation process or the existence and development of innovative capabilities. A company itself cannot change the environment; it has to adapt to the environment. Companies continuously face new customers and their new and ever-changing expectations. Meeting these expectations necessitates flexibility and the ability to adapt. The ability to create and implement innovation processes is thus, justifiably, a company's core process. A crucial factor in innovative capability and implementation of innovation processes is change management. This paper advocates competence management as an important tool for change management. It is a significant part of change management, preparation of change, emphasis on the importance of change, personnel commitment to the change, as well as operations after the change and the new operational models.

In organisational literature, change is defined as movement from solid place p1 at a certain time t1 to another place p2 at a certain time t2. Related to this, the pioneer of controlled change, Kurt Levin (1947) has defined a *pre-planned change* in a company to consist of three steps: 1) unfreezing, 2) changing, and 3) refreezing. It is a question of creating and implementing new work methods, and reciprocally, unfreezing the present methods, that is, substituting old methods with new and rooting them in the company culture. Change leadership directs the company to the future. It means ensuring and preparing the way for an environment favourable to efficient innovation processes. It is also a question of ensuring the existence and development of innovative capability. Operational preconditions supportive of the implementation of innovation processes appear as a positive attitude towards development. The state of change must be made an acceptable and stable state of affairs in a company.

Regional Response

Regional Innovation Systems and Regional Innovation Networks

The increasing importance of knowledge in innovations means that companies should not innovate alone but in interaction with other organisations. These are typically other companies, universities, schools, research institutes or administrative institutions (Edqvist 1997). The recent debate about developing competitiveness and innovative capability has dealt with innovation systems. The concept of a regional innovation system provides a good framework for assessing technology and innovation policies in the new regional environment. At least three different schools have contributed a great deal to the framework: the Marshallian school of industrial districts (see, e.g., Marshall 1916, 1932; Beccatini 1990; Pyke and Sengenberger 1992), the school of new industrial spaces taking as their starting point the works of Coase and Williamson (see, e.g., Coase 1937; Williamson 1979, Storper and Scott 1992), and the mainly European GREMI-school emphasising the importance of the concept of innovative milieu (see Aydalot and Keeble 1988; Camagni 1991; Crevoisier and Maillat 1991).

The approaches mentioned have some differences, but many characteristics are similar. Edqvist (1997) defines nine features that can be found in all the approaches:

- Innovations and learning are at the centre;
- Assessments are holistic and interdisciplinary;
- A historical perspective is natural in them;
- Differences between systems and non-optimality are present;

- Emphasis is on interdependence and non-linearity;
- Approaches encompass product technology and organisational innovations;
- Institutions are central;
- Approaches are conceptually diffuse;
- Approaches are conceptual frameworks rather than formal theories.

The common features presented by Edqvist give a good overall picture of the regional environment where competitive advantage is created under the present techno-socio-economic paradigm. Much emphasis is placed on the role of institutions, interactivity and the non-linearity of the development processes, collective learning and the different characteristics of innovation processes.

Interaction characterises the innovation process in companies during the new economy, and different kinds of networks have become an integral part in the facilitation of innovativeness. The process of knowledge creation and diffusion involves a complex web of interactions among a range of different organisations and institutions (Van de Vent et al. 1999, 35). For instance, EU innovation policy emphasises the significance and crucial role of regional innovation systems as part of the measures activating Pan-European innovation. Each region is a result of a long historical development process and its business and service structure differs from other economic regions. Of course, each region must also efficiently network with others by exploiting national and global innovation measures in order to support its own innovative capability.

A regional innovation system consists of different innovation networks. These networks have many different forms defined by, for example, origin, size, structure and the objective of the networks (Harmaakorpi et al., 2003). From the point of view of knowledge creation and diffusion processes for supporting innovativeness and innovation processes in the region, regional innovation networks are an important structure. Regional innovation networks are typically heterogeneous, multi-actor networks. A well functioning regional innovation network is a valuable tool in supporting overall regional innovativeness as well as innovativeness and specific innovation processes in companies.

Special attention has to be given to the relationships within these loose, multi-actor networks. The critical issue is the creation of a trusting atmosphere in the network to facilitate interactive and joint learning processes. Actors in an innovation network "need to develop a common language and modes of interpretation and, above all, trust, in order to overcome some of the uncertainties characterising the innovation process" (Lundvall and Borras 1999, 30). Companies and individual entrepreneurs need to be integrated as members of these networks, and an atmosphere of interaction in innovation must be created. In fact, networking and the ability of companies to interact in order to support innovation activities or innovation processes are crucial parts of their innovation capability (cf. Arnold and Thuriaux 1997). A company may have unique and high-level core competences in a narrow sector, and in this field, the enterprise could be a real creator of knowledge. However, competences do not otherwise support sufficient interaction where the diffusion of knowledge would also be involved. The growing significance of knowledge in innovation places demands on the development of a company's competences so that they are more suitable for interaction and also for the diffusion of knowledge.

Different Levels of Interaction

When examining how companies are actually integrated into regional innovation networks and other innovation networks, it turns out that interaction varies between several different levels. The two extremes in the range can be described as follows:

A company can mainly just acquire external specialist services for its innovation process, but otherwise avoids further interaction with other organisations. One-time problem solving characterises such interaction, and active diffusion of knowledge is very seldom included.

A company can use regional innovation networks as an external knowledge base to support its innovativeness. Continuous cooperation with other organisations and the diffusion of knowledge characterises the interaction. Indeed, part of the company's innovation activities are shifted to the regional innovation networks, although the company still has overall responsibility for its specific innovation processes.

Without doubt, both kinds of interaction are important for innovation and also during a specific innovation process for a company or network of

companies. One-time problem solving might be a key factor for the success of a specific innovation process and, in this respect, extremely valuable. It, however, typically does not have a sustainable impact on the innovativeness either at the company or regional level.

A regional innovation network is based on the idea of continuous relationships. A company will become part of the knowledge creation and diffusion processes of the network. From the point of view of the company and the region, this interaction is likely to lead to a sustainable impact on innovativeness. Networks will provide and tailor new globally invented knowledge for the specific needs of the company, and the company will provide the networks with knowledge obtained during its innovation processes and other activities. This contributes to creating a real regional innovative milieu.

Our findings concerning the Lahti Region are in line with the results of Biemans (1992) as well as Cooper and Kleinschmidt (1987). The competences of SMEs to support planning and implementation of innovation processes, as well as interaction in innovation, are relatively low. Because of the lack of supporting competences, SMEs are incapable of efficiently planning and implementing innovation processes, even with the presence of a good regional knowledge base (see Schienstock and Hämäläinen 2001) and high-quality limited external expert services in the business environment. As an innovation process is also a learning process, it is argued that appropriate external actions during the company's innovation processes provide an excellent opportunity to train the company personnel and increase the innovative capability. This again, enables deeper interaction in innovation and participation in the activities of regional innovation networks.

Case study: Innovation Services Unit at Helsinki University of Technology – Lahti Centre (the Innopipe)

The city of Lahti is located in southern Finland about 100 kilometres north of Helsinki. The population of the Lahti Region is about 200,000. The industrial structure is quite conventional, and the main industries include metal and engineering, mechanical wood processing, and furniture and plastics. Helsinki University of Technology – Lahti Centre is an off-campus training and research unit of the leading university of technology in Finland. Helsinki University of Technology – Lahti Centre has developed a model especially for enhancing the innovative capability of SMEs with low or narrow competences (the Innopipe). The development work started with the assumption that company innovativeness can most effectively be supported and improved by combining measures to support company innovative capability both 1) at the strategic and competence levels related to planning and implementing innovation processes, as well as 2) at the level of limited external expert services supporting innovation processes. The idea of innovation processes as learning processes has strongly influenced the creation of the model. This combination of actions at two levels has been tested in practice in the work of the Innopipe.

The Innopipe has its own profile and position in the innovation system of the Lahti Region. Co-operation and division of duties with the other regional support organisations have been developed, and they function well. Annually, the Innopipe team participates in the planning and implementation of innovation projects in 30 – 50 companies. The Innopipe markets its services directly to the companies. Due to the development of a regional innovation network, it is also increasingly common for other regional support organisations to send their clients to the Innopipe. These other support or financing organisations, with frequent contacts with business, refer companies to the Innopipe that are perceived to have good development ideas, but do not have the competence or the resources to develop the ideas more thoroughly on their own.

It is beneficial to the whole region that companies carry out innovations competently and effectively. An economically crucial question for the companies is whether or not the implementation of the innovation processes is correct, reliable and effective. The further the process goes, the more resources are tied up, thus creating more costs and increasing the possibility of failure.

The Operational Model of the Innovation Services Unit

The starting point for planning the Innovation Services Unit operational model was experiences and feedback from companies involved in an R&D training concept developed earlier for the needs of SMEs at Helsinki University of Technology – Lahti

Centre. (Lintuniemi and Kauranen 2000; Kauranen and Lintuniemi 2003.) The objective was to form a comprehensive entity of supportive services for all phases of the innovation process in SMEs, bearing in mind the industrial structure in the Lahti Region, the development needs in the business environment and the general objectives of regional development.

The aim of the Innopipe model is to improve the innovativeness and innovative capability by developing and strengthening competences and networking abilities in the companies. The operations of Innopipe take into consideration the need to strengthen process management and implementation of innovations in companies by improving competences, interaction and reception, on the one hand, and by transferring the required outside expertise to the companies, on the other. The unit's operational model consists of two service packages for companies: support for the planning and implementation of innovation processes in companies (strategic co-operation) and implementation of separate R&D measures related to a specific innovation process (fast actions).

The Innopipe operations are presented in Figure 1. Strategic co-operation measures support the entire innovation process at the various stages of planning, implementation or change caused by the innovation in the company. Fast action measures are short-term development projects, often performed by external experts, to bring about a single operation significant to the innovation process.

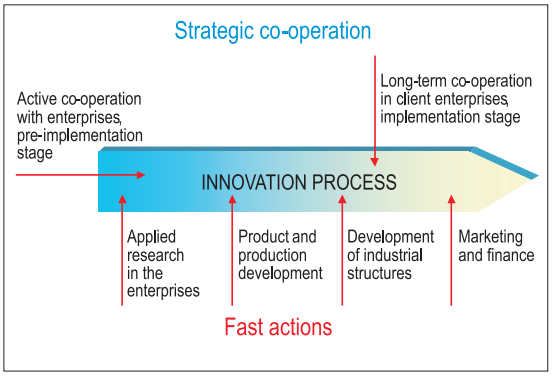

Figure 1. Strategic Co-operation versus Fast Actions

Strategic Co-operation

The planning and implementation of an innovation process requires a multitude of different competences in a company, and it may even lead to radical changes in the present tasks, actions and competence needs of the company. Strategic co-operation supports the company in the planning and implementation of the innovation process, as well as during the internal changes in the company. A prerequisite for the success of strategic co-operation is a confidential co-operative relationship between the company and the expert or expert organisation. A long-term partnership will be formed between the expert organisation and the company.

The experts use their own competence to support the pre-implementation strategic or operational planning in the company. They advise the company during the actual planning process and participate in the different stages of implementation. Through the Innopipe, the competences of Helsinki University of Technology and other members of the regional innovation network are supplied to support the innovation activities of the company and to enhance and improve the competences and abilities of the company's key personnel in the various tasks related to the innovation process. The strategic co-operation activity also uses the learning process aspect of the innovation process to train the company to interact and participate in the activities of regional innovation networks and other innovation networks (see Table 1).

Table 1. Strategic Co-operation Measures

Active co-operation with companies, pre-implementation stage: To keep companies informed about the support services that the regional innovation networks have to offer. To check with companies regarding their specific service needs. To gather information and feedback to further develop the services. To enable measures that aim at developing the competence level in companies.
Long-term co-operation in client companies, implementation stage: To support planning and implementation of innovation strategies and processes in companies. To act as an external support and guide for the company in the implementation of innovation processes. To improve the innovative capability in companies through the learning-by-doing process. To deepen companies' interaction and networking in innovation-related matters.

Fast Actions

Typically, the innovation process consists of various projects involving reports, studies and other development measures each demanding special expertise and knowledge. Fast action measures are part of the company's innovation process and usually produce new, processed information and knowledge during the implementation of a specific innovation process.

The company obviously performs some of the necessary steps, but some are best implemented with outside expertise. The experts are people who work in the region or outside the region, for example, in training and research organisations or other expert organisations. Fast action measures are short-term projects (2-12 months), involving an outside expert and a company employee. They implement a single research or development task important to the company's entire innovation process.

There are four priorities in the fast action measures chosen after analysing the needs of the companies. These emerged from a survey that was carried out in companies in the Lahti Region at the stage where the unit's operational model was being planned (see Table 2).

Table 2. Fast Action Measures

Applied research in companies. Theses and other reports to support specific innovation processes.
Product and production development. Feasibility studies, product and production development projects to support innovation processes in companies.
Development of industrial structures. Studies and development projects pertaining to strategic planning and implementation of new business activities.
Marketing and finance. Market analyses and studies supporting innovation processes in companies.

The structure of the service package offered by the Innovation Service Unit is flexible, and adaptable to the current needs of each company. The service package can, for example, consist of a single fast action measure or a combination of services – typically, strategic co-operation measures together with the necessary fast action measures. The Innopipe services are shown in Figure 2.

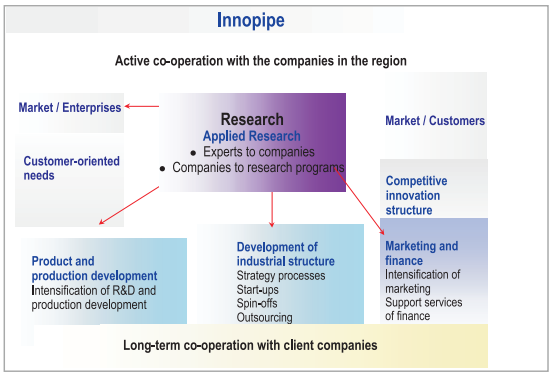

Figure 2. The Innovation Service Unit at Helsinki University of Technology – Lahti Centre (the Innopipe)

Results of the Work

A survey questionnaire was sent to companies that had participated in the Innopipe services before June 2002 to assess the feasibility of the new model. Companies were selected randomly from among all companies that had utilized the Innopipe services between 1998 and 2002. About 30 per cent of the 60 questionnaires sent out were answered and returned. Table 3 summarises the key replies from the companies.

Table 3. Assessments of the Innopipe Model by the Participating Companies

Assessments of the Innopipe model by the participating companies

Question:
How do you rate the Innopipe service model on the following scale:
(-2 = very poor, -1 = quite poor, 0 = no opinion, +1 = quite good, +2 = very good)

	-2	-1	0	+1	+2	
• Model as a whole	0	5	0	45	50	%
• Fast action as part of the model	0	0	11	61	28	%
• Strategic co-operation as part of the model	0	5	17	28	50	%
• Implementation of the model	0	5	5	40	50	%

Entrepreneurial Demand and Regional Response in Building Innovative Capability

The results of the survey show that companies perceive the Innopipe model to be useful, on the whole, and it serves their needs well. The response rate in the survey was not particularly high. However, the annual net increase in the number of companies that utilize the services is on average 20 and many companies utilize them several times, which supports the survey results concerning the usefulness of the services.

About 95 per cent of the companies that responded gave the model as a whole an overall rating of ”very good” or ”quite good”. In a more detailed analysis, almost 90 per cent of the responding companies rated the fast action part separately as “very good” or “quite good”. Fifty per cent of the companies rated the strategic co-operation part as “very good” and 28 per cent as “quite good”, while 17 per cent had “no opinion”, and only 5 per cent answered “quite poor”. When the companies were asked to rate the actual implementation of the model, 90 per cent answered “very good” or “quite good”, while 5 per cent had “no opinion”, and only 5 per cent answered “quite poor”.

It should be particularly noted that almost 80 per cent of the companies that responded find the strategic co-operation measures “very good” or “quite good”. This indicates that companies feel that this long-term co-operation is important. It also needs to be noted that over 60 per cent of the responding companies emphasised that as a result of the participation in the Innopipe, they are now in interaction with new partners and actively involved in networking.

Conclusions

Product and service development and strategic decision-making are today the core processes that assist a company in its adaptation to a changing environment. Innovative capability in a company is visible in the implementation of these crucial processes. Innovative capability involves the ability to develop and the willingness to develop in the personnel, but it also involves a critical but positive attitude towards change.

In this paper, strategic competence management was chosen as the key development element of innovative capability. Competence management is the most important part of change management. It means producing the competences necessary for planning changes and implementing them, and emphasising that continuous change must be faced with a positive attitude. The key to competence management as well as to the handling and development of innovation processes and innovative capability is core competences, the awareness of which must be part of all the processes in a company.

Knowledge creation and diffusion characterises innovation processes in the new economy. Companies and networks of companies are the main carriers of specific innovation processes, and competences in companies should support interaction and networking in innovation-related matters. A well-functioning regional innovation system and innovation networks are excellent tools to support specific innovation processes in companies. The main question is how to increase innovative capability and develop the competences of companies so that they will enable knowledge creation and diffusion during innovation processes.

Helsinki University of Technology – Lahti Centre has developed a new regional innovation support model to increase innovative capabilities and to develop competences especially in SMEs. The key of the regional innovation support model is to use specific innovation processes in companies as learning processes. The model combines measures for improving companies’ strategic competences and limited external expert services pertaining to the implementation of innovation processes.

The aim of the long-term strategic co-operation is to maintain an interactive relationship with the companies and increase their innovative capability by supporting learning and competence development, the knowledge creation and diffusion process, as well as networking in innovation-related matters.

Fast action measures are part of a company’s innovation process. They are normally carried out by external experts to produce new, processed information and knowledge during the innovation process in the companies. They support learning processes and often enable the start of knowledge diffusion and networking in the companies.

The Innopipe model has been tested in the Lahti Region and, according to the survey sent out to the participating companies, the results from the model appear promising. Companies perceive the model to serve their needs well. Long-term strategic co-operation is particularly valued. As a result of the participation in the Innopipe, companies now have new partners and are active in networking. This gives a fruitful basis for further implementation and development of the model, also in other environments.

References

Amit, R. and Schoemaker, PJH. 1993. Strategic assets and organizational rent. *Strategic Management Journal* 14 (1): 33-46.

Argyris, C. and Schön, DA. 1978. *Organizational Learning: A Theory of Action Perspective*. Addison Wesley, Reading, MA.

Arnold, E. and Thuriaux, B. 1997. *Developing Firms' Technological Capabilities.* Technopolis Ltd.

Aydalot, P. and Keeble, D. (eds). 1988. *High Technology, Industry and Innovation Environments: the European Experience.* London.

Barney, JB. 1991. Firm resources and sustained competitive advantage. *Journal of Management* 17 (1): 99-120.

Beccatini, G. 1990. The Marshallian industrial district as a socio economic notion. In Pyke F., Beccatini G. and Sengenberger W. (eds). *Industrial Districts and Inter-Firm Cooperation in Italy.* Geneva.

Biemans, W. 1992. *Managing innovation within networks.* Routledge, London.

Boden, M. and Miles, I. 2000. Conclusions: Beyond the service economy. In Boden, M. and Miles, I. (eds). *Services and knowledge-based economy.* Continuum, London and New York.

Camagni, R. 1991. Local "milieu", uncertainty and innovation networks: Towards a new dynamic theory of economic space. In Camagni, R. (ed). *Innovation networks: Spatial perspectives.* London.

Coase, RH. 1937. The Nature of the Firm. *Economica* 4: 386–405.

Coleman, J. 1988. Social Capital in the Creation of Human Capital. *American Journal of Sociology.* Volume 94, Issue Supplement: Organizations and Institutions: Sociological and Economic Approaches to the Analysis of Social Structure, 95-120.

Conner, KR. and Prahalad, CK. 1996. A resource-based theory of the firm: Knowledge versus opportunism. *Organization Science* 7 (5): 477-501.

Cooper, R. and Kleinschmidt, E. 1987. What makes a new product a winner: Success factors at the project level. *R&D Management* 17 (3): 175-189.

Crevoisier, O. and Maillat, D. 1991. Milieu, industrial organisations and territorial production system: Towards a new theory of spatial development. In Camagni, R. (ed). *Innovation networks: Spatial perspectives.* London.

Davenport, TH. and Prusak, L. 1998. *Working Knowledge: How Organizations Manage What They Know.* Harvard Business School Press.

Dodgson, M. and Bessant, J. 1996. *Effective Innovation Policy. A New Approach*. Thomas, London.

Edqvist, C. 1997. Systems of Innovation Approaches – Their Emergence and Characteristics. In Edqvist, C. (ed). *Systems of Innovation: Technologies, Institutions and Organizations, Chapter One*. Pinter Publishers, London and Washington.

Edvinsson, L. and Malone, MS. 1997. *Intellectual capital*. Harper Collin Business.

Eisenhardt, KM. and Martin, JA. 2000. Dynamic Capabilities: What Are They? *Strategic Management Journal* 21: 1105-1121.

Foray, D. and Lundvall, B-Å. 1996. The knowledge-based economy: From the economics of knowledge to the learning economy. In Foray, D. and Lundvall, B-Å. (eds). *Employment and growth in the knowledge-based economy.* OECD, Paris.

Grant, RM. 1996. Toward a knowledge-based theory of the firm. *Strategic Management Journal*, Summer Special Issue 17: 109-122.

Grove, AS. 1995. A High-Tech CEO Updates His Views on Managing and Careers. *Fortune*, September 18: 229-230.

Hamel, G. and Prahalad, CK. *1994 Competing for Future*. Harvard Business School Press, Boston.

Hamel, G. 1999. Bringing silicon valley inside. *Harvard Business Review* 2: 71-84.

Harmaakorpi, V., Niukkanen, H., Kauranen, I., and Haikonen, A. 2003. *Network Leadership in Regional Development Networks. Case: Developing*

the Expertise Concept for the Lahti Region in Finland. Paper presented at the Conference of Regional Studies Association, Pisa, Italy, 12-15 April.

Den Hertog, P. and Bilderbek, R. 2000. The knowledge infrastructure: The role of technology-based knowledge-intensive business services in national innovation systems. In Boden, M. and Miles, I. (eds). *Services and the knowledge-based economy.* London and New York.

Javidan, M. 1998. Core Competence: What Does It Mean in Practice? *Long Range Planning* 31 (1): 60-71.

Kauranen, I and Lintuniemi, M. 2003. Needs of industrial companies as the point of departure in continuing education. *Industry and Higher Education*. July. IP Publishing Ltd, London.

Kautonen, M., Kolehmainen, J. and Koski, P. 2001. *Yrityksen innovaatioympäristöt.* Tekes, Helsinki.

Kirjavainen, P. and Laakso-Manninen, R. 2000. *Strategisen osaamisen johtaminen*. Oy Edita Ab, Helsinki.

Levin, K. 1947. Frontiers in group dynamics. *Human Relations* 1: 5-41.

Lintuniemi, M. and Kauranen, I. 2000. *Use of outside experts in production development of small firms and start-up firms.* The Publication Series of the Institute for Regional Economics and Business Strategy. Helsinki University of Technology, Lahti.

Lundvall, B-Å. and Borras, S. 1999. *The Globalising Learning Economy: Implications for Innovation Policy.* Office for Official Publications of the European Communities, Luxembourg.

Mahoney, JT. and Pandian, JR. 1992. The resource based view within the conversation of strategic management. *Strategic Management Journal* 13 (5): 363-380.

Marshall, A. 1916. *The Principles of Economics.* Macmillan, London.

Marshall, A. 1932. *Industry and Trade*. Macmillan, London.

Nelson, RR. 1991. Why do firms differ, and how does it matter? *Strategic Management Journal*, Winter Special Issue 12: 61-74.

Nonaka, I. 1994. A Dynamic Theory of Organizational Knowledge Creation. *Organization Science* 5 (1): 14-37.

OECD. 1996. Technology, productivity and job creation. Paris.

OECD. 2000. A new economy? Changing role of innovation and information technology in growth. Information society. Paris.

Penrose, ET. 1959. *The Theory of the Growth of the Firm*. Wiley, New York.

Peteraf, MA. 1993. The cornerstones of competitive advantage. *Strategic Management Journal* 14 (3): 179-191.

Putnam, R. 1993. *Making Democracy Work: Civic Traditions in Modern Italy.* University Press, Princeton, N.J.

Pyke, F. and Sengenberger, W. (eds). 1992. *Industrial Districts and Local Economic Regeneration.* International Institute for Labour Studies, Geneva.
Schienstock, G. 1975. *Organisation innovativer Rollenkomplexe*. Anton Hain, Meisenheim.

Schienstock, G. and Hämäläinen, T. 2001. Transformation of the Finnish innovation system: A network approach. Sitra Reports series 7. Hakapaino Oy, Helsinki.

Schumpeter, JA. 1947. The creative response in economic history. *Journal of Economic History.*

Sotarauta, M. 2000. Kaupunkiseudun ydinkompetenssien kehittäminen. In Kostiainen, J. and Sotarauta, M. (eds). *Kaupungit innovatiivisina toimintaympäristöinä.* Tekniikan akateemisten liitto, Helsinki.

Stalk, G., Evans, P. and Schulman, L. 1992. Competing on Capabilities: The new rules of corporate strategy. *Harvard Business Review*, March-April, 57-69.

Steward, T. 1997. *Intellectual Capital – The New Wealth of Organizations*. Doubleday, New York.
Storper, M. and Scott, AJ. (eds). 1992. *Pathways to Industrialization and Regional Development.* London, New York.

Teece, D. and Pisano, G. 1998. The Dynamic Capabilities of Firms: An Introduction. In Dosi, G., Teece, D. and Chytry, J. (eds). *Technology,*

Organization, and Competitiveness: Perspectives on Industrial and Corporate Change. Oxford University Press, Oxford.

Teece, D., Pisano, G. and Shuen, A. 1997. Dynamic capabilities and strategic management. *Strategic Management Journal* 18 (7): 509-533.

Tura, T. and Harmaakorpi, V. 2003. *Social Capital in Building Regional Innovative Capability: A Theoretical and Conceptual Assessment.* Paper presented at the 43rd Congress of the European Regional Science Association (ERSA). Jyväskylä, Finland, 27-30 August.

Ulrich, D. and Lake, D. 1990. *Corporate Capability. Competing from the Inside Out*. John Wiley & Sons, New York.

Van de Ven, A., Polley, DE., Garud, R. and Venkataraman, S. 1999. *The Innovation Journey*. Oxford University Press, New York and Oxford.

Viitanen, P. 1994. Strategista oppimiskykyä etsimässä. In *Oppiminen kilpailutekijänä*, 5-12. Frenckelin Kirjapaino.

Wernerfelt, B. 1984. A Resource Based View of the Firm. *Strategic Management Journal* 5 (2): 171-180.

Wernerfelt, B. 1995. The resource-based view of the firm: Ten years after. *Strategic Management Journal* 16 (3): 171-174.

Williamson, OE. 1979. Transaction Cost Economics: The Governance of Contractual Relations. *Journal of Law and Economics* 22: 233–262.

The Innovative Technologies and Right Pricing Decisions in Marketing

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Abstract

As a result of the author's previous research work, this paper presents a model for establishing the right price strategy in marketing––a model that is useful mostly when innovative technology appears.
Based on the author's original method, DISTEH (i.e. technical distance), for assessing the level of technical performance and technology, any product/service might be represented by a dot within the p (T) domain (p = selling price per unit; $\overline{T}$ = Technical distance: lower $\overline{T}$, higher the technical performance of the product/service).
Using statistical methods, such as regression analysis, one might identify the "technology family" curves, as well as the "technology peak" and the direction and progress of the technological innovation. For a certain "technology family", the marketing manager can easily identify the low competition zones (marketing niches). A niche corresponds to the best price and product strategy.
A company might use an analysis of the p (T) diagram in order to design a marketing strategy with a higher probability of success, based on the price and product mix that targets the lowest competition zone. The Marketing and Research & Development departments should be actively involved in making this strategic decision.

Key words: ***DISTEH*** *(i.e. technical distance) - original method for assessing the level of technical performance and technology, competitiveness area, innovative technology, "technology family", "technology jump", marketing and price strategy, product strategy, marketing-mix, market niche.*

Introduction: The *DISTEH* Method

The ***DISTEH*** method was developed by the author as an original method to assess the level of technical performance among products (goods or services) and technologies (Scarlat 1980) within the laboratories of the Industrial Management Department at the University "Politehnica", Bucharest. The method was originally named ***DISTEH*** (Costake, N., Scarlat, C. 1981, 18) and the influence of the factor of time was first considered by Costake and Scarlat (1985, 226, 233). The method was tested in a number of practical training, consulting and research circumstances and continuously improved.

Assuming that any given product A_i (i = 1, …, m) is characterized by a set of technical performances (features, characteristics) C_j (j = 1, …, n), we can define the performance matrix:

$$C = [c_{ij}] \quad (1)$$

where c_{ij} is that value of the feature C_j in the case of the product A_i. It is understood that the unit price (p_i) and time of launch (t_i) are also known for each product.

The purpose is to determine a unique value associated with each product A_i, a value that allows the ranking of all products considered (starting with the best at the top). It should be mentioned that all products considered belong to the same category: they respond to the same need (examples: PCs or sport cars).

One can define an ideal product (I) – real or virtual – as having the best features $c_{Ij,}$ as follows:

$c_{Ij} = max_i\ (c_{ij})$ when feature C_j is to be as high as it can (Examples: memory, speed) (2)

$c_{Ij} = min_i\ (c_{ij})$ when feature C_j is to be as low as it can (Examples: weight, gas consumption) (2')

Note that (I) generally describes a virtual product. Its coordinates may vary in time, but if the analysis horizon is relatively short, the position of (I) is considered time-stable (Scarlat 2000, 372).

The leading idea is that each product (either real or virtual) can be represented as a point in n-dimensional space. The closer the point is to (I), the better the product. Thus, it makes sense to define *the technical distance between the given specific product and the ideal one* for each product in the following manner:

$$\overline{T_i} = \sqrt{\sum_{j=1}^{n}\left(b_j \frac{c_{ij} - c_{Ij}}{c_{Ij}}\right)^2} \qquad (3)$$

where b_j is associated with the importance of feature C_j ($0 < b_j < 1$).

The products are ranked starting from the best (minimum $\overline{T}_i$). Note that the technical distance is zero in the case of the ideal product. The greater the $\overline{T}_i$ value, the lower the quality of product A_i and its technical performance.

The ***DISTEH*** method can also be applied when the decision maker does not need to select absolutely the best product, but a *relatively better product*, in a similar manner (Scarlat 2000, 372-373).

One of the immediate applications of this method is the analysis of *product competitiveness* – mostly in the case of new technologies.

The Model of Competitiveness

As far as product competitiveness is concerned, there are two major goals: to identify and assess the main factors that have a major impact on the product's competitiveness, and to decide how competitiveness and profitability interact.

Based on the ***DISTEH*** method for assessing the level of technical performance, any product/service might be represented by a dot within the $p(\overline{T})$ domain (Exhibit 1). The *competitiveness area* is defined (as depicted in the same figure) bi-dimensionally: the dimension of *technical competitiveness (TC)* – assessed by the level of the product's technical performance (this is *technical distance,* according to the ***DISTEH*** method) – and the dimension of *economic competitiveness (EC)* – measured by the unit price level.
The squared domain can be even measured and evaluated geometrically (the shaded area A_C):

$$A_C = \overline{T}_L * (p_E - c) \qquad (4)$$

The lower the technical distance (the better the product – as we have seen), the higher the technical competitiveness; the lower the price, the higher the economic competitiveness. A product becomes more and more competitive as it simultaneously becomes technically and economically competitive (closer to 0) – as the pointed arrows show below.

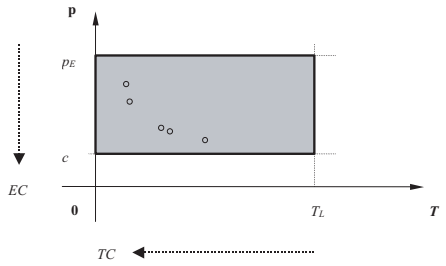

Exhibit 1: Competitiveness Area

$\overline{T}$ = Technical distance

$\overline{T}_L$ = Technical distance – limit *(over T_L products are not competitive, technically, because of the poor quality)*

p = selling price per unit

p_E = excessive price per unit *(over p_E, products are not competitive, economically, as too expensive)*

c = production cost per unit *(under c-level, products and production are not profitable)*

Unfortunately, there seems to be a strong contradiction between competitiveness and profitability: as the unit price decreases, the economic competitiveness (EC) increases, but the profitability per unit (p_E - c) becomes smaller and smaller *(Exhibit*

2). This "conflict" between (economic) competitiveness and profitability can be solved considering the total profit (G) generated by the total amount sold (q):

$$G = q(p - c) \tag{5}$$

Because of sales elasticity, *q* depends on *p* and finally, *G* depends only on *p.* The problem of profit maximization is solved by Scarlat (2003, 108-112) using derivatives: there is an optimum price (p_{opt}) between *c* and p_E for which the total profit is maximized:

$$G_{\max} = G(p_{opt}) \tag{6}$$

The conclusion is that competitiveness and profitability are only apparently contradictory.

Note that product competitiveness is influenced by other factors as well: the other components of the marketing mix (other than product and price) – commercial policies in force in different economic unions or commercial zones; contractual provisions such as product delivery terms or payment conditions even the currency used (Scarlat 1987).

The competitiveness model based on the ***DISTEH*** method is very useful for analysing the product's technical performance and quality from the standpoint of the technology used to manufacture that product.

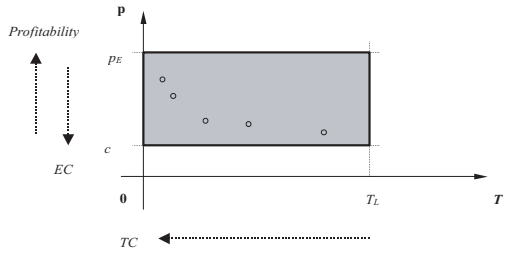

Exhibit 2: Competitiveness vs.Profitability

Innovative Technologies

For a given type of product (for example: digital photocamera mobile phones), there are "clouds" of dots within the competitiveness area, each dot corresponding to a specific product of that type (eg Nokia 6600). Using statistical methods, such as regression analysis, the curve $p(\overline{T})$ can be easily identified and designed. Note that the $p(\overline{T})$ curve is non-linear (convex). Usually, the best performing product is the most expensive one (towards the upper-left on the curve). It represents a so-called *"technology peak".*

In many cases, not only one regression curve can be obtained but several. *Exhibit 3* shows the case of two such regression curves, A and B. They describe different *"technology family"* curves, which were identified. The B family corresponds to *the innovative technology* as it includes either:

(i) Chipper products with similar quality and technical performance (technical level $\overline{T}$);
(ii) Products with improved quality and technical performance, at equal price (p).

The transitions of (i) or (ii) types are called *"technology jumps".* The most innovative technology is always placed on the extreme-left of the diagram.

Note that technological progress means new products with new and/or improved technical characteristics; consequently a *new ideal point (I) is established.* This means that the diagram $p(\overline{T})$ changes and must be redesigned as must the technology analysis.

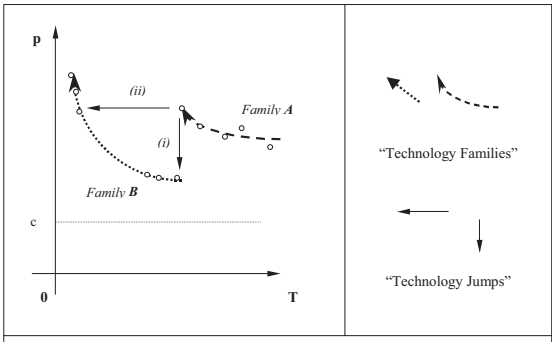

Exhibit 3: Technology families and "jumps"

Some Comments on Price Setting

When launching new products, companies may use thebi-dimensionalcompetitivenessmodelofthe $p(\overline{T})$ curve, based on the ***DISTEH*** method, as a practical method of identifying market niches as low-competi-

tion market zones, as noted by Dumitrache and Scarlat (2003, 104). The market niche corresponds to that portion of the regression curve (the most extended) where there are no dots *(Exhibit 4)* – i.e. there is a considerably large demand for a well-defined range of the specific technical performance of the given product, *which is not covered by existing products* and so *there is no competition! Exhibit 4* presents the niche on the "new technology family" curve.

The niche indicates the range of the technical performance of the new product to be designed and engineered, because of the variety of the clients' needs, which are not met by existing products ("$\overline{T}$ gap" on the $\overline{T}$ axis). The unit price is recommended, as well (p between p_1 and p_2) – for a given "$\overline{T}$ gap". It is important to remember that the "$\overline{T}$ gap" corresponds to the set of different technical features belonging to the product. This is extremely valuable market information for a company that is entering a new market or intends to launch a new product on a given market.

The Marketing and Research & Development departments should be actively involved in making this strategic decision, providing the background information about market niches (the coordinates of the market niche on both axes: product and price). The two components of the marketing-mix ("product" and "price") are strongly interrelated. The decisions about "price" cannot ignore the "product" and vice versa. Top-level management should be able to design their marketing strategy with a higher probability of success, based on a price and product mix that targets the lowest competition market zone.

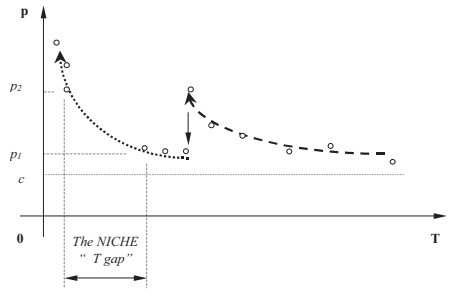

Exhibit 4: Niche identification

Niche identification is only "course tuning"; the "fine tuning" involves *how to set the right price within the niche.*

A common situation is presented in *Exhibit 5.* The market niche is defined and limited by two existing products (V and M) and their corresponding product and price limits:

- the technical performance between $\overline{T}_V$ and $\overline{T}_M$;
- the unit price between p_V and p_M, respectively.

Assume that a new entrant intends to launch a new "N product" of the same type; also, assume its technical performance ($\overline{T}_N$) is roughly in the middle of the distance $\overline{T}_V\overline{T}_M$. Most customers also expect the unit price p_N to be in the middle of the distance p_V p_M. As already presented, the fact is that the fair unit price (p_{real}) should be on the $p(\overline{T})$ curve, *which is considerably lower than p_N!* As Scarlat (1987, 337-339) pointed out, a wise price strategy would set the unit price under p_N (clients have the feeling of a low price) but above p_{real} (company will report an extra-profit). *This is a very good example of a win-win strategy!*

The assumption of mid-positioning of the new product does not influence the above conclusion; it just eases the understanding of the whole rationale.

It should be mentioned that the company management would set the price based not only on the optimum considerations presented, but also on other strategic elements (see, for example, Kotler 1993: *Chapter 19. Designing Pricing Strategies and Programs).*

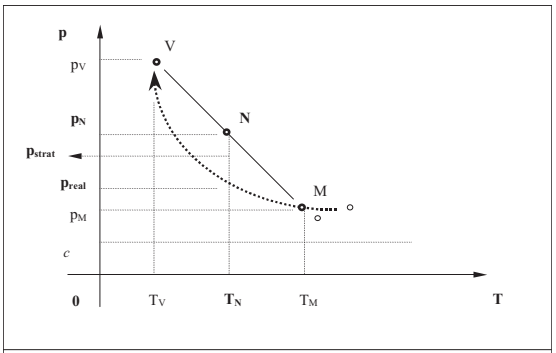

Exhibit 5: Price setting

Conclusions

- The ***DISTEH*** method is a useful tool for assessing the technical performance of products and ranking them accordingly
- There is a recommended optimum unit price for a given product, compromising its economic competitiveness and unit profitability, that maximizes the company's total profit
- Competitiveness diagrams can be constructed based on $p(\overline{T})$ regression curves
- Analysis of the competitiveness diagram reveals the innovative technology among different technology families, technology peaks and jumps, the sense of technological progress (prognosis) as well as market niches
- The best product-price decisions and marketing strategies are those based on $p(\overline{T})$ regression curves.

The model presented is a powerful tool for enhancing the "science" of managing. Each company manager will have his own approach to this "science", in terms of how he arrives at the best marketing decision – balancing the optimum unit price with the most suitable product strategy to achieve a successful marketing mix and consequently a successful marketing strategy.

References

Costake, N., Scarlat, C. 1981. Determinarea nivelului tehnic al produselor (Assessment of the products' technical performance level). *Revista economica.* March 1981, 13, 16-18.

Costake, N., Scarlat, C. 1985. Analiza nivelului tehnic al produselor (Analysis of the products' technical performance level). *AMC Review - Automatica. Management. Calculatoare.* Vol. 47, 225-236. Bucharest: Editura Tehnica.

Dumitrache, I., Scarlat, C. a.o. 2003. *Managementul centrelor de cercetare stiintifica (Management of the Scientific Research Centres).* Bucharest: Editura Economica.

Kotler, P. 1993. *Marketing Management. 8th Edition.* Englewood Cliffs, New Jersey: Prentice Hall. Romanian version: Kotler, P. 1999. *Managementul Marketingului.* Bucharest: Teora Press.

Scarlat, C. 1980. Metoda de stabilire a nivelului tehnic al produselor industriale complexe (Method to assess the technical performance level of the complex industrial products). *Proceedings of the First Symposium "Modelarea cibernetica a proceselor de productie", May, 1980.* Bucharest: Academy for Economic Studies Press.

Scarlat, C. 1987. Competitivitatea – abordare complexa tehnico–economica (Competitivity – complex technical-economic approach). *Stoica, N. and Scarlat, C. (coord.): Organizarea si conducerea intreprinderilor (Organization and Management).* Vol. 1, 324-347. Bucharest: "Politehnica" University Press.

Scarlat, C. 2000. Metoda distantei tehnice (Technical Distance Method). *Nicolescu, O. (coord.): Sisteme, metode si tehnici manageriale ale organizatiei (Systems, Methods and Techniques for Organization Management).* Bucharest: Editura Economica (369-378).

The Impact of Culture on Retail Service Quality Measures in Estonia

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Abstract

The continuing need to expand and extend the external validity of marketing principles and constructs beyond the major economic regions of the West continues to be a challenge to marketing researchers. One such field of research that has championed this call is the area of cross-cultural studies. Cross-cultural studies help provide a response to the criticisms raised by academic researchers that in order to extend and validate developed Western (predominantly American) models and survey instruments, empirical research must be broadened to encompass non-Western regions. The aim of this study is to address this issue by looking at one particular marketing phenomenon, retail service quality, in a non-western market, the Republic of Estonia, through established cross-cultural research. This is supported through consumer retail service quality data that was collected using a two-part qualitative research methodology––critical incident technique (CIT) and research focus groups––in the Republic of Estonia.

Introduction

The continuing need to expand and extend the external validity of marketing principles and constructs beyond the major economic regions of the West continues to be a challenge to marketing researchers. One such field of research that has championed this call is the area of cross-cultural studies (see special issue of the Journal of Business Research, 55, 2002). Cross-cultural studies help provide a response to the call made by researchers, such as Douglas and Craig (1997) and Steenkamp and Burgess (2002), for academic researchers to extend and validate Western developed (predominantly US) models and survey instruments to non-Western regions (Steenkamp and Burgess, 2002). The aim of this research is to address this call by looking at one such marketing phenomenon, retail service quality, in one non-western market, the Republic of Estonia through established cross-cultural research.

With over two thirds of the World's consumers living in developing and transition markets (Prahalad and Hart, 2002)[1], empirical marketing studies conducted in such markets contribute to lessening the Western/non-Western research gap. As noted by Batra (1997), non-western countries often differ in terms of cultural, economic, political and social systems in comparison to their western counterparts, and thus there is reason to question the validity of research findings for these non-western markets.

One area of cross-cultural research focuses on how individual human values help to highlight cross-cultural differences (Watson, Lysonski, Gillan & Raymore, 2002). Recently, researchers have examined one particular influence on values––the political system of a country/region (Schwartz, S. H., Bardi, A., and Bianchi, G. 2000, Schwartz and Bardi, 1997).

[1] There are varied definitions and terminology to describe non-western markets (for example, Emerging markets; Developing economies; Transitional economies; Global transition economy; Middle income countries). The use of the specific term transition economy best describes the transition of the centrally planned economies of Central and Eastern Europe and the countries of the former Soviet Union and to a lesser extent, the countries of Cambodia, China, Vietnam and Laos in South East Asia to free market practices and the privatization of former state run enterprises (Åslund, 2002).

This study presents data about retail service quality collected using a two-part qualitative research methodology––critical incident technique (CIT), and research focus groups––in the Republic of Estonia. The findings of this study are used to suggest that for a marketing construct such as retail service quality, the cultural make up of the area of study can have a direct impact on the development and testing of measurement instruments in order to increase confidence in the extendibility of differences found.

The paper is laid out in seven parts. The paper begins with the marketing field of interest, service quality, and how the construct of service quality may differ in transition economies. Section two provides insights into this specific stream of service quality research, retail service quality. Section three, briefly reviews the findings of Schwartz and his colleagues, on differences in personal values between developed and transition economies. Section four is the heart of the paper as it looks at how values research and retail service quality research may be used in conjunction to develop better measures of the service quality construct. Section five provides a brief overview of the Republic of Estonia and explains why it was chosen for this study . Section six reviews the qualitative research methodology employed in this study and the interpretation of the qualitative research findings. The final section presents conclusions and future research options.

Service Quality Research in Transition Economies

The literature published on the service quality construct within transition economies appears to be limited in scope. One article by Malhotra, Ulgado, Agarwal, and Baalbaki (1994) compares service quality dimensions in developed and developing countries. Malhotra et al. (1994) proposed that service quality should be viewed in terms of differences in economic and social factors, and that this should be tested empirically through cross-cultural research. But when compared with developed economies, transition economies showed a different percentage of business activity and employment in the industrial versus the services sector.

Transition economy enterprises were predicated on industrial production (particularly military production, see LeBaron, 2002), often at the expense of services. Prior to transition, central governments in planned economies, such as in the Soviet Union adhered to this production-based principle. The result was that in planned economies non-material production, or services, were excluded from national income measures (Åslund, 2002). The service sector was neglected in planned economies in favour of heavy industry (International Monetary Fund (IMF), 2000) and most firms were run by engineers who had unlimited power within the organization. Additionally, the absence of accountants and finance personnel was a direct result of the lack of profit incentive in these firms (Åslund, 2002), and consequently published studies of service quality prior to transition would have been of little use.

Retail Service Quality

In contrast to service quality within pure service encounters (e.g., hairdressers, film processors, telephone help desks), in a retail service setting, there exists both a goods and a service process (the "retail product" may be tangible, such as an item of clothing, or intangible, such as a bank savings account). The service process, such as how the store staff interact with the consumer (e.g. assistance in finding items, the check out process, the returns process) and the quality of the goods sold, both have an impact on the overall service quality experience (Dabholkar, Thorpe, and Rentz 1996). Retail service quality research within the overall field of research into service quality is an important construct for study as research has shown a link between service quality and a better understanding of customer satisfaction and customer retention (Parasuraman, Ziethaml, and Berry 1985).

Dabholkar et al. (1996) were among the first to publish a model of service quality specifically grounded in the retail sector. Dabholkar et al. (1996) revisited an original research method (Parasuraman et al.1985) of gathering qualitative research data to better determine what factors best describe service quality in a retail setting. Their resulting model of retail service quality (henceforth RSQ) produced a five-factor solution, Physical Aspects, Reliability, Personal Interaction, Problem Solving and Policy. They supported the application of a hierarchical model based on retail literature that suggests consumers evaluate retail service quality at both the attribute and an integrated level. They also saw a hierarchical model as providing a greater level of understanding of the overall service quality measure, while also providing additional levels of diagnostic analysis for practical use.

With respect to the international testing of the RSQ model, a study by Siu and Cheung (2001), did support the use of the Dabholkar et al. (1996) RSQ model within another culture, that of Hong Kong. Their study provided some interesting insights into service quality in a non-western environment, but it is argued that, as stated by Hofstede (2001), regardless of the fact that the survey subjects were English speakers, the difference between American and Hong Kong consumers in terms of culture could have a significant impact on the research findings. Therefore, there continues to be a lack of research specifically using transition economies as the country of study, and studying the retail service quality construct.

Cultural Values: Transition Economies versus Western Economies

One of the most cited frameworks of culture has been that of Hofstede (2001), whose five dimensions of culture (Power Distance, Uncertainty Avoidance, Individualism/Collectivism, Masculinity/Femininity, Long Term/Short Term Orientation), has been applied to a number of marketing and other management issues in comparative research studies (Lynn, Zinkhan, and Harris, 1993).

Although the work of Hofstede has had and continues to have an impact on cross-cultural research, the empirical study of culture within transition economies such as Estonia lies outside of this realm. One body of cultural research that has studied people empirically within transition economies specifically in the area of individual values, is the research of Schwartz and his colleagues (Schwartz, 1994; Schwartz and Bardi, 1997, Schwartz, et al. 2000, Schwartz and Bardi, 2001). Schwartz, although having commended Hofstede on the depth and breadth of his research data, had concerns about the fact that his values data was developed by western researchers in the west, and not in the regions of interest. Schwartz addressed this potential cross-cultural gap by using multi country researchers in the development of his value measures resulting in the Schwartz Value Index (Schwartz, 1994; Schwartz and Bardi, 1997, 2001). This series of 56 single value items was originally used to empirically test the identity of 10 value types, which in subsequent research (Schwartz, 1994) was collapsed into seven value types (Conservatism, Intellectual Autonomy, Affective Autonomy, Hierarchy, Egalitarianism, Harmony, Mastery).

There are two reasons why the Schwartz Value Index is of interest for the present study, the first is that the original value data included an Estonian sample, and the second is that Schwartz and Bardi (1997) demonstrated differences in value priorities between people in nine transition economies (Bulgaria, Czech Republic, Estonia, Georgia, Hungary, Poland, Russia, Slovakia, Slovenia), and those of Western European countries. Schwartz and Bardi (1997) found that citizens in Eastern Europe and the Former Soviet Union differed from their counterparts in Western Europe by scoring higher in the values of Conservatism (emphasis on the status quo, respect for tradition, obedience), and Hierarchy (legitimacy of roles and resources) and lower in the value ratings of Egalitarianism (equality, freedom, social justice), Affective Autonomy (enjoying life, pleasure) and Intellectual Autonomy (creativity, curious, broad-minded) (there were no significant differences in the areas of Harmony and Mastery). Schwartz, et al. (2000) also found support for the idea that the greater the degree of adaptation to the communist system (ie Soviet Republics vs. countries of Central Europe) the greater the value differences in comparison to the West.

Value Priorities and Retail Service Quality

The meaning of constructs such as retail service quality will remain unclear unless one can understand the way in which they are interpreted. According to Schwartz et al. (2000), there were two types of influences on value change in the planned economies of Eastern Europe. The first, direct indoctrination, involved a complete inculcation of the citizens to the Soviet system in all of their activities. Although there is little support that direct-indoctrination took hold to any great degree in areas under Soviet domination (Finifter, 1996), there is support that the second type of indoctrination, adaptation, did occur.

The value of Conservatism can be viewed as being the most prevalent even beyond the political system. It can be argued that consumers within communist systems were most comfortable with what Sunic (1994) referred to as economic predictability and psychological security, and this comfort within the communist system came from a hierarchical existence of roles and legitimacy. Based on this view, shoppers in transition economies should continue to have certain expectations as to the roles of retail service providers, and also retail sales staff should

have a similar inclination as to the "importance" of their role.

It is also suggested that a lack of interpersonal trust is important when measuring retail service quality. It has been shown that in developed markets, the level of customer trust that consumers have in the retail service provider has an impact on their retail patronage habits (Swan and Nolan, 1985). In transition economies, there is a history of interpersonal trust being less significant, based on a history of mistrust in everyone. Informants played a significant role in the enforcement of actions and activities within the communist system (Ross, 2002) and the resulting lack of trust is in keeping with the lower importance placed on egalitarian values.

Although it can be argued that values can and do change over time (Hraba, Mullick, Lorenz, Vecernik, and McCutcheon, 2002), research on cultural change shows that change in values is not rapid, regardless of the speed and depth of the political and economic change that occurs. This view of slow change is also supported by Inglehart (1997) and his analysis of the World Values data (an ongoing survey of worldwide socio-cultural and political change, basic values and beliefs of the people in more than 65 societies).

In conclusion, the findings of Schwartz, et al. (2000) indicate that changes in values have been small and slow, even in a country-by-country analysis. These findings indicate that political change itself has little impact on changing people's basic values, further supporting a need for country/culture specific marketing research.

The Republic of Estonia

Identifying countries in transition involves focusing on a number of types of change. In the process of transition from a planned to a free market economy, change does not solely occur economically, but also socially and culturally (Blom, Melin and Nikula, 1996). The Republic of Estonia represents such a country (Lauristin, Vihalemm, Rosengren, and Weibull, 1997).

The choice of Estonia for empirical research is based on a number of research criteria. As demonstrated by the cultural research of Inglehart (1997), Estonia clusters with other countries that are defined as being in transition. Additionally, Estonia falls somewhat centrally within this cluster of transition economy countries. It is suggested that specific scale items derived from Estonian based research may result in service quality measures that may also hold true in similarly mapped countries (for example Latvia, Slovenia, Belarus).

Additional reasons for selecting Estonia for research include its relatively small population and size and distinct language, which provides the opportunity to control for many potential cross-cultural effects. Also, as recommended by Cavusgil and Das (1997), access to locals allows improved sampling, translation, and administration of quantitative and qualitative research. The author has had the opportunity to establish both academic and practitioner contacts within Estonia.

Finally, a reason for looking at transition economy countries in general, and selecting Estonia specifically, in an *a priori* fashion, is supported by the cultural differences in values that Estonians have in comparison to cultural values of the west. The Schwartz (2000) study used a comparative cross-national approach to analyze how the socio-economic and technological development of an economy had an impact on human values. Estonia was one of the countries included in their research.

Research Study
Qualitative Research Methodology

The principles of qualitative research are to gain an insight into and an understanding of the construct of interest, but not to draw definitive conclusions (Rubin and Rubin, 1995). With this as a guiding principle, a two-step qualitative research design was used. The first step was to collect a series of critical incidents of service quality as defined by Estonian shoppers. The second qualitative method was to form focus groups of Estonian consumers and facilitate discussion of key aspects of retail service quality. These two approaches were conducted in the context of the potential value priority differences identified above.

Critical Incident Technique

The first qualitative research method, critical incident technique (CIT), has its origins in the work of Flanagan (1954) and his study of Air Force personnel. Flanagan saw CIT as a technique to better

understand observations of human behaviour through the development of psychological principles. Since then, critical incidents have been used in service quality literature (e.g. Edvardsson, 1992) to uncover service quality dimensions. The most common form of CIT analysis has been content analysis. For this study, as recommended by Johnston (1995), a traditional questionnaire was used to collect critical incident data from Estonian shoppers in order to allow the respondents to express in their own words, what service means to them.

In order to highlight the phenomenon being studied at the level of basic values (Schwartz et al. 2000 – basic values – what people believe is good or bad p. 217) within the specific area of research, retail service quality, a short questionnaire was developed. The two-part question was;

"Think of a shopping experience you have had at a store in Tartu/Tallinn (the two major Estonian cities) when you were very pleased/unhappy and satisfied/dissatisfied with the service provided. Please describe in a few sentences the service experience and what made you satisfied/dissatisfied about the service provided."

A convenience sample of 78 Estonian consumers completed the questionnaire via email. There were a total of 153 "good" comments, and 116 "bad" comments. The following table summarizes the top five comments for each question:

Although the descriptors of "good" versus "bad" service are diametric opposites for a number of the top five groupings, as shown by Lynn, Lytle and Bobek (2000), the presence/absence of a descriptor does not always mirror the positive/negative aspects of the service experience.

Consumer Focus Groups

The second stage in the qualitative research design involved a series of six focus groups with four to seven Estonian subjects in each. The six focus groups, consisted of two groups of consumers that would have had personal retail shopping experiences both prior to Estonian independence in 1991 (pre transition retail environment), as well as after independence (i.e., over 40 years of age), and four groups of consumers that would have experienced the majority of their shopping experiences since 1991 (less than 30 years of age).

There were two expectations to be achieved from the focus groups. The first was to highlight potential differences between how Estonian consumers describe aspects of retail service quality, and the second, was to collect descriptions and insights on retail service quality in Estonia in order to generate scale items for a pre-test retail service quality instrument (Rubin and Rubin, 1995). For this reason it was expected that six groups would provide acceptable insights (Byers and Wilcox, 1991), while the choice of four to seven subjects was to ensure that there was sufficient group interaction and diversity while still being a manageable size (Davis, 2000).

At each of the sessions a moderator posed a series of service quality questions to the group. This was to expand upon the meaning and interpretation of the three aspects of service quality hypothesized as important by the literature and pilot study findings (physical aspects, speed of service, problem solving, other), as well as other potential, Estonia-specific, measures of service quality. For each of these service quality dimensions the participants were asked to describe a negative shopping experi-

Good Service		**Number of Responses**	
1	knowledgeable/competent staff/offer recommendations	36	23.53%
2	smiling/friendly/polite	29	18.95%
3	staff kindness/helpful	13	8.50%
4	not coming up right away to offer assistance/not pushy	12	7.84%
5	no good experiences	9	5.88%

Bad Service		**Number of Responses**	
1	impolite/rude staff	29	25.00%
2	uncaring/disinterested/dour staff	27	23.28%
3	incompetent/unknowledgeable staff	17	14.66%
4	poor product selection/can't find products/out of stock	9	7.76%
5	out of date/poor quality products	6	5.17%

ence (perceptions) and also to talk about how they would describe an excellent service experience, again according to the three dimensions.

The six focus group sessions were tape-recorded and a transcript of each session was made. The transcripts were then reviewed for phrases and meaning from the comments provided by focus group participants. The following section interprets the research findings from these sessions.

As in the CIT findings, the role of the service provider was frequently mentioned as being of greatest importance in a positive service experience. An interesting finding was the variety of responses about what the role of the service person should be. Some participants saw the service person as a retail expert and their role to tell the customer what to buy and why ("salesman should be the expert - an expert salesperson is competent- a consultant, they know about you, show you different options"). Other respondents saw the role of the service person as being their servant in that the shopper is the expert––the shopper knows what they want, and the sales person's role is to do what the shopper wants ("they should be thankful I am bringing money to the store").

The question about returning products also created some interest. The Dabholkar et al. (1996) study included a scale item about the store's willingness to handle returns. The Estonian focus group participants also saw this as an important part of service quality, but with some additional conditions. Focus group comments about having to accept personal responsibility for making incorrect choices were mentioned. If the product they purchased was broken the store should exchange it, but if the shopper made a poor choice (colour, size), the store should not have to exchange the item ("is it my fault, shop's fault, or product's fault, very rarely change product if it is my fault").

Another potential difference in retail service quality highlighted in the focus groups was the role of the physical layout of the store. In the focus group sessions when this question was asked, the participants needed to further deconstruct this question into additional stipulations. Being able to find what they wanted in the store was important, but the ability to find what you are looking for yourself was judged to be of greater importance than having people available to help you do this. There were also comments about the lack of consistency in regard to where products were located in the store from week to week. Although additional time may be necessary in order to find an item, the fact that the item could still be found was viewed as outweighing the greater time needed to find it ("usual to not find product, I am used to it - looking around myself, then if I can't find it I will ask the staff, I wouldn't get frustrated").

A final potential difference in retail service quality in Estonian versus western markets concerns the importance of 'in stock' positions at a store. The Estonian focus group shoppers were asked their views about a store being 'in stock' with respect to service quality (as this is an ever increasing concern for western based retailers, see Taylor and Fawcett, 2001). The Estonian shoppers did not view a store being 'in stock' as having an impact on how they viewed service quality. In a similar vein to the product returns/exchange example, specific comments about the store not having control or responsibility for having products 'in stock' were made. "Fault" was assigned/assumed to be that of the supplier and not the retailer. If the product is one the consumer wanted they would keep coming back to the store until it was in stock ("if I don't find product I will look in another shop, I do not get mad").

Interpretation of Qualitative Research Findings from a Values Perspective

If as shown by Schwartz and Bardi (1997) there are value priority differences between Eastern and Western Europe, then how do these qualitative research findings align with this position? The following points provide an interpretation of the qualitative research findings with respect to differences in cultural values.

Estonian consumers appear to view the component of retail service quality concerning the return/exchange of goods differently to Western consumers. This suggests that in Estonia, one accepts personal responsibility for having made the wrong choice. If the product was broken the store should exchange it, but if I the shopper made a poor choice (colour, size), the store should not have to exchange the item. This example appears to align with what Schwartz (1994) labels the Hierarchy dimension, ie the legitimacy of the store makes them responsible for selling goods that do what they should, but they are not responsible for correcting the consumer's poor judgement.

A second area of interest was the role of an in stock position as being an important measure of retail service quality. The apparent difference of attitudes in this area is proposed as an example of a cultural difference between Western and transition economy consumers with respect to differences in the Conservatism value (Schwartz and Bardi1997). Estonian shoppers may be more willing to forgive those in direct authority (in this case the store), if they have another party to blame (the supplier). This makes sense intuitively in light of the historical experience of Estonians attributing the central government or authorities responsibility for when things go wrong (Tannberg, Mäesala, Lukas, Laur, & Pajur, 2002).

A final interpretation of the Estonian findings sees the importance of the sales staff as being critical for both good and bad service. As in western retail service quality research, the role of the store staff in the areas of friendliness, helpfulness, and problem solving are well documented (Merrilees and Miller, 1996). In the Estonian findings, the fact that the physical actions of the store staff play a dominant role in defining good/bad service, regardless of the retail actions of the staff, can be interpreted as a more heightened sense of the changing consumer attitudes. Prior to re-independence in Estonia (and other soviet republics), retail service staff had little incentive to please the customer, as sales targets were not of importance due to the complete lack of competition (Åslund, 2002). Although as noted, the value that Estonians place on conservative values would lead one to suspect that deference would be given to store staff due to their position of authority, this is not the case.

One way of interpreting this apparent contradiction could be that the consumers' interpretation of power has changed, and that Estonian shoppers view themselves as now being in the position of power/authority (an Estonian comment is "the client is king") and that the store staff are now showing respect to customers based on customer power.

Conclusions and Future Research Options

Knowledge of the past and current retail sector in transition economies such as those in Eastern Europe and the former Soviet Union is important in understanding the influences and biases that may result from the application or development of established marketing and retailing measures and models. If there exist differences between transition and developed markets in terms of marketing focus and marketing objectives in general, there is a need for retailers who wish to operate in transition economies to understand these key contrasts.

This research has raised some questions about the appropriateness of using western developed research instruments when examining marketing constructs such as retail service quality in non-western markets. Integrating cross-cultural research, particularly in terms of cultural values together with established marketing concepts of service quality, results in a greater confidence in the validity of research concepts within non-western markets. Although these findings represent only one service sector, in one transition economy, it is recommended that similar research in transition economies continue in order to better ascertain the validity of "universal" constructs and research phenomena.

References

Åslund, A. 2002. *Building capitalism: The transformation of the former Soviet bloc.* UK: Cambridge University Press.

Batra, R. 1997. Marketing issues and challenges in transitional economies. *Journal of International Marketing, 5, 4,* 95-114.

Blom, R., Melin, H. & Nikula, J. 1996. The green banana of the Baltic states - Obstacles to capitalist development. In R. Blom, H. Melin & J. Nikula (Eds.), *Between plan and market: Social change in the Baltic States and Russia*. Berlin: Walter de Gruyter.

Byers, P.Y., & Wilcox, J.R. 1991. Focus groups: A qualitative opportunity for researchers. *Journal of Business Communication, 28, 1,* 63-78.

Cavusgil, S.T. & Das, A. 1997. Methodology issues in cross-cultural sourcing research - A primer. *Marketing Intelligence and Planning, 15, 5,* 2123-220.

Cronin, J. J., & Taylor, S.A. 1992. Measuring service quality: A re-examination and extension. *Journal of Marketing, 56,* 55-68.

Dabholkar, P.A., Thorpe, D.I., & Rentz, J.O. 1996. A measure of service quality for retail stores: Scale

development and validation. *Journal of the Academy of Marketing Science, 24, 1,* 3-16.

Davis, D. 2000. *Business research for Decision Making.* California: Duxbury Press.

Douglas, S.P., & Craig, C.S. 1997. The changing dynamic of consumer behavior: implications for cross-cultural research. *International Journal of Research in Marketing, 14, 4,* 379–395.

Edvardsson, B. 1992. Service breakdowns, a study of critical incidents in an airline. *International Journal of Service Industry Management, Vol. 3, 4,* 17-29.

Finifter, A.W. 1996. Attitudes toward individual responsibility and political reform in the former Soviet Union. *The American political science review, 90, 1,* 138-161.

Flanagan, J.C. 1954. The critical incident technique. *Psychological Bulletin, 51, 4*, 327-358.
Hofstede, G. 2001. *Culture's consequences: Comparing values, behaviors, institutions, and organizations across nations.* Thousand Oaks, California: Sage Publications.

Hraba, J., Mullick, R., Lorenz, F.O., Vecernik, J., & McCutcheon, A. 2002. Education and support for the Czech reforms. Sociology of education, 75, 2; 147-168.

Inglehart, R. 1997. *Modernization and postmodernization: Cultural, economic and political change in 43 Societies.* Princeton, NJ: Princeton University Press.

International Monetary Fund 2000. Transition: Experience and policy issues. *World Economic Outlook: Focus on Transition Economies, October,* 84-137.

Johnston, B. 1995. The determinants of service quality: satisfiers and dissatisfiers. *International Journal of Service Industry Management, Vol. 6, 5,* 53-71.

Lauristin, M., Vihalemm, P., Rosengren, K.E., & Weibull, L. 1997. *Return to the western world: Cultural and political perspectives on the Estonian post-communist transition.* Tartu: Tartu University Press.

LeBaron, D. 2002. *Mao, Marx and the market.* New York: John Wiley & Sons.

Lynn, M., Lytle, R., & Bobek, S. 2000. Service orientation in transitional markets: Does it matter? *European Journal of Marketing, 34(3/4)*, 279-298.

Lynn, M., Zinkhan, G.M., & Harris, J. 1993. Consumer tipping: A cross-county study. *Journal of Consumer Research, 20, (December),* 478-488.

Malhotra, N.K., Ulgado, F.M., Agarwal, J., & Baalbaki, L.B. 1994. International service marketing: A comparative evaluation of the dimensions of service quality between developed and developing countries. *International Marketing Review, 11, 2,* 5-15.

Merrilees, B. & Miller, D. 1996. *Retailing Management: A Best Practice Approach*. Collingwood: RMIT Press.

Parasuraman, A., Zeithaml, V.A., & Berry, L.L. 1985. A conceptual model of service quality and its implications for future research. *Journal of Marketing, 49,* 41-50.

Prahalad, C.K. & Hart, S.L. 2002. The fortune at the bottom of the pyramid. *Strategy + business*, *Q1,* 2-14.

Ross, J.E. 2002. Tradeoffs in undercover investigations: A comparative perspective. *The university of Chicago law review, 69,3, 1501-1541.*

Rubin, H.J., & Rubin, I.S. 1995. *Qualitative interviewing: The art of hearing data.* California: Sage Publications.

Schwartz, S.H. 1994. Beyond individualism/collectivism: New cultural dimensions of value. In U. Kim, H.C. Triandis, C. Kagitchibasi, S.C. Choi, & G. Yoon (Eds.) *Individualism and collectivism: Theory, method and applications* (pp. 85-119). Thousand Oaks, California: Sage Publications.

Schwartz, S.H., & Bardi, A. 1997. Influences of adaptation to communist rule on value priorities in Eastern Europe. *Political Psychology, 18, 2,* 385-410.

Schwartz, S. H., & Bardi, A. 2001. Value hierarchies across cultures: Taking a similarities perspective. *Journal of Cross Cultural Psychology, 32*, 268-290.

Schwartz, S. H., Bardi, A., & Bianchi, G. 2000. Value adaptation to the imposition and collapse of

communist regimes in East-Central Europe. In J. Duckitt & S. A. Renshon (Eds.), *Political psychology: Cultural and cross cultural foundations*, (pp. 217-237). Macmillan.

Siu, N.Y.M., & Cheung, J.T.H. 2001. A measure of retail service quality. *Marketing Intelligence and Planning, 19, 2,* 88-96.

Steenkamp, J.E.M., & Burgess, M. 2002. Optimum stimulation level and exploratory consumer behavior in an emerging consumer market. *International Journal of Research in Marketing, 19,2,* 131-150.
Sunic, T. 1994. The persistence of the communist mystique. *The journal of social, political, and economic studies, 19, 1,* 95-104.

Swan, J.E., & Nolan, J.J. 1985. Gaining customer trust: A conceptual guide for the salesperson. *Journal of personal selling & sales management, 5,* 39-48.

Taylor, J.C., & Fawcett., S.E. 2001. Retail on-shelf performance of advertised items: An assessment of supply chain effectiveness at the point of purchase. *Journal of Business Logistics, 22, 1,* 73-89.

Tannberg, T., Mäesala, A., Lukas, T., Laur, M., & Pajur, A. 2002. *History of Estonia*, Tallinn: AS-BIT.

Watson, J.J., Gillan, T, Lysonski, S., & Raymore, L. 2002. Cultural values and important possessions: A cross-cultural analysis. *Journal of business research, 55,11,* 923-931.

E-Broking as an Innovative Tool for Marketing Financial Services

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Summary of the Article

For any organization to thrive in today's business environment, it must deal effectively with global competition and the rapid pace of technological change. The Internet has played a vital role in transforming business in the new millennium. As an innovative tool, the Internet is gradually entering our lives and improving cost effectiveness, catalyzing disintegration, and increasing convenience for businesses and their consumers. Perhaps, nowhere else is the impact of the Net felt as much as in the marketing of the services sector"—it has opened new channels for service delivery, shortened turnaround times, and offered unprecedented convenience to customers.

The focus of this article is on the "marketing of financial services," with special emphasis on 'e-broking'. In the first part of the article the author familiarizes the readers' with the basic concepts, such as, e-market, e-broker, e-trading, e-broking etc, and summarizes distinct phases in the development of e-broking and the mechanism of e-trading. In the second part the "Six 'S' Model" provides a framework for analyzing the potential e-enablement of a service. Part three succinctly portrays the benefits for users and brokers and a few of the problems caused by switching over to an e-broking system.

For any e-trading system to be successful, as stressed in the next part of the article, one should provide for foolproof security, reliability and confidentiality of data. Here, we discuss three layers in the cycle, key success factors, and various security models that are adopted by the e-broking industry. Last but not least, an attempt is made in section five to give an overview of an e-broking scenario in the US, South Korea, Japan, and India. Finally, we conclude by portraying the prospects for an e-broking industry around the globe. Despite all the challenges, the e-broking industry seems like a sector set to grow day-by-day. Paperless environments, virtual organizations, mass customizations, and the Internet-based customer services are some of the hallmarks of organizations in the new millennium.

Introduction

Over the last few centuries, human beings have experienced two major revolutions—the industrial and electronic revolutions. The former transformed our society from being agriculturally based to industrially based, whereas the latter transformed our society from being mechanically based to electronically based. "As we enter the 21st century, we are seeing the beginning of a new revolution, namely the network revolution. It interconnects different parts of the world, enabling the seamless flow of information. The Internet is the engine of this revolution and electronic commerce (e-commerce) is its fuel," observes Turban (et al., 2000). In the mid-1990s, the term "Web economy" had not yet been coined; it is now a common phrase in business circles.

It is very unfortunate that the media has been as prompt in writing-off the Internet as it was in canvassing for it. However, the truth is that the Internet is neither a sweeping change that could change the face of business overnight, nor as banal a force as the media would now have us believe. Professor Hanson, in his classic book (2001) Principles of Internet Marketing, beautifully sums up the real situation as: " The Internet is definitely a force with potential to change the ways the world operates, though not overnight…It is slowly entering our lives

and becoming as ubiquitous as electricity…It is improving cost-efficiencies, catalyzing disintegration, and increasing convenience for businesses and their consumers." With the advent of Internet technologies and advanced cryptographic techniques, it is now feasible to implement e-commerce and e-business over a public network—the Internet.

Perhaps nowhere else is the impact of the Internet felt as much as in the marketing of the services sector. The delivery of a service via the Internet to consumers or other businesses can be referred to using the generic term "e-Services" (Amor 1999). However, the focus of this article is on 'financial services,' with special emphasis on 'e-broking' of stocks. There is a wide-range of e-services currently offered through the Internet and these include banking, stock trading, jobs and career sites, travel, education, consultancy advice, insurance, real-estate, broker services, on-line publishing, and on-line delivery of media contents (such as, videos, computer games, etc.). This list is by no means an exhaustive one and it is growing all the time. A research report by the Tower Group in 2004 (www.towergroup.com.) portrays an optimistic forecast for the service industry— "After steering through difficult years in a cost containment mode, the financial services industry, across the globe, is selectively sparking a new wave of innovations in 2004…Strategic cost management efforts are paying off, as banking, securities, and insurance institutions are dedicating an increasing portion of their total technology investments to new developments that deliver tangible customer, as well as, bottom-line performance."

The Internet has, in fact, opened new channels for service delivery, shortened turnaround times, and offered unprecedented convenience to consumers. The financial services sector has leveraged the Internet and exploited its many benefits. "E-broking is the financial service most amenable to e-enablement. It has already witnessed meteoric growth in the United States and is staging a similar show in other economies," (Kalakota, *et al*. 1999). India too, will not remain untouched by these changes. E-broking also offers tremendous benefits to the Indian investor (such as, more convenience, better information, competitive price, customization of service, portfolio and advisory services, etc.) and will probably expand the market segment itself. More information about this area is provided in the section titled as "*Benefits and Problems of E-Broking*".

What is Electronic Broking?

First and foremost, we will familiarize readers with the basic concepts— electronic markets, electronic broker, electronic trading and electronic broking respectively. To borrow the words of Prof. David Whiteley (2000): "An electronic market is an attempt to use information and communication technologies to provide geographically dispersed traders with the information necessary for the fair operation of the market." The electronic market (or simply, e-market) is, in effect, a brokering service to bring together suppliers and customers in a specific market segment. These markets give the customer (or customer's intermediary) easy access to comparative data on prices, and other attributes of the goods or services on offer. E-markets are exemplified by airline booking systems. They are also used in the financial and commodity markets and again the dealing is done via intermediaries to buy stocks and shares a member of the public uses the services of a stockbroker.

An electronic broker (Chan, *et al*. 2001) is an intermediary who:

- May take an order from a customer and pass it on to a supplier;
- May put a customer with specific requirements in touch with a supplier who can meet those requirements;
- May provide a service to a customer, such as a comparison between goods, with respect to particular criteria such as price, quality, etc.

Thus, e-brokers provide comparison-shopping, order taking and fulfilment, and services to a customer. That is the reason why they are sometimes referred to as "electronic" intermediaries. Examples of e-brokers (or intermediaries) include priceline.com, mySimon.com, and bestbooksbuy.com. This class of e-retailers is currently an extension of the notion of a broker in the physical to the cyber world.

Kalakota and Robinson in their book (1999) titled "*e-Business: Roadmap of Success*" observes that the term "e-trading" in stock stands for "trading in the equity or debt instruments on the stock exchanges through an Electronic Communication Network (ECN)." Although on-line trading strictly refers to the electronic execution of trade, an ecosystem of e-stock trading has three dimensions:

- Electronic execution of the trade,
- Payment of the transaction through a payment gateway, and
- Transfer of shares in electronic form. Current developments are, essentially, converting off-line practices to an online equivalent.

By examining the major developments in the sphere of Internet-based share dealings in the new global market place, as reported by Peter Temple in his book (2000) "*The New Online Investor*," we find that there has been *three distinct phases in the development of e-broking*. These are:

Phase 1: The open-outcry system with the transactions taking place manually in the ring.
Phase 2: The electronic system, enabling brokers to place orders online.
Phase 3: The e-broking system, empowering customers to transact online.

The mechanics of the e-trading system begins with the user logging onto the Electronic Communication Network (ECN) through the Internet. The user then accesses his e-trading account with the help of a secure customer password. The user is now connected directly with the exchange and any transactions would be instantaneous and irrevocable. The user also has access to real-time price movements of various stocks/scrips, and other contextual information to assist him in his decision-making. Lee suggests in his book (1998) *Doing Business Electronically: A Global Perspective of E-Commerce* that "An integrated e-broking system consists of not only a transaction enabler but also a payment gateway for funds transfer and 'demat' account for transfer of stocks. Such a service enables smooth, convenient and transparent operations."

It is a healthy sign for the service industry that the number of e-trading sites and the usage of them are mushrooming all over the globe. Several companies, such as, E*Trade, Datek.on-line, American Express Financial Services, etc. allow you to trade stocks, bonds, mutual funds, etc. on the Internet. Figures for 2002-03 show 17 million online traders in the US alone, and a rapid growth in the UK since the first site opened at the start of 1998. In the UK, the sites are offered by some of the traditional British stock broking firms, a number of banks, and the large US companies having set up in the UK.

A Framework for Analyzing the Amenability for E-enablement of a Service

First and foremost, we are endorsing the Six 'S' Model developed by Allgood (1999) to provide a conceptual framework for analyzing the amenability of a service for e-enablement (see Exhibit 1). This will be of considerable help in identifying the services that can be easily e-enabled, and which offer the maximum benefit from such an enablement.

This model is based on the proposition that a service which offers the best potential for e-enablement does not require sophisticated skills, is standardized, has a wide geographic spread of clients, and a high number (statistic) of clients who use the service very frequently (scope) and whose automatic processes account for a high proportion of costs (savings).

Using the Six 'S' Model framework, as briefly outlined above, we can attempt to find out which financial services are amenable to e-enablement in the following section.

Corporate Banking: The corporate banking industry involves understanding client needs, analysis of the project proposal, evaluation of various alternatives, and finally, recommendation of a suitable alternative. The task involves application of high-level skills, is not highly standardized, and therefore, not amenable to automation. However, the number of corporate clients per entity and frequency of transactions is limited, even though the geographic spread may be diverse. Thus, we can say that corporate banking does not seem to be amenable to e-enablement.

Investment Banking: For the reasons cited above regarding corporate banking, investment banking does not appear to be a suitable subject for e-enablement.

Retail Banking: The retail banking industry (mainly comprising of credit-cards, management of savings accounts, etc.) is characterized by a large number of clients, spread geographically, and utilizing simple, repeatable and standardized services. For serving the customer-base, specialized skills are not required, and automation processes comprise a significant proportion of the overall costs of service. By using the above stated frame-

work, it appears that retail banking sector would be highly amenable to e-enablement.

Stock Broking: McAfee and McMillan (1997) suggest that "A stockbroker basically collates orders from the various customers and executes the same through a trading terminal. Customers typically place orders through the telephone and a representative of the broker executes the order on behalf of the client on the trading terminal." The 'skill-set' used by the representative is not highly specialized, as the action being considered is merely the execution of the order and usually not client advisory. While other processes (such as, risk, exposure and client monitoring) are also involved, they are typically automated for effectiveness. The task performed by the broker is simple, standardized and easily repeatable. Although that the frequency of transactions by the customers is moderate, if not high, the geographic span of the clients is widespread, and so there is significant scope for a reduction in overall costs through automation. All these characteristics, therefore, make broking highly amenable to e-enablement.

Benefits and Problems of E-broking

In recent years, the use of the Internet has spread among investors in stocks and shares. The Internet can make up-to-the-minute information that until recently had only been available to those working in financial institutions available to a large number of investors. Komenar (1999) concludes that—"The use of online brokerage services automates the process of buying and selling, and hence, allows a reduction of commission charges…Also, the commodity being traded is intangible, the ownership of stocks and shares can be recorded electronically, so there is no requirement for physical delivery." However, it should be noted that the supply chain for online share dealing remains unchanged, use of the Net just speeds up the whole process and that can be vital in some share deals. Switching over to e-broking results in several benefits, both to the user and to the broker (see Box).

Benefits to Users

1. Lower transaction costs: Typical brokerage-rates in India are in the range of 1.0 to 1.5 %, whereas the rates for e-broking are as low as 0.1 %. In the U.S. brokerage costs, before e-trading was introduced were as high as 7%, and have now come down to about 1%. E-broking, in addition, not only brings down the costs of the execution of the transaction but also the electronic transfer of securities.

2. Transparency: E-broking empowers the customers to transact directly on the stock exchange and delayers the whole process thereby improving transparency. "The user does not need to rely on the broker's 'word-of-mouth' or 'transaction' slips for confirmation of the price at which his trade was conducted, observes Dr. Lucas (1999).

3. Convenience: Online share trading is available merely at the click of a button, in the comfort of home/office, thus, making it much more convenient for the customers to trade anytime. Also, with 'limit-based' orders being allowed, customers can place their orders even during the 'non-trading' hours, which are executed at the earliest trading possibility.

4. Procedural benefits: Unlike the earlier scenario, where the customers had to physically go to the broker to complete the formalities of trade, under the e-trading paradigm, these procedures are done away with. As Chan (*et al*. 2001) in their book titled "*E-Commerce: Fundamentals and Applications*" (2001) concludes, "The entire cycle-of-trade (like placing the order, transfer of funds, transfer of securities, etc.) is done electronically, and it speeds up the whole process."

Benefits of Online Share Dealing or E-Broking

To Users:	To Brokers:
Convenience	Global reach
Better information	Better customer service
Competitive price	Low capital cost
Customization	Mass customization
Shopping anywhere, anytime	Targeted marketing
Portfolio & advisory services	More value-added services

Benefits to Brokers

1. Easier risk management: Peter Temple sums it up as: "Under the online mechanism, the system would first check the status of funds available with the client in his bank account and only then allow the trade to take place. This process, thus, substantially reduces the exposure of the broker to client-related credit and payment risks."

2. Greater business potential: The new paradigm of e-broking, which allows simple, convenient, and transparent transactions may encourage more participants to trade. It is expected that the introduction of e-broking will expand the market horizon, thus, resulting in better business for brokers in the long-term.

3. Lower staff costs: Automation of the broking processes, results in reduced manpower requirements, flexibility of time, less infrastructure, etc. offering significant cost-savings to the broker.

The *major problem* with e-stock trading is that it increases the temptation on the part of influential speculators & stockbrokers to indulge in short-term speculation rather than long-term investment. The history of stock markets (both NSE and BSE) in India is replete with at least a dozen cases of scams, where stockbrokers and bankers joined hands to squander the savings of millions of small and institutional investors. As Dr. Lucas has rightly pointed out in his book (1997) *Internet Trading and Its Threat to Traditional Stock Brokers*—"Consumer and business concerns about Internet security are well founded. Amid an explosive upsurge in scams, fraudsters continue to take advantage of the Internet's anonymous transaction environment—with everyone from one-time hackers to organized crime testing the market's boundaries." However, the problems are further compounded by the different legislative frameworks, which are prevalent in countries across the globe.

Technology and Security Concerns for E-broking

Some leading technology companies have already developed "online transaction processing" and "straight-through processing" applications that allow real-time transaction execution. Both allow the user to directly interact with the central system of any market place, without any manual intervention. As Professor David Whiteley (2000) suggests: "Straight-through processing technology permits financial software products to directly interact with the stock exchange system by communicating with the exchange market structures. This is achieved by developing application programming interfaces (APIs) that talk to the exchange server."

One of the leading technology providers for online trading in India is *Financial Technologies (India) Limited* (www.ftIndia.com). It is a leading vertical specialist enterprise delivering mission-critical, Straight Through Processing (STP) solutions comprising Domain Expertise, Technology Licensing and Development & Transaction Outsourcing services to the global securities industry. It is also providing transaction automation technologies for Equities, Derivatives, Forex, Treasury and Commodity markets. FTIL also offers market infrastructure based 'shared services' involving sophisticated Exchange operations and technology infrastructure as a neutral service provider.

Straight Through Processing (STP) has become the widely accepted means to achieve real-time transaction automation. The underlying impact of a true STP environment is to automate the entire process from order origination to order routing to order matching to risk management to transaction settlement without any manual intervention at any stage. This not only improves transparency in the system but also delivers business efficiencies and interoperability of the multiple stages of transaction flow automation. STP essentially treats the entire trade cycle as a single unit instead of a series of loosely related messages. As such, there is seamless integration among the systems and processes involved with the complete lifecycle of a trade from execution to settlement to transaction reporting. The benefits of STP solutions are shorter cycles, lower costs, lower risk and stronger business growth.

It would suffice to say that the cycle of e-broking has to pass through three layers: (a) The Client Interface Layer: the front-end, (b) The Middle Layer: risk management systems that access data from banks and depository participants, calculate client exposure at that instant, and give 'Go/No go' advice on the trade, and (c) The End-Layer: the back-end, where the accounting modules, pay in or pay out schedules etc. operate.

It must be noted at the outset by the readers that from a technical perspective, there are three key success factors for e-broking. They are briefly described below.

Scalability and robustness of the trading system: It becomes imperative for any Net-based application to have a proven capability for scalability and robustness of trading system that ensures the ability to handle and process requests from multiple users at any given point in time.

Bandwidth optimization: The application software should demonstrate intelligence in optimizing the available bandwidth by deploying advanced technologies like streaming.
Integration with third-party systems: On the Net, with information feeds available from multiple points, it is prudent to deploy applications that are built on open architecture methodology for interfacing with third party systems.

For any e-trading system to be successful, it should provide security, reliability and confidentiality of data (Chan, *et al*. 2001). This can be achieved through the use of 'encryption' technology before the online trading begins. The exchange must ensure that records maintained in electronic form by the broker are not susceptible to manipulation, and adequate back-ups and storage are available. The security features demanded by 'regulatory' authorities include: unique user identification, and passwords that can be renewed from time to time to prevent hacking by outsiders. The major *security requirements* of e-broking are: (a) trusted means of authentication over open networks, (b) confidentiality of the transaction, (c) means to ensure integrity of data in-transit, and (d) means to ensure non-repudiation of payment or its receipt (www.odysseytec.com).

Various security models are adopted to ensure safe and reliable e-broking transactions. The commonly employed *security models in e-Broking* are: passwords, Secure Sockets Layer (SSL), Kerberos, Pretty Good Privacy (PGP), Public Key Infrastructure (PKI), Custom Implementations, Linux, etc. For example, the Tower Group Report, 2004 (www.towergroup.com), explores major trends in Linux adoption in the securities industry—"Linux continues to gain popularity in the US securities industry, with large brokerage firms leading the adoption charge. It is currently deployed as the operating system on 9% of all servers in the North American securities industry, with a large number of firms using Linux to support core infrastructure and critical applications like trading and market data platforms. Linux is expected to grow at an annual rate of 22% in the North American securities server market between 2003 and 2006, with most of the growth coming at the expense of Unix. While Linux continues to gain traction in the securities industry, the development of the "ecosystem" that revolves around Linux will be critical to its survival in the marketplace."

Global E-Broking Scenario

E-Broking in the US: The ECN, Instinet (www.Instinet.com) was first used in 1969 by institutions to transact with each other but today it also includes a select group of smaller brokers. However, e-broking was pioneered in by the *E*Trade Securities* (www.etrade.com), which first started operations and offered online investing services through *America Online, CompuServe,* and even launching its own Website in 1996. *Charles Schwab*, now the largest in the US with 2.24 million online accounts and $174 billion under management via the Internet, also launched its online trading (www.aboutschwab.com) venture in 1996. In January 1999, Charles Schwab clients executed an average of 1,53,000 electronic trades every working day. In addition, there are now over 112 on-line brokerage firms in the US offering e-broking services to consumers. Today, about half of all transactions made by US retail investors are done through the Internet. *International Data Corporation,* for example, predicts that "the number of US households using on-line brokerages to meet their financial needs will grow from the 2000 figure of over 7 million to 19 million in 2004, with over $2.5 trillion of assets managed online."

Online brokerage in the US grew out of the discount brokerage industry and has fundamentally changed the retail brokerage industry. E-broking initially developed as a low-cost, self-service approach to equity investing. As a result, online brokers began competing on a cost basis. Currently, average online commission price per trade hovers around $12-15, and some deep discount firms offer trades as low as $5. A few firms—American Express, (www.freetrade.com.) a subsidiary of Ameritrade, and most recently, FreeTrade by Ameritrade (www.financialcafe.com.)—has even already introduced 'free' online trading. The online commission pricing battle demonstrates the 'commoditization' of online transactions. However, online brokerage firms must seek to provide greater services and support to clients.

It is heartening to note that the number of US online brokerage accounts continues to grow consistently. After an initial period of astounding growth, the number of online brokerage accounts is still steadily increasing. Tower Group estimates show that by 2005, there will be more than 130.5

million online brokerage accounts in the US (see Exhibit 2 for details).

E-Broking in the Asian Markets

South Korea: The explosive growth in online trading has not been a solely American phenomenon. As their economy rebounded in 1999, Koreans began to embrace online equity trading with a vengeance. With Korean stock prices rising, online commission rates plummeted through the first-half of 1999. Despite these discounts, the value of trades placed online jumped from 5 % of all trades in January to 30% in August 1999.

The South Korean e-broking market is growing rapidly. At present, Korea has three markets—*Kosdaq, Kospi* and *Kofex*. The dominant South Korean players are five of the largest brokerage houses, which control 95% of the online trading market. They are *L.G Securities*, *Samsung Securities*, *Hyundai Securities*, *Daewoo Securities*, and *Daishin Securities.* "The combined trading volume of the five securities firms," as reported by Lim and Kit (2001), "hit 500 trillion Won (US $ 435 billion) at the end of June 2000, and more than doubled in just four months. The number of online customers also increased from 227,000 in 1998 to 3722,000 in 2000."

In 2000, almost half of South Korea's total stock turnover was conducted online, up from just over 25% in 1999. An analysis of the South Korean market indicates that the factors contributing to its growth are: the high risk-taking ability of South Korean's, the availability of suitable infrastructure (50% penetration rate of cellular phones and over 60 ISPs), and the high concentration of cyber saloons.

Japan: E-broking is expected to gain increasing popularity in Japan. The three largest Japanese securities firms (*Nomura Securities*, *Matsui Securities* and *Daiwas Securities*) have recently established online trading. Heavy weight Japanese corporations (like *Sony* and *Toyota*) are also planning to establish e-brokering portals. US brokerages, such as, *E-Trade, DLJ Direct*, and *Charles Schwab* have also established e-broking facilities in Japan. While the growth of e-broking has not been very rapid, due to resistance to change by investors, the growth in the customer-base is still very promising. "From a mere 280,000 customers at the beginning of 2000, the number of customers at the beginning of 2001 reached a figure of 1704,000," according to a study conducted by the *Bank of Japan Research and Statistics Department* in June 1999-2000.

Some aspects, as reported by the *Tower Group Research* (2000), that have significantly influenced the growth of online trading in Japan include:

Deregulation of commission rates on securities trades in 1999. Prices dropped from hundred of dollars to as low as $9.99 per trade.
Rising Internet usage rates, which were initially low compared to the US Internet usage rates.
Japanese investors tend to hold a lower proportion of equity compared to their US counterparts (20% compared to the US 48%). However, the scenario is changing, leading to a growth in e-broking.

According to the above study, Japan has the necessary traits for E- brokerage to thrive. These traits include high personal wealth and rising Internet usage rates.
India: Internet stock-trading in India is a recent phenomenon and began as recently as January 2000. Although there are more than 40 e-brokers, the industry is still in a nascent stage as online trades account for merely Rs. 700 million, which is a negligible percentage of the total stock trade. It is estimated that the customer-base for all the portals put together is a mere 120,000 compared to 2.5 million customers in Japan and 14.4 million in the US. The leading e-brokers in the Indian markets are *ICICIDirect*, *IndiaBulls, MotilalOswal, 5Paisa*, etc.

Hindrances to the growth of e-broking in India can be summed up as: *First*, the low density of telephones, low Internet penetration, and low installed base of computers are responsible for the poor availability of the Internet. *Second*, very few online payment gateways are available, hindering the smooth growth of the industry. Integrated service providers (like ICICIDirect.com), which provide combined banking, broking and 'demat' services, have an advantage over other non-integrated service providers, who have to scout for partners for providing gateway services. *Third*, data privacy can be ensured through server side certification and here the situation appears to be satisfactory. However, most of the sites restrict access through passwords and identification numbers, but these are not considered adequate and foolproof. *Fourth*, Institutional investors comprise over 80% of the

total investors in the country. The remaining 20% of retail investors, the focus segment of e-brokers, do not contribute significantly to the overall stock-turnover of the country. Thus, there is a theoretical limit to the overall penetration of e-broking. *Last* but not least, the concept of trading on computers through the Internet requires a change in the habits of people; enhancing trust in these techniques may take more time.

Prospects for the E-broking Industry: An Overview

It is heartening to note that efforts are being made by the leading international stock exchanges across the globe to realize their cherished dream of 'Consolidation' in the Global Equity Markets. The *Tokyo Stock Exchange* reported in June 2000 (www.TSE.or.jp) that "stock exchanges across the globe are exploring an alliance that will create a 24-hour Global Equity Market. The New York Stock Exchange and exchanges from three main time zones—Australia, Tokyo and Hong Kong in the Asia-Pacific; Sao Paulo, Mexico and Toronto in the Americas; and Euronext, the combined Amsterdam, Brussels and Paris exchanges in Europe—plan to form a trading mechanism that will allow the trading of stocks in the world's global companies. Each of the partnering markets will retain its brand and form a platform to allow companies with worldwide demand to experience 24-hour trading of their shares." This would be an innovative and a bold move and it is expected to lead to a better price discovery on a global basis.

Similarly, the leading *New York Stock Exchange* also supported the move and expressed its willingness to provide a helping hand to the proposed GEM move— "The proposed GEM will link the trading systems of each exchange to provide a global market structure, based on the principles of transparency, self-regulation and agency auction price discovery"(see www.nyse.com/content/articles). This high-tech linkup of auction markets will certainly create a global pool of liquidity, facilitate global price discovery, and provide investors' with better and faster access to global stocks. The GEM, it is hoped, will address investors' appetite for big-capitalized stocks by providing them easier access to stocks not currently available on their local stock exchanges. The market capitalization of the companies listed on the participating exchanges is expected to exceed $20 trillion, representing more than 60 percent of the world's market capitalization. Like the 24-hour Forex market and its electronic network SWIFT, the GEM will have an Electronic Communication Network (ECN), thereby realizing the ultimate potential of e-broking. The Tokyo Stock Exchange, Inc. and the New York Stock Exchange, Inc. announced (in June 2002), they would sign an agreement to share market surveillance information in their respective markets.

E-broking is still an evolving industry in India and the survivors are likely to be those brokers who offer integrated/consolidated services and are financially resilientee. The future of the e-broking industry, thus, largely depends on the extent of the penetration of the Internet in the near future. Moreover, the *Bombay Stock Exchange (BSE)* and the *National Stock Exchange (NSE)* have recently developed *'proprietary' trading engines* called *'Webex'* and *'Dotex'*, respectively. These engines will obviate the need for a broker to develop his own engine, and thus, result in capital investment savings. However, a user can log on to these engines using the website of the broker and trade electronically. These developments are, therefore, expected to give a strong fillip to the e-broking industry in India. Application of superior technology and establishing integrated systems to provide a one-stop solution to clients will be a key determinant of success.

Business intelligence major, *International Data Corporation*, has predicted that—"The IT-enabled services market globally will account for revenues of US $1.2 trillion by 2006. Despite the adverse global economic conditions, Indian players logged in high growth rates. Overall this sector grew at over 65%, upping from Rs. 71 billion in 2001-02 to touch Rs.117 billion in 2002-03," concludes NASSCOM. In yet another study, titled "*e-Commerce and Development Report, 2002*" conducted by UNCTAD it was revealed that the global e-commerce market was worth around US $615.3 billion and expected to grow to US $4,600 billion by 2005. Another estimate by Forrester Research indicates that global online sales accounted for approximately US $2,293.5 billion of world trade during 2002 (as reported by www. Nasscom.org). Despite the development of Internet e-commerce and the hype that surrounds it, the amount of business done online as a proportion of all retail sales remains stubbornly small.

The e-brokerage industry continues to be battered by several *complex challenges,* such as, collapse in pricing structures, reduced return on IT investments, shaken value propositions, and crisis in consumer confidence. A research report from the Tower Group, 2004 (www. Towergroup.com), for example, very strongly asserts that these challenges may change not just the way brokerage firms conduct their day-to-day business, but may begin to redefine the e-broking industry as a whole. They must make tough decisions as to where to deploy their IT dollars, as well as what strategies and what customers to pursue. They must re-invent themselves in a real-life world where 'service' is the key differentiator. There is an urgent need for firms to place a new emphasis on customer relationships that combines selling with personal financial consultation to meet clients' specific needs. Thus, financial planning, portfolio allocation and advice tailored to each individual's risk tolerance and life stage will become the hallmarks of the new full-service orientation, as firms are both pushed and pulled toward the brave new world of the retailing of brokerage. Despite all the challenges, e-broking industry seems like a sector set to grow day-by-day.

For any organization to thrive in today's dynamic business environment, it must learn to deal effectively with intense global competition, and cope with an increasingly rapid pace of change. Sometimes, a fundamental change in the manner in which business is done is the only way to succeed or even to survive. Paperless environments, virtual organizations, mass customizations, and Internet-based customer services are some of the challenging hallmarks of organizations in the new millennium. These days, it is very difficult to imagine any organization that does not strive to use the innovative tools of information technology to increase its competitiveness, and to capitalize on opportunities that contribute to its success.

References

Allgood B. 1999. '*Internet Based Share Dealing in the New Global Market Place'*, Bit World'99, Cape Town, South Africa.

Amor, D., 1999. '*The E-Business (R) Evolution*,' Prentice-Hall.

Bank of Japan Research and Statistics Department (June 1999), '*Japanese Equity Holding Preferences*.'

Chan H., Lee R., Dillon, T. and Chang E. 2001. '*E-Commerce: Fundamentals and Applications'*, John Wiley & Sons, Ltd. England.

Hanson, W. 2001. '*Principles of Internet Marketing'*, Thompson Learning, Southwestern College Publishing, US.

Kalakota, R. and Robinson, 1999. M., '*E-business: Roadmap of Success*,' Addison-Weseley, Reading, MA.

Komenar, M.M, '*Electronic Marketing'*, Wiley, New York.

Lee B. 1998. '*Doing Business Electronically: A Global Perspective of E-Commerce'*, Springer, London, pp. 163-73.

Lim, Stanley and Kit, Yau, 2001. '*Opportunities and Challenges in Asia's Online Financial Services Marketplace,*' IDC Research, Feb. and 'Asia's Online Financial Services Marketplace,' IDC Research, May.

Lucas P. 1999. '*Internet Trading and its Threat to the Traditional Stock Broker'*, BIT World'99, Cape Town, South Africa.

McAfee R. P. and McMillan J. 1997. '*Electronic Markets'* in Kalakota and Whinston A. '*Readings in Electronic Commerce'*, Addison Weseley, pp. 293-309.

New York Stock Exchange, 2000. July, '*The Formation of a Global Equity Market*,' www.nyse.com/content/articles; Angel, James J., 1998, '*Consolidation in the Global Equity Market: An Historical Perspective.*'

Temple, Peter, 2000. '*The New Online Investor: The Revolution Continues*,' John Wiley & Sons Ltd..

Tokyo Stock Exchange, 2002, June 4. '*Tokyo Stock Exchange and New York Stock Exchange Agree to Share Information on Market Surveillance*'.

Tokyo Stock Exchange, 2000 June 8. '*TSE Announces Participation in Global Equity Market Discussions*,' www.TSE.or.jp.

Tower Group Research, 2004 Jan. '*Tower Group Names Seven Top Business & Technology Drivers Reshaping Retail Brokerage Industry.*'

Tower Group Research, 2003 Nov. '*Tower Group Identifies Top Trends that will Drive Global Financial Services in 2004*.'

Turban, E., Lee, J., King, D., Chang, H.M., and Lee, J.K., 2000. '*Electronic Commerce—A Managerial Perspective'*, Prentice-Hall, Upper Saddle River, NJ, 2000.

Whiteley D. 2000. '*E-Commerce: Strategy, Technologies and Applications'*, McGraw Hill Companies, London.

Exhibit 1:
Framework for Evaluating E-enablement

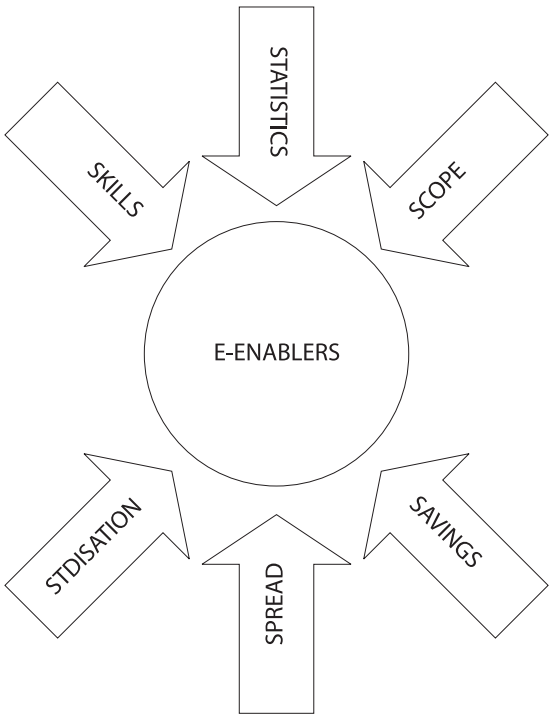
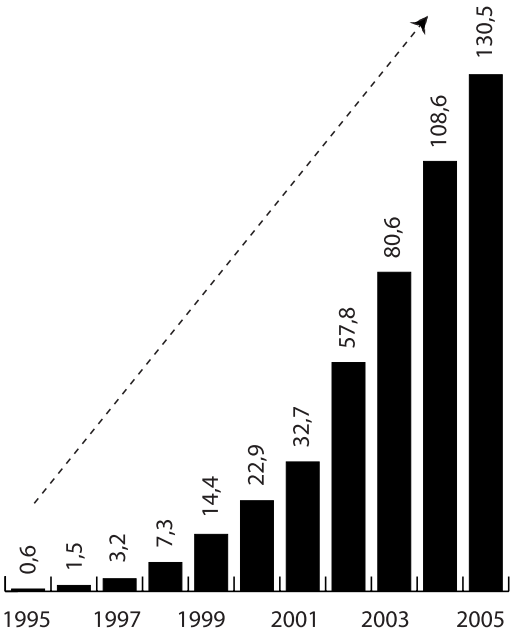


Exhibit 2:
Number of US Online Brokerage Accounts (Millions), 1995-2005



Source: Tower Group Estimates

Leadership Style as Determinant of Creativity Profiles in Estonian Organizations

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Abstract

In the beginning of 21st century in the economic contents we speak about competitive advantages. In marketing and sales the key words are "being competitive", but it is essential also in human recourse management, production management etc., basically the core concept is – being competitive. Competitiveness is related with constant change management, innovation, creativity and leadership. The last one –leadership or may be still it is management is related to values.

In this paper keywords are: *innovation, creativity, management, leadership, values*

To achieve a competitive advantage in the 21st century, organisations should move from having a reactive to a proactive attitude. The firms that succeed in the long run are those able to extend existing advantage while anticipating competitive shifts that require different sources of advantage (DeGeus 1988). *Innovation* and *creativity* are keywords in this competitive world.

In order to build innovative organisations, certain type of characteristics and behaviours are required from managers. According to social scientists, behaviour is a function of the meaning of a given situation. Participants in social events bring to them prior meanings and stereotypes, which can be understood only in a historical and cultural context (Sahlins 1985). The values of managers play a very important role in their choice of approach to directing people in achieving company goals (Kovac and Jesenco 2003). Values exist and are communicated through social connections and may vary in different cultures and different countries (Fisher and Lovell 2003). Leadership in the East European transformation process has been the subject of a lot of country-based studies and cross-cultural comparisons. In general, leadership in the East has been seen as more autocratic and less participative, less human and more status oriented and, at least partly, more formal (Alt et al 2003). The research question here is, how this type of management influences an organisation's ability to be innovative?

In this paper a short theoretical overview of innovation, creativity, management, leadership and values will be followed by an analysis of empirical research in Estonian organisations.

Management, Leadership and Values

The management process could be defined as social process of directing organisational complexity and conceiving organisational changes in a rapidly changing environment (Kovac and Jesenco 2003). Leadership involves influencing others to strive to achieve one or more goals (Wood 1997). In work place settings values exert a great impact upon the work of managers.

Values have been defined as the principles or standards that people use, individually or collectively, to make judgements about what is important or valuable in their lives (McEwan 2001). Values are broad feelings, often unconscious and not discussible, about what is good and what is evil, beautiful

or ugly, rational or irrational, normal or abnormal, natural or paradoxical, decent or indecent. These feelings are present in most of the members of a culture, or at least in those persons who occupy pivotal positions (Pucik et al 1993: 141).

Values influence managers' perceptions of situations and problems; their decisions and solutions taken in this regard; their attitude toward and treatment of the other individuals; their perception of organisational success and methods of achieving it (Bass 1990; Dessler 2001).

Innovation and Creativity

Business leaders are constantly urging upon industry the need to respond to competition by becoming more innovative. The term innovation has been defined as a tangible process or procedure within the organisation, which is new to the social setting within which it is introduced. It must be intentional and not a routine change, and aimed at producing benefit for the organisation and public (West and Farr 1990). Innovation is based on creativity.
Definitions of creativity focus on creative people, products and processes (King and Anderson 2002). Most commonly, creativity is conceived of as a mental process that leads to solutions, ideas, theories or products that are unique and novel (Reber 1985).

DeGraff and Lawrence (2003) define creativity as a core competence that can help a company create products, services, processes or ideas that are better or new. They introduce four major creativity profiles: *imagine*, *invest*, *improve* and *incubate*. These four profiles are developed based on Quinn's (1988) Competing-Values Approach, which is based on the premise that the values and organisational requirements of leaders should accommodate environmental influences. The framework identifies the leadership roles, skills and organisational models necessary to effectively respond to changing environments. Figure 1 shows a combination of creativity profiles and the required leader's roles.

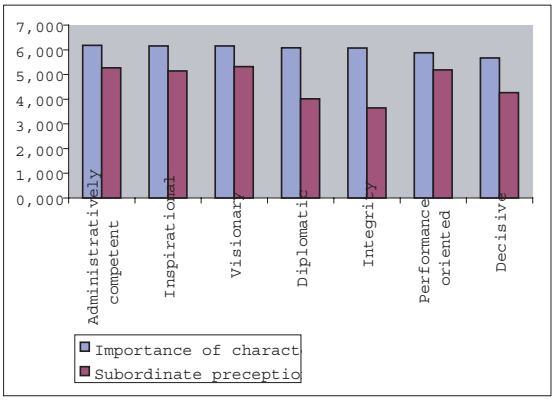

Figure 1. Creativity Profiles and Leadership – adapted from DeGraff and Lawrence (2003) and Quinn (1988)

The *incubate* profile focuses on sustainability by advancing the community through shared values and learning. The *imagine* profile values radical products, services and markets – being new. The *invest* profile competes through focused initiatives and values hard work and partnership – being first. The *improve* profile values quality and optimisation through developing standards, structures and systems.
Based on the empirical study of leadership and values in Estonian organisations, the authors attempt to find out which creativity profile could be achieved by Estonian managers.

Methodology

The Estonian Business School carried out a research project in connection of The University of Pennsylvania, Wharton Business School. This research was carried out in more than 60 countries. Known as the GLOBE Research Program, its aim is to develop an empirically based theory to describe, understand and predict the impact of cultural variables on leadership and organizational processes and the effectiveness of the processes. One of the central questions of the study is: to what extent are specific leadership attributes and behaviours universally endorsed as contributing to effective leadership and to what extent is the endorsement of leader attributes and behaviours culturally contingent.

Estonia joined the GLOBE project in 2001.The research of leader expectations and leader perceptions in Estonia was carried out during the years 2001 and 2003. In 2001 more than 60 companies were visited. Complete research kits, including interviews, CEO questionnaires and all the required

questionnaires for subordinates (2 from type c, d, e), were returned from 40 companies. This data was sent to the University of Pennsylvania for further investigation in relation to the subject of cultural differences and leadership. More than 240 questionnaires were completed by subordinates in addition to the 40 questionnaires completed by the CEOs. The research in 2003 involved about 170 respondents from more than 15 companies who had to complete a questionnaire about organizational or societal culture and leadership qualities.

In Estonia's case, the initial research in 2001 was related to the subject of how Estonian subordinates perceive their managers. Two years later, a second investigation was carried out related to the subject of what Estonians think about excellent leaders and which personal characteristics must a leader possess and what behaviours are expected from outstanding (charismatic) leadership.

Results

Firstly, a cluster analysis of the values was conducted and based on this the values could be divided into four major groups as follows:

- Values related to the welfare of society;
- Values related to the short-term welfare of the organisation;
- Values related to the long-term welfare of the organisation;
- Values related to religion and supernatural powers.

The results according to the received clusters are shown in Table 1.

Table 1. Clusters of Values of CEO-s

Cluster	Value	Mean	Std. Dev.
Welfare of society	Economic welfare of the nation	4,15	1,04
	Economic welfare of the local community	4,33	1,11
	Effect on female employees	3,61	1,47
	Effect on minority employees	3,12	1,30
		3,80	
Long term welfare of the organisation	Employee relations (well-being, safety, working conditions)	5,18	0,10
	Effect on relationships with other organisations	5,07	0,82
	Effect on the environment	4,53	1,12
	Ethical considerations	5,09	1,16
	Employee professional growth and development	5,18	0,85
	Effect on long-term competitive ability of the organisation	5,6	0,86
		5,11	
Short term welfare of the organisation	Effect on product quality	5,59	1,09
	Effect on sales volumes	5,33	1,06
	Effect on firm profitability	5,73	0,89
	Cost control	5,31	1,01
	Customer satisfaction	5,96	1,23
		5,58	
Religion	Pleasing, respecting, not offending a divine being (god, idol)	2,44	1,62
	Effect on supernatural forces	1,54	0,91
		1,99	

Note: the scores are given on a scale from 1 to 7

The most important values for the CEOs of Estonian companies were values related to short-term welfare (on the seven-point scale m=5,58) followed by long term welfare values (m=5,11) and those related to the welfare of society (m=3,8). Least important were values related to religion (m=1,9). In addition, we investigated how subordinates perceived their managers/leaders, and as a result we can say that, in the Estonian context we cannot talk about leadership yet. At the moment, Estonian CEOs are characterised as managers. The subordinates see them as directive information sources (see Table 2), but do not yet see them as leaders.

Table 2. How Subordinates Perceive their Managers

	Perception	Mean
1.	Directive	5,53
2.	Information Source	5,45
3.	Communicator	5,35
4.	Visionary	5,30
5	Shows self-confidence	5,24
6	Administratively Effective	5,24
7	Follower Confidence	5,24

(The scores given are on a scale from 1 to 7)

While conducting research into the values held by subordinates and their levels of motivation, (2) the following observations were noted. Satisfied customers and high sales volumes are the things that motivate personnel the most. One reason for this could be that their monthly salary or bonus is directly connected with sales (r= .251) and sales figures are definitely related to the existence or non-existence of satisfied customers (r= .250). It is also logical that when product quality (r= .231) is taken as a motivator, there can be no satisfied customers or high volume sales if the goods sold are of an unacceptable quality (See Table 3).

Table 3. Connections between the Values Held by Subordinates and their Motivation Level

	Values held by subordinates	r
1.	Customer satisfaction	0,251
2.	Effect on sales volume	0,250
3.	Effect on product quality	0,231
4.	Effect on female employees	0,191
5.	Effect on relationships with other organisations	0,179
6.	Contribution to the economic welfare of the nation	0,177
7	The welfare of the local community	0,172
8	Effect on the long term competitive ability	0,168
9	Employee professional growth and development	0,162
10	Cost control	0,151
11	Effect on the firm's profitability	0,151
12	Ethical considerations	0,150

Expectations and Reality

When we compare expectations (research of 2003) and reality using the evaluation scores, then there are at least five expected leadership characteristics that in the minds of Estonians contribute somewhat to a person being an outstanding leader (average score is > 6) – being administratively competent (6,180), being inspirational (6,156), being a visionary (6,154), being diplomatic (6,081) and having a high level of integrity (6,068) were seen as important. These features were followed by other important leadership items (average score is around 5) performance orientation (5,883), being decisive (5,668), being a team integrator (5,431) and team orientation (5,162). These were the expectations, but now the reality about Estonian managers (research of 2001) was as follows. There were ten characteristic features where the respondents agreed slightly that their manager possessed that feature (5 = slightly agree on a 7 point Likert type scale). The first five were considered to be directive (5,585), information source (5,485), communicator (5,37), visionary (5,323) and administratively effective (5,267). The difference between the expected importance of managerial characteristics and real perceptions are shown on figure 2.

In real life (the research from 2001), the highest score for *directive* at 5,585 is between lightly agree and moderately agree (between 5 and 6). Based on that, we can say that the expectations of Estonians are much higher than the reality. The differences between the first five most important features are interesting.

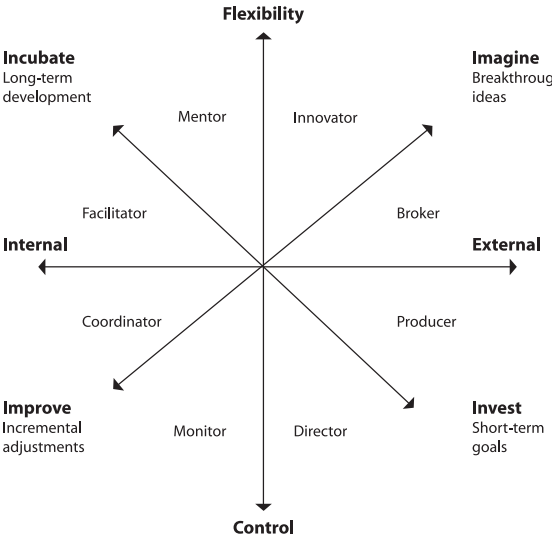

Figure 2. The Difference Between the Importance of Managerial Characteristics and Real Perception

Estonia in Comparison with other Countries

The results of the CEO-Study (part of the GLOBE project) with interview and questionnaire data from more than 40 enterprises in Austria, Estonia, East

Germany and Romania highlighting differences caused by national culture as well as transformational influences. According the GLOBE methodology, the data on the leadership items have been summarized to form leadership sub-scales (leadership attributes) and 6 main factors (leadership style patterns).

The Estonian style differs especially through significantly lower scores for values based and human focused leadership from Romania, and East Germany (Alt et al 2003). In addition, Estonian and German leadership is seen as less values based than followers expected it to be. The Estonian leadership style is described as less visionary, less inspirational, less decisive, and less performance oriented than that in Romania, Austria and East Germany.
Participative styles are more common in the Germanic countries, East Germany and Austria, than in Estonia or Romania. Estonians and Austrians show a significantly lower score in humane, modest or calm behaviour.

Conclusions and Discussion

Based on these results we can say that these Estonians, who are managers or at least have leading positions in companies, differ from what an outstanding leader is expected to be.
Managers currently operating in Estonia are generally examples of a directive type of person who keeps information to him/herself (we can hardly say *herself* as there were only two women in the sample). Such managers probably keep this information to themselves as one way of retaining power. On a more positive note, Estonian managers do nevertheless communicate something, that is, there is at least something they do share with their subordinates and their subordinates do believe that their manager has vision. In addition, the mentioned qualities of an Estonian manager include *administratively effective follower* and *self confident*, *performance oriented* and *inspirational*.

According to this research the most important values for the CEOs of Estonian companies during the period of transition from a centrally planned economy to a free market economy were values related to short-term welfare followed by long term welfare values and those related to the welfare of society. This kind of ranking of values is probably connected with the fact that during such a period of transition the main aim of the management of companies is to ensure short term results – profit – achieved by sales and cost control. When talking about sales we need a satisfied customer and this is achieved via quality products. Only after the short-term welfare of an enterprise is guaranteed can its long-term welfare be considered.
When comparing the values of Estonian managers with the previously described creativity profiles, we found connections with the *invest* profile – focusing on short-term goals – and some difficulties with the *incubate* profile – focusing on long-term objectives and sustainability.

Estonian managers were perceived by subordinates as directive in the current survey. According to the competing-values approach, this refers to the tendency to act as *director*, which is also needed for the *invest* strategy.
These findings are consistent with previous studies. Research done in 38 Estonian organisations indicates that managers' attitudes toward the usefulness of change and leadership were only related to task orientation and not relationship orientation of organizational culture. At the same time the managers' commitment to the organization, their satisfaction with job and information were predicted by both orientations of organizational culture, although the impact of task orientation was greater (Alas/Vadi 2003). A survey of values conducted in the second half of the nineties indicated that Estonian business students underestimated social values when compared with Finnish students (Ennulo/Türnpuu 2001).

We can conclude, that according to leaders' characteristics, Estonian companies tend to be better at competing through focused initiatives, hard work and partnership. The hardest thing for them to achieve is a human relations model – advancing a community through shared values and learning. By contrast the rational goal model dominates in Estonian organisations.

References

Alas, R., & Vadi, M. 2003. 'The Impact of Organizational Culture on Attitudes Concerning Change'. In: Vadi, M. (Ed.) Organizational culture in Estonia: manifestations and consequences", University of Tartu, 65-81.

Alt, R., Alas, R., Catana, D., Lang, R., Steyrer, J., & Tuulik, K. (2003) Leadership in Transformation

- Between Local Embeddedness and Global Challenges, EBS Review, Autumn, No 17: 40-51.

Bass, B. M. 1990. *Handbook of Leadership,* The Free Press.

DeGeus, A. P. 1988. 'Planning as Learning', *Harvard Business Review*, March-April: 70-74.

DeGraff, J., & Lawrence, K. A. 2003. *Creativity at Work: Developing the right practices to make innovation happen*, Josse-Bass.

Dessler, G. 2001. *Management,* Prentice Hall.

Ennulo, J., & Türnpuu, L. 2001.'An Intercultural Comparison of Management Values among Business School Students and Teachers', *Trames,* 5(4): 336-344.

Fisher, C. & Lovell, A. 2003. *Business Ethics and Values*. Prentice Hall.

Kovac, J., & Jesenco, N. 2003. 'Vlues and leadership styles of managers in Slovenia', *Journal for East European Management Studies,* 8(4): 346-360.

McEwan, T. 2001. *Managing Values and Beliefs in Organisations.* Prentice Hall.

King, N., & Anderson, N. 2002. *Managing Innovation and Change: A critical guide for organisations,* Thomson.

Pucik, V., Ticy, N., & Barnett, C., 1993. '*Globalizing Management, Creating and Le*ading *the Competitive Organisation*`, John Wiley & Sons , Inc.

Quinn, R. E. 1988. Beyond Rational Management. San Francisco: Jossey-Bass.

Reber, A. S. 1985. *Penguin Dictionary of Psychology,* Penguin.

Sahlins, M. 1985. *Islands of History,* University of Chicago Press.

Tuulik, K., & Alas, R. 2003. The Impact of the Values of Top Managers upon their Subordinates Values. *Journal of Business Economics and Management,* Vol. IV, No 2: 105-114.

West, M. A., & Farr, J. L. (Eds) 1990. *Innovation and Creativity at work: Psychological and Organisational Strategies,* Wiley.

Wood, J. T. 1997. *Communication in Our Lives,* New York.

Yukl, G.A. 2002. *Leadership in organisations,* 5th ed., Prentice-Hall

Innovation in Education: The Concept of Radical Innovation Adoption

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Abstract

This article addresses how educational institutions can most effectively integrate e-business practices and processes into their institutional framework to more effectively serve their stakeholders. E-business is a type of "radical innovation" and presents opportunities for external growth as well as internal efficiencies.

Having an emphasis towards organizational learning, market orientation, business process orientation, and technological opportunism may help educational institutions in their efforts to integrate e-business practices. The use of e-business or radical innovation adoption as a source of competitive advantage and strategy is relatively recent, but nevertheless it has become the focus of attention for a variety of people in this field.

Colleges and universities are facing increased competition from a growing number of educational providers, both traditional and online. Community members are demanding new services and students are constantly seeking the most promising workforce training available. Faculty retention has become more of an issue as increasing numbers of faculty prepare for retirement. This is happening at a time when student enrollment is increasing and funding may decrease in the near future. A host of issues requires that educational leaders be flexible and innovative and that they communicate with all their stakeholders in a way that garners trust and "buy-in". Educational institutions that have a focus towards certain organizational capabilities may be better prepared to deal with these challenges.

Therefore, in light of this problem, and of the opportunities and challenges that lie ahead for educational institutions, this article will examine the relationship between four organizational capabilities – organizational learning, market orientation, business process orientation, and technological opportunism – to determine if educational institutions who are more aligned with these capabilities are additionally more likely to utilize e-business and radical innovation adoption in their organizations.

Introduction

Leaders in higher education are currently struggling to successfully integrate e-business practices and processes into their institutional fabric, and as they do so, they are additionally being faced with other challenges both external and internal to their educational institution. Budgetary issues, an ever-changing community, changing demand for worker skills and thus educational programs, and faculty retention are a few of the issues educational leaders face on a continual basis.

How to most effectively integrate e-business initiatives into the environment of higher education is an important issue and one worthy of further investigation. Having an organizational emphasis towards organizational learning, market orientation, business process orientation, and technological opportunism may help colleges and universities in their efforts to integrate e-business practices.

Throughout the history of higher education, universities and colleges have had to constantly adapt to change in both their internal and external environments. They serve a variety of stakeholders including students and prospective students, the community, faculty and staff, legislators, and the governing board. How best to meet the needs of such a diversified group has been a challenge to many higher edu-

cation leaders. The best colleges are those that are comfortable and accepting of continual, sometimes daily change. They need a leadership that is innovative and flexible enough to rejuvenate their organizational structure and alter their strategic planning when it makes sense to do so.

According to Alfred (2003, 20), in his article "The Wolf at the Door", "A college's future success depends on its ability to build a culture that can make a difference in the lives of the students and customers it serves." Alfred believes that "… the most important source of competitive advantage for our colleges comes from the people in them who enhance their value." In addition to people, the successful integration and use of e-business also has the ability to improve business and organizational processes thereby potentially increasing a firm's competitive advantage in its industry with better service to customers, suppliers, and all interested stakeholders.

Organizations are realizing that they can use the new technology offered by e-business to transform the way they do business by making it faster and more efficient. Additionally, these same institutions are ultimately transforming their business strategy and better meeting their needs as well as those of their stakeholders. This in turn allows the organization to truly exhibit a competitive advantage in their industry.

The use of e-business as a source of competitive advantage and strategy within academia is a relatively recent addition. In order to achieve operational excellence through the use of e-business, organizational leaders and managers must first understand what drives their traditional educational institution and second, how moving to an online venue can help them achieve greater organizational efficiency and lower costs, thereby not only improving customer relations but also enhancing the overall financial performance of the institution (Barua, Konana, Whinston and Yin 2001).

The use of e-business systems and processes in higher education is also relatively recent and has resulted in substantial financial investments in technology for use in a variety of different offices and locations. The use of e-business technology is meant to reduce costs and enhance services to stakeholders. Communication and information dissemination are increased through technology. As a result, expenses from printing and mailing publications can be reduced and student services improved through Internet based registration and course selection. In the area of instruction, utilizing technology to offer Web-based courses has resulted in academic institutions needing less campus space and/or offering more course sections, thereby increasing overall revenues. Most colleges also have intranets which allow for increased and more efficient communication among internal stakeholders.

It is important to remember that the opportunities afforded by e-business include the possibility for any organization to lower costs, improve customer service, create additional revenue streams, and enter new markets, both domestically and internationally. Due to the Internet and subsequent use of the World Wide Web to conduct e-business, the dissemination of information has additionally become much more efficient and effective. Stakeholders, whether internal or external to the organization, can communicate with those in the firm using the Internet, extranet, or intranet 24 hours a day, seven days a week. The opportunity to transmit information using this new technological resource is perhaps one of its greatest advantages.

Statement of the Problem

This article focuses on the problem of radical innovation adoption or the use of e-business within higher education. The external environment is changing for colleges and universities worldwide. Innovation is in demand, change is becoming commonplace, and colleges are being forced more and more to compete with a widening variety of competitors. How to most effectively manage this and maintain a strategic competitive advantage in the marketplace are questions and concerns institutions of higher education are currently grappling with and will continue to focus on for years to come.

Colleges are facing increased competition from a growing number of education providers, both traditional and online. Community members are demanding new services and students are constantly seeking the most promising workforce training available. Faculty retention has become more of an issue as increasing numbers of faculty prepare for retirement. This is happening at a time when student enrollment is increasing and budgets are decreasing in colleges worldwide. A host of issues requires that higher education leaders be flexible

and innovative and that they communicate with all their stakeholders in a way that garners trust and "buy-in" from constituents that work for and support the institution.

Therefore, in light of these issues, and of the opportunities and challenges that lie ahead in academia, this article examines the relationship between four organizational capabilities – organizational learning, market orientation, business process orientation, and technological opportunism – to determine if colleges who are more aligned with these capabilities are additionally more likely to utilize e-business and radical innovation adoption in their educational institutions.

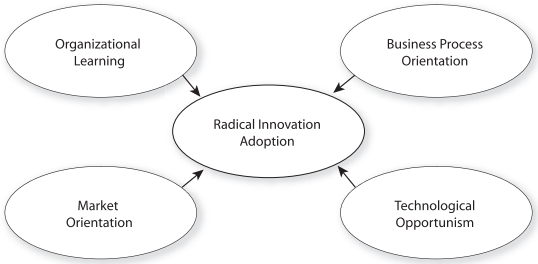

Figure 1. Organizational Capabilities and their Relation to Radical Innovation Adoption

Resource-based View

The theoretical framework for this article is contained within the resource-based view theory (RBV). The resource-based view theory is a strategic management concept that attempts to identify resources that may provide organizations with a sustainable competitive advantage (Maijoor and van Witteloostuijn 1996). RBV theory holds that assets with particular characteristics will bring about sustainable competitive advantage (Black and Boal 1994). This competitive advantage enables an organization to provide superior value to its customers as well as retain profitability for itself (Porter 1998).

In order to develop a competitive advantage, organizations must have resources and capabilities which are superior to their competitors (Porter 1998). Resources are the basic unit of analysis for RBV and are defined as those assets that are tied semi-permanently to the firm (Maijoor and Witteloostuijn 1996). Resources are the financial, physical, human, commercial, technological, and/or organizational assets that are utilized by organizations in the development, manufacture, and/or delivery of products and services to customers (Barney 1991).

The main contribution of RBV theory is that it stands as a theory of competitive advantage which assumes that the desired outcome of managerial effort within the firm is a sustainable competitive advantage. Organizations that can achieve and sustain advantages possess certain key and valuable resources that cannot easily be duplicated. It is therefore the responsibility of the organization's management to identify, develop, and deploy appropriate key resources to maximize efficiency and financial returns (Fahy and Smithee 1999).

To obtain a competitive advantage, providing value to the customer is of paramount importance in RBV theory. Additionally, competitors must not be able to duplicate the resources used within a particular organization or understand the reasons behind the use of the resources in a firm's given success. Even so, the essential elements of the resource-based view of a firm are that the organization's key resources can then provide it with a sustainable competitive advantage leading to superior performance (Fahy and Smithee 1999).

For this article, organizational learning, market orientation, business process orientation, and technological opportunism are the organizational capabilities used within the context of the resource-based view. The utilization of these four organizational capabilities in a manner which is superior to competitors will enable an organization to achieve a competitive advantage. This will ultimately result in providing superior value to the organization's stakeholders in the area of radical innovation adoption or e-business. A brief overview of each of these four organizational capabilities is described below.

Organizational Learning

Organizational learning is defined as developing new knowledge or insights that can influence behavior (Hurley and Hult 1998). Increasingly, organizational learning is being viewed as a strategic tool which can help organizations obtain and sustain a competitive advantage in the marketplace. An organization devoted to learning exemplifies a true learning organization that strives to continuously learn about both internal and external mar-

kets in order to achieve a competitive advantage (Hult, Nichols, Giunipero, and Hurley 2000).

Market Orientation

Market orientation is the second organizational capability and it refers to the "operationalization of the marketing concept into a management orientation" (Harris and Ogbonna 1999, 179). According to Deshpande and Farley (1999), market orientation is the same as "customer orientation" or "customer focus" and essentially refers to an organization's continuous cross-functional processes and activities that attempt to satisfy customers. The importance of developing market orientation has been gaining in popularity, essentially because many believe that there is an association between market orientation and organizational performance.

Business Process Orientation

The third organizational capability is business process orientation. Firms that have a business process orientation strategically assess their business processes and view their organization as not just independent functional departments, but rather as a highly integrated process with an emphasis on outcomes, specifically customer satisfaction (McCormack and Johnson 2001a). Business processes are what an organization must engage in to get work done. Specific sequences of tasks must be created and aligned to achieve specific objectives.

Technological Opportunism

Technological opportunism is defined by Srinivasan, Lilien, and Rangaswamy (2002, 49) as the "a sense-and-respond capability of firms with respect to new technologies" - and these researchers believe that it is an important determinant in radical technology adoption, such as e-business. Technological opportunism is the overall capability of an organization to sense and respond to new technologies, both internal and external to the firm, regardless of whether that technology is used in developing new products (Srinivasan, et al. 2002).

Radical Innovation Adoption

Radical innovation involves uncertainty in four main areas – technical, market, resource, and organizational. Radical innovation involves looking to the future and changing the focus of management by coming up with new ideas and processes (Pennington 2002). E-business is a type of "radical innovation" because for most organizations, an e-business model is a new paradigm that presents both an opportunity to realize additional external growth and internal efficiencies as well as an organizational challenge that may include the redesign or reengineering of the organization. Successfully transforming from a traditional bricks-and-mortar infrastructure to an integrated e-business model requires that institutional activities be coordinated towards achieving the integration of e-business processes within the organization (Chen and Ching 2002).

E-business as a Source of Competitive Advantage

According to Rindova and Kotha (2001, 1264), "Understanding how firms pursue competitive advantage in dynamic environments requires simultaneous understanding of changes in function (that is, product strategy) and changes in form (that is, organizational arrangements, including structures, routines, resources, and capabilities)." Organizations must continually reinvent themselves in order to renew their competitive advantage in environments where that competitive advantage is relatively transient. The process by which they do so must be dynamic and flexible and conducted within a strategic framework. The greater the strategic flexibility of a firm, the more it can engage in transformations of its internal and external processes. The focus of any firm competing in a hypercompetitive environment, such as e-business, should be on renewing rather than protecting their sources of competitive advantage (Rindova and Kotha).

Today, many organizations are redesigning their business processes to achieve a competitive advantage in the marketplace. With the continuing development of technology, organizations are finding that they must continually pursue new business models so that their product, service, or even industry does not become obsolete (Phan 2001).

Problems with E-business Integration

Effectively integrating e-business into an organization so that it makes sense from an organizational point of view as well as enhancing the overall firm is not always as easy as it may first appear. The problems underlying many of the e-business initiatives over the past couple of years have been due

in many cases to forgetting to remain focused on tried-and-true principles of business and instead becoming enamored only with the technological innovation itself. Additionally, some of the best e-business capabilities have been built on strategies that focused on integrating the technology initiative across the entire business system, rather then separating it into its own e-business organizational unit. E-business was often developed and instituted as a separate unit because managers initially believed that this would give the e-business initiative more priority and focus. What has evolved instead is the need for cross-organizational utilization of e-business practices in order to develop better customer relationships by effectively centering the business around the customer (Rheault and Sheridan 2002).

Coltman, Devinney, Latukefu, and Midgley (2001) believe that e-business has essentially failed to transform business in any significant way. In their eyes, few of the visionary predictions about e-business have materialized. While this viewpoint is somewhat pessimistic, even if many consider it realistic, there are more researchers and business practitioners, rather than fewer, that are beginning to see the benefits of using e-business technologies. And few, if any, are choosing to ignore the Internet or e-business. What has proven to be a more reasonable or rational orientation for most firms has been to move from seeing the use of e-business as simply right or wrong - yes, we will use it, or no, we will not – to the gradual realization that the effective use of this new technology and radical innovation requires some real organizational and behavioral changes by the firms themselves.

While some institutions have seen improved organizational performance as a result of their use of e-business, not all firms have fully realized their potential to utilize new technology. According to Schuette (2000, 20), "the key to success in the emerging e-business economy requires identifying the organizational barriers to e-business and turning them into strengths."

The Internet is clearly transforming the way business is conducted and globalization and e-business in tandem are growing as a result of new technology (Deshpande 2002). The reasons suggested for the hesitation or downright resistance to incorporating e-business practices into an organization's infrastructure are varied and disparate, and concern both internal as well as external factors. The problem appears to lie not only in an organization's willingness to invest or innovate using the new technology, but also in the cultural, logistical, and technical issues facing these firms (Schuette 2000).

Organizational Learning and E-business

For organizations adopting or implementing e-business practices, one key to their success is that they are willing to keep learning (hence the term "learning organization) with each experience as they pursue their goal of a sustainable e-business strategy. E-business development and implementation in the educational institution can best be achieved when the culture is oriented towards innovation. And an innovative institutional environment must then be one in which organizational learning and change are embraced, fostered, and encouraged (Senge, Kleiner, Roberts, Ross, Roth and Smith 1999).

It is sometimes difficult for managers and administrators to coordinate mainstream operations, like manufacturing and marketing, while at the same time attempt to cultivate a culture of innovation and change within the organization. Interestingly, the need for efficient management of mainstream competencies often opposes the development of successful innovation and continual organizational learning. Organizational processes, like manufacturing and marketing, are often built around stability, efficiency, and profitability. Yet innovation and continual learning within an organization require a long-term vision and commitment to an oftentimes unstable course. The uncertain and very dynamic world of innovation requires that new knowledge must exist in order to develop new products, processes, and systems which in turn guarantee the future success of the mainstream activities (Lawson and Samson 2001). Any educational organization committed to e-business is one that is additionally committed to continual and lifelong organizational learning. Without a willingness to innovate and learn new technologies, new processes, and new systems, e-business cannot evolve.

While e-business evolves and creates its own business processes, cultural concerns seem to represent the most difficult e-business issue that many organizations face. The organizations internal structure may not be staffed or structured properly to allow an effective e-business initiative to grow and this problem, coupled with a fear of change, oftentimes

means that some individuals are unable or unwilling to be truly innovative and entrepreneurial - two requirements for a successful e-business initiative (Schuette 2000). E-business initiatives are often hindered by internal resistance from employees who are uncomfortable with change. Educational organizations intent on being innovative and creative must work on developing a learning culture which motivates existing employees but also attracts innovative individuals to the firm (Colman 2002).

Market Orientation and E-business

While internal organizational concerns abound, the potential for bricks-and-mortar institutions to engage in e-business is made all the more plausible by visionary leadership, organizational agility, and a continual focus on the future. The institution's senior leaders will set the direction as well as establish clear and visible values and expectations for meeting the needs of all stakeholders in an e-business context. As most organizations today now find themselves competing in the global market, firms must continually demonstrate the capacity for rapid change and flexibility. More rapid, flexible, and customized responses are required when utilizing e-business technologies. For firms today and especially those engaged in e-business, sustainable growth and market leadership additionally require a strong orientation towards the future and a definitive understanding of both the short and long-term factors affecting the business, the industry, and key stakeholders ("Baldrige" 2002). This is as true for corporations as much as it is for educational institutions.

Kanter (2001) asserts that one of the most difficult problems encountered by companies has been their ability to work out the relationship of their e-business initiative to their existing business lines. Yet in order to be truly market oriented and customer focused this is what organizations must do. Whether simply to relay content or to conduct electronic commerce, institutions utilizing a Web presence are now additionally required to exhibit a market orientation online as well. The use of the Web and e-business now gives customers more choices and businesses greater market access as well as internal efficiency (Kanter).

The use of e-business is quite simply transforming the solutions available to customers in almost every marketplace and every industry around the globe. Customers, for example, can now buy books, food, clothing, and almost any other item over the Internet. In terms of academia, more and more educational institutions are offering online courses and programs, as well as the ability to complete various administrative functions online such as registering for classes and checking final grades. Customers can perform all these different functions online with distinct forms of personal customization (Fahey, Srivastava, Sharon, and Smith 2001).

Hargrove (2001, 79) believes that organizations must ask themselves two questions when creating a successful e-business model that is customer and market focused. The first is, "Who are your most important customers?" And the second is, "How can you help them solve problems?" Above all else, a marketing orientation in an e-business environment requires being truthful and providing honest information about the firm's product line (Hargrove).

Business Process Orientation and E-business

What does business process orientation (BPO) have to do with e-business? To McCormack and Johnson (2001a), the "e-craze" occurring during the 2000s has replaced the popular re-engineering craze of the 1990s. The ability to adopt a business process orientation as well as the horizontal organizational structure of e-corporations is gaining in importance. These researchers feel that building virtually integrated networks within the e-economy are critical if companies want to remain competitive. All efforts must be focused on adding value since the Internet has brought about an "effortless globalization" and as result, opportunities and competition have increased exponentially (McCormack and Johnson).

BPO is dramatically affected by e-business initiatives. Every traditional business process is radically reshaped by e-business, from developing new products to managing customer relationships to procuring raw materials. The use of e-business broadens the scope, content, and value of traditional processes. For example, with customer relationship management, e-business practices have enabled companies to retrieve large amounts of data, manipulate the information, and customize the output to better serve distinct customer segments, and sometimes even individual customers (Fahey, et al. 2001).

Business processes must also be redesigned and sometimes even reengineered when adding an e-commerce component. Customers expect an organization's business and operational processes to support their online demands. Thus, when products ordered online do not arrive as promised, e-mail requests are not promptly returned, network systems fail, or order tracking is cumbersome, these same customers balk and it is obvious to the consumer that the organization's business processes are unable to handle the demands and expectations of its customers in an e-business environment. Jeff Bezos, founder of Amazon.com, described the changing business process orientation well when he stated, "in the offline world companies spend 70% of their resources on marketing and 30% on providing a good customer experience. In the online world it's the other way round." (Earl 2000, 33).

A business process orientation connects well with an e-business initiative in academia. The use of e-business provides an electronic means from which educational organizations can enable connections among and between processes in new ways and at faster speeds. Core operating processes can be radically reconfigured, new subprocesses can be created within core processes, and operating processes can be better integrated than ever before. Through the integration of separate processes, e-business essentially creates new business processes. Managers and administrators are challenged to think about core operating processes in fundamentally new ways, thanks to the advent of e-business (Fahey, et al. 2001).

E-business has the potential to radically alter business processes, strengthen customer and supplier ties, and open up new markets throughout academia. However, in order to achieve these successes, educational institutions must rethink their corporate strategy to leverage customer and partner relationships as well as work towards integrating internal business processes (Hackbarth and Kettinger 2000). BPO can be utilized to reduce conflict and encourage greater connectedness throughout an organization, while improving overall business performance. New e-business technologies have made it possible for organizations to function as networks of companies cooperating across boundaries. Building business processes across a network will result in these organizations achieving and sustaining a significant competitive advantage as they understand and master process design and change (McCormack and Johnson 2001b). In the future, colleges and universities will continue to network with each other through alliances and other agreements to offer enhanced customer service and a distinct competitive advantage in the markets they serve.

Technological Opportunism and E-business

According to Srinivasan, et al. (2002, 52), "technologically opportunistic firms perceive technology developments as potential sources of growth for the organization and will respond proactively to adopt radical technologies." Yet organizations must temper their enthusiasm for increased use of technology with concrete analysis and reliable information. Many firms make the mistake of acquiring the "latest and greatest" information technology to force their e-business strategy. The result, more often than not, is that problems do not get solved, and in fact, sometimes get worse because oftentimes the problem was not fully understood in the first place. Managers and administrators must fully understand the current state of their business as well as their strategic objectives for the next three to five years before applying an e-business initiative. In so doing, they can better realize one of the key promises of this new technology - new and additional ways of doing business. The Internet is evolving as the natural support for global many-to-many communication and collaboration (Frichol 2001).

An organization that has a technologically opportunistic outlook tends to perceive technological developments as opportunities for growth and therefore is quite happy to adopt radical technologies, such as e-business. Technology is no longer viewed simply as an enabler of business processes, but is becoming the core of a firm's business strategy. As stated above, this type of outlook is also more future focused and centered on innovation (Srinivasan, et al. 2002).

In applying technological opportunism to e-business technologies in an academic setting, it is clear that "an organization's early and extensive adoption signals its technological astuteness and gives it social legitimacy with its stakeholders" (Srinivasan 2002, 53). At the same time, fear of being left behind can also result in more rapid adoption of technology as Srinivasan, et al. found in their study on technological opportunism. Their results showed that the extent of e-business adoption in

organizations depended on both the degree of technological opportunism and the degree to which other firms in their industry were also adopting e-business practices, plus the subsequent pressure to adopt. They additionally identified two viable drivers of technological opportunism capabilities, the first being top management's support and advocacy of the new technologies and the second, their enabling of certain types of organizational cultures (Srinivasan, et al.). Both of these drivers are additionally important in education.

Conclusion

From the research presented above, the organizational resources and capabilities available to educational institutions appear to impact their degree of radical innovation adoption or the successful integration of e-business strategies into their organizational structure. In other words, the research shows that e-business success is achieved more fully when organizations are oriented towards organizational learning, market orientation, business process orientation, and/or technological opportunism. The adoption and successful implementation of e-business tends to occur more readily and successfully in organizations that are focused on continual organizational learning and who are readily open to change and innovation.

Those that hold a solid market orientation and are oriented towards their customers, rather than their products or costs, also tend to be more successful in adopting e-business because they provide their customers with what they want via the Web. Organizations that focus on efficient business processes and work on developing networks and team environments tend to be extremely successful using the Internet and e-business. These same firms tend to embrace partnerships, strategic alliances, and the formation of networks with other organizations that in turn help each further their own e-business successes.

Those organizations that are technologically opportunistic also tend to succeed better in the e-business realm because they proactively seek and adopt technology which can help them in the development of an effective e-business initiative. These firms invest in the technology necessary and realize the importance of linking that technology to the various business functions and processes throughout the institution.

This article provides support and justification for expanding the research previously conducted using these four organizational capabilities. The literature clearly shows that these four capabilities have the ability to provide a resource-based advantage in terms of utilizing e-business. By continuing to study these four organizational constructs within one framework, further theoretical and practical implications can be illustrated for e-business implementation in higher education as well as a variety of industry settings.

References

Alfred, R. 2003. The wolf at the door: Where colleges could fail. *Community College Journal.* April/May 2003, 16-24.

Baldrige National Quality Program. 2002. *Business criteria for performance excellence.* Gaithersburg, MD: National Institute for Standards and Technology.

Barney, J. 1991. Firm resources and sustained competitive advantage. *Journal of Management,* 17, 99-120.

Barua, A., Konana, P., Whinston, A.B., & Yin, F. 2001. Driving e-business excellence. *MIT Sloan Management Review.* Fall 2001, 43(1), 36-45.

Black, J.A. & Boal, K.B. 1994. Strategic resources: Traits, configurations and paths to sustainable competitive advantage. *Strategic Management Journal.* Summer 1994, 15, 131-148.

Chen, J. & Ching, R.K.H. 2002. A proposed framework for transitioning to an e-business model. *Quarterly Journal of Electronic Commerce,* 3(4), 375-389.

Colman, R. (Ed.) 2002. E-commerce cornerstones. *CMA Management.* April 2002, 76(2), 3.

Coltman, T., Devinney, T.M., Latukefu, A., & Midgley, D.F. 2001. E-business:

Revolution, evolution, or hype? *California Management Review.* Fall 2001, 44(1), 57-87.

Craig, J. & Jutla, D. 2001. *E-business readiness.* Upper Saddle River, NJ: Addison-Wesley.

Deshpande, R. 2002. Performance companies. *International Journal of Medical Marketing.* March 2002, 2(3), 225-231.

Deshpande, R. & Farley, J.U. 1999. Executive Insights: Corporate culture and market orientation: Comparing Indian and Japanese firms. *Journal of International Marketing,* 7(4), 111-128.

Earl, M.J. 2000. Evolving the e-business. *Business Strategy Review.* Summer 2000, 11(2), 33-39.

Fahey, L., Srivastava, R., Sharon, J.S. & Smith, D.E. 2001. Linking e-business and operating processes: The role of knowledge management. *IBM Systems Journal,* 40(4), 889-908.

Fahy, J. & Smithee, A. 1999. Strategic marketing and the resource-based view of the firm. *Academy of Marketing Science Review, 10.* Retrieved June 1, 2003 from http://www.amsreview.org/articles/fahy10-1999.pdf

Frichol, M. 2001. There's no business like e-business. *IIE Solutions.* March 2001. 33(3), 38-45.

Hackbarth, G. & Kettinger, W.J. 2000. Building an e-business strategy. *Information Systems Management.* Summer 2000. 17(3), 78-94.

Hargrove, R. 2001. *E-leader.* Cambridge, MA: Perseus Publishing.

Harris, L.C. & Ogbonna, E. 1999. Developing a market oriented culture: A critical evaluation. *Journal of Management Studies.* March 1999. 36(2), 177-196.

Hult, G.T.M., Nichols, E.L. Jr., Giunipero, L.C., & Hurley, R.F. 2000. Global organization earning in the supply chain: A low versus high learning study. *Journal of International Marketing,* 8(3), 8.

Hurley, R.F. & Hult, G.T.M. 1998. Innovation, market orientation, and organizational learning: An integration and empirical examination. *Journal of Marketing.* July 1998. 62, 42-54.

Kanter, R.M. 200). *Evolve.* Boston, MA: Harvard Business School Press.

Lawson, B. & Samson, D. 2001. Developing innovation capability in organizations: A dynamic capabilities approach. *International Journal of Innovation Management.* September 2001. 5(3), 377-401.

Maijoor, S. & van Witteloostuijin, A. 1996. An empirical test of the resource-based theory: Strategic regulation in the Dutch audit industry. *Strategic Management Journal,* 17(7), 549-569.

McCormack, K. & Johnson, B. 2001a. Business process orientation, supply chain management, and the e-corporation. *IIE Solutions.* October 2001. 33(10), 33-38.

McCormack, K.P. & Johnson, W.C. 2001b. *Business process orientation: Gaining the e-business competitive advantage.* Boca Raton, FL: St. Lucie Press.

Pennington, A. 2002. Innovation expert Mark Rice. *What you can learn from established companies to inspire innovation in your own company.* August 13. Retrieved June 5, 2003 from http://www.Entrpeneur.com/article/o,4621,291736,00.html

Phan, D.D. 2001. E-business management strategies: A business-to-business case study. *Information Systems Management.* Fall 2001, 18(4), 61-70.

Porter, M.E. 1998. *Competitive advantage.* New York, NY: Free Press.

Rheault, D. & Sheridan, S. 2002. Reconstruct your business around customers. *Journal of Business Strategy.* March/April 2002, 23(2), 38-43.

Rindova, V.P. & Kotha, S. 2001. Continuous 'morphing': Competing through dynamic capabilities. *Academy of Management Journal.* December 2001, 44(6), 1263-1281.

Schuette, D. 2000. Turning e-business barriers into strengths. *Information Systems Management.* Fall 2000, 17(4), 20-26.

Senge, P., Kleiner, A., Roberts, C., Ross, R., Roth, G., & Smith, B. 1999. *The Dance of Change.* New York, NY: Doubleday.

Srinivasan, R., Lilien, G.L., & Rangaswamy, A. 2002. Technological opportunism and radical technology adoption: An application to e-business. *Journal of Marketing.* July 2002, 66(3), 47-61.

The Professional Growth of an Accounting Agency Entrepreneur

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Abstract

The accounting agency profession in Finland is undergoing major changes. At the moment the development of the accounting agency system has advanced further in Norway than in Finland.

In the present study a professionalisation approach has been applied to accounting entrepreneurship for the first time. Professionalisation is the development of a vocation or field of business, with respect to the relevant expertise, towards a more professional and specialised direction. Professionalisation was used as the conceptual approach in this study in order to discover methods for knowledge-intensive entrepreneurs to improve within their field. For the first time in Finland, this study highlights elements of the profession such as value chain considerations in professional services, market protection showing the maturity of the profession and the internal professional monopoly in the area of accounting agency entrepreneurs. The internal monopoly of the profession is market protection, and prevents non-chartered accounting agencies from entering the market. Market protection prevents ones other than those educated for the field from practising the profession; in other words, the markets are governed by an internal professional monopoly. This happens in a mature profession. The results of the study provide new insights into the development needs of Finnish and Norwegian accounting agency fields from the points of view of business and educational sciences. The beneficiaries of the results are accounting agency entrepreneurs and the national accounting organisations in both countries, as well as several educational institutes.

Introduction

The accounting agency profession in Finland is undergoing major changes. At the moment the development of the accounting agency system has advanced further in Norway than in Finland. It seems, however, that Finland will follow in the footsteps of Norway when developing the accounting profession. Consequently, the focus of the present study is professional growth; the professional actors in the study are accounting agency entrepreneurs. Theories of professional growth and entrepreneurship form both the approach and conceptual framework. Professionalisation, in other words development towards a more expert profession, is a natural theoretical starting point.

In the study an accounting agency entrepreneur is a person in charge of an accounting agency. He/She has acquired a degree in chartered accountancy and operates entrepreneurially or intrapreneurially. Intrapreneurial behaviour here means the personal qualities of entrepreneurship. If an employee has the qualities of entrepreneurship, this is intrapreneurial behaviour. Entrepreneurial or intrapreneurial behaviour is typified by, among other things: initiative, activity, innovativeness, creativity, flexibility, a willingness to work hard and a propensity for taking risks. A profession is a vocation based on specialized know-how defined according to specialised scientific criteria, education in a related field and a potentially legitimizing degree. Professionalism, by contrast to amateurism, often reflects itself in, and has an effect on, the professional's norms, customer and network relations and membership of organisations supporting

the specialist know-how. Professionalism is also definable through these elements.

The Accounting Agency as an Enterprise in Finland and Norway

The operations of Finnish and Norwegian accounting agencies are rather similar because the size, location, and to some degree, the economy and culture of the two countries have much in common. Their similar societies and legislation based, in part, on the same matters make co-operation between these two countries natural (Schneider and Barsoux, 1997, pp. 48––56). Norway is not a member of the European Union however, which causes operational differences between the two countries. Customers using the services provided by accounting agencies are micro or small to medium-sized companies (SM companies) in both countries. In addition, the division between accounting and auditing and the importance of independent auditing are emphasised in both Finland and Norway. For example, in Sweden the difference between accounting and auditing is significantly less clear than in Finland and Norway. (Tilintarkastuslaki 936/1994 23 §; Svenska Revisorsamfundet SRS, 2000; Keskuskauppakamari, Tilintarkastuslautakunta, 1999)

An organisation of accounting agencies corresponding to the Finnish Kirjanpitotoimistojen Liitto ry (The Association of Accounting Firms), established in 1968, is the Norwegian NARF, Norges Autoriserte Regenkapsføreres Førening (The Norwegian Association of Accountants), established in 1969. Membership is personal in the Norwegian organisation, whereas the members of Kirjanpitotoimistojen Liitto ry are accounting agencies. In both countries accounting agencies buy training and information services from the organisations that monitor similar interests. There are 700 accounting agency members in Kirjanpitotoimistojen Liitto ry and about 1500 personal members in the NARF, which are the national organisations of Finland and Norway respectively (Kirjanpitotoimistojen Liitto ry, 2004; Partanen, 1999; Norges Autoriserte Regenkapsføreres Førening NARF, 2004).

The main difference between the Finnish and Norwegian accounting agency systems is that in Norway the field is chartered by law, which means there are strict educational and work experience requirements for any person in charge of an accounting agency. In Finland, however, anyone is free to set up an accounting agency and start keeping the books for a customer company. The chartered accountant's degree in Finland is known as KLT and in Norway, as ARF. Non-chartered accounting agencies have not been considered in the present study. The Norwegian law regulating the accounting agency field, originally deriving its aims from the Finnish chartered accounting agencies, requires chartering in all those cases where accounting services are sold to another party. The idea for the law in Norway came from The Association of Accounting Firms in Finland because the chartering system in Finland was older than that in Norway, and the Finnish organisation therefore acted as a consultant to the Norwegian system. The law requiring the chartering of accounting agencies stipulates the educational level, area of specialisation and experience in the accounting field of the person in charge of the accounting agency. In Norway a higher education degree is always required. The chartered accountant's degree is obtained without a separate examination. The main aim of the law is to secure the quality of the services provided by the accounting agency and bought by customer companies (Lov om autorisasjon av regnkapsførere no 109/18.7.1993; Tili-instituuttisäätiön säännöt 1 §––10 §). A chartered accountant is not necessary in order to establish an accountancy agency in Finland, but if there is a person with such a qualification, that person automatically takes responsibility if the agency is then registered as chartered.

The following figure summarises a comparison between the Finnish and Norwegian accounting agency systems (Table 1):

Table 1. A comparison of the Finnish and Norwegian accounting agency systems as highlighted in the present study

Characteristic	Norway	Finland
A law regulating accounting agency business	Exists	Does not exist
Chartering	Compulsory	Voluntary
Requirements for establishing an accounting agency	Meeting the chartering requirements	Free
A chartered accountant in charge of the accounting agency	Always	Always if present
Degree of chartered accountant	ARF	KLT
Basic educational requirement for the degree	Higher education	College degree / from 2006 on only higher education

Contents of basic education have been specified	Yes	Yes
Work experience	2 years during the past 5 years	3–5 years
Special examination for chartered accountant degree	No	Yes
Control and checking that the requirements for chartering are met by accountants and agencies after chartering	Yes	Yes
Specified duties for renewing professional skills of chartered accountants	Yes	Yes
Written agreement between the accounting agency and the customer	Required by law	Not compulsory
Average number of personnel in an accounting agency	4 people	6 people
Members of national organisation	Accountants	Accounting agencies
Independence of accounting agency business and auditing	Binding	Binding
Requirements set by the EU	Partly	Yes (requires the International Accounting Standards, IAS model for balancing)
ETA agreement (e.g. the directive on company legislation)	Binding	Binding

Professionalisation in the Accounting Agency Field

A profession is a vocation based on specialized know-how defined according to specialised scientific bases, education in a related field and a potentially legitimizing degree. Professionalism, in contrast to amateurism, often reflects itself in, and has an effect on the professionals' norms, customer and network relations and membership of organisations supporting the specialist know-how, and it is also definable through these. (Thompson, 1991; Kyrö, 1995; Konttinen 1991a and 1991b; Volanen-Alava, 1982, in combination have been used to create the definition of profession for the needs of the present study.)

The original meaning of "profession" is professionalism, as opposed to amateurism. In its references to profession, the present study emphasises analysing the relationships between the markets, networking and organisations. Previous studies in the field have focused on the position of monopoly enjoyed by professions in the markets (Thompson, 1991). Unfortunately, the importance of profession for the customer has often been forgotten, although it is a key issue from the market point of view. (Kyrö, 1995, pp. 75––95)

A profession offers criteria for acquiring and evaluating professional services. Profession also defines the content and quality of services. Cyert and March (1963, pp. 44––82) raised these problems as early as the 1960s, from the point of view of the organisation buying services. If there were no vocations, the organisation would face unreasonable costs for the selection process and the unacceptable risk of using incompetent services. Nowadays employment relationships are mostly temporary, while the use of external specialist services is increasing at the same time. Obtaining and using services unconnected to a profession may become impossible for the customer.

For the purposes of the present study, professionalisation is defined as follows: professionalisation is the development of a vocation or a field of business with respect to the specialist know-how in question, towards a more professional and specialised direction.

The elements of professionalisation comprise the following four structural factors:

- a specialised scientific basis;
- relatively extensive freedom to work;
- professional organisations;
- professional strategies.

Social responsibility is emphasised in the above factors. Social responsibility refers to both ethical norms and qualifications or professional norms. (Konttinen, 1991a, p. 29; Volanen-Alava, 1982, p. 20)
The aims of professionalisation in the accounting agency field are to serve small and medium sized enterprises because they are the ones that mainly buy financial administration services from accounting agencies. Professional organisations create and control the norms and rules of behaviour. Thus, the education, which is based on a specialised scientific basis, and norms and rules of behaviour, together form the socialisation process of the professional. The professional organisation in Finland is Tili-instituuttisäätiö, which creates and controls the norms and rules of behaviour concerning KLT accountants. A business-specialised

basic scientific education, together with gaining the KLT degree, form the socialisation process for the KLT accountant. When the profession has fully developed to maturity, the privileges will guarantee the profession a monopoly in the markets that Freidson calls market protection (1986, pp. 1––17, 21, 225). It prevents ones other than field-specifically educated people from entering the markets. This has happened in the accounting agency business through legislation in Norway, where a state organisation called Kredittilsynet is legally responsible for chartering. (Kredittilsynet, 2001) The same thing would happen gradually in Finland if a law for accounting agencies were to be passed.

The following figure describes the elements of professionalisation. The freedom to work and a specialised scientific basis are connected to each other because the degree of freedom to work is derived from the specialised scientific basis. Because of this freedom, it is difficult for accounting agencies to standardise their professional services. Standardisation happens during the professionalisation process that is connected with professional organisations. Professions are separated from other vocations by the specialised scientific basis (Larson, 1979, p. 17 and 1990, p. 25). Creating the specialised scientific basis is a part of the process of producing professionals.

Education based on specialised scientific knowledge is another element of the profession (Parsons, 1954, pp. 37––38 and 1965; Parsons-Platt, 1974, p. 92). Education creates a group of producers of professional services to whom society gives the right to produce those services. Education also creates an identity for professional services that provides the customer with criteria for choosing and evaluating services (Kyrö, 1996, pp. 26––27). As a result of the professionalisation of operations, a deficit arises in the know-how of the unchartered accounting agency entrepreneur, when compared to the chartered accountant. This deficit is caused by changes in work tasks and is defined as a "know-how need".

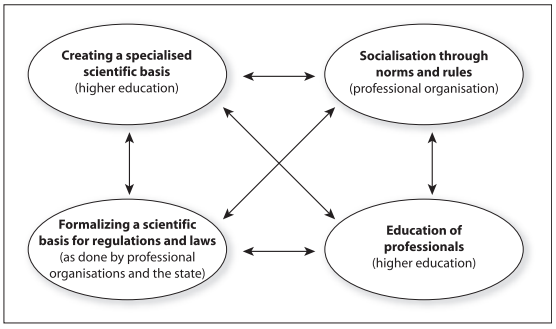

Figure 1: Elements of professionalisation (Kyrö, 1995, p. 129)

Models of strategic planning have attempted to develop various solutions parallel to the field of business, or in its place to position and manage enterprises in a competitive environment. Value chain thinking can be found in these models. Porter launched the term "value chain" as a tool for analysing competitive advantage. (Porter, 1980, pp. 34––46) The value chain consists of all the actions that are needed to meet the expectations of the customer. The chain also contains the customer's actions, as a part of the service production process (Gilbert & Strebel, 1991, pp. 70-79). Every action in the value chain must add value to the product from the customer's point of view. When a profession defines the field, it is possible to form a field of business for those enterprises that have similar value chains.

Authorisation in the accounting agency field occurs through chartering. The basis for chartering is education in both Finland and Norway. In addition to this, a separate KLT examination must be passed in Finland. After chartering, the internal operations of businesses in the accounting agency field differ because accounting agencies offer diverse services. The last stage is represented by customers from the SM sector with whom accounting agencies interact. The final professional services in the accounting agency field are also incomplete without action by the customer.

Therefore, the value chain or production process of professional services in the accounting agency field consists of three different types of actions and processes:

1. The production of professionals (chartering of the accounting agency).
2. The internal operations of accounting agencies in the field, which are needed for creating diverse services and marketing.

3. The interaction process between the customer and the professional (the accounting agency). The operations are, in character both internal and external to the business.

The customer's expectations are primarily targeted at professional services and only secondarily at a particular professional or accounting agency marketing those professional services. (Kyrö, 1995, pp. 87––95) For example, a SM business is primarily looking for accounting agency services and only secondarily for the services of a particular accounting agency. (Tenhunen, 1998, pp. 83––100)

Operational logic in the accounting agency field is defined by the rules created by the profession, after the profession for the accounting agency field has been formed. The profession is guided by sets of norms and values arising from the basis of legislation and various decisions and regulations. In Norway the legislation concerning chartering forms the main set of norms for the accounting agency field.

The market consists of three layers: large core companies, small and medium sized companies and micro companies. The various market layers are not separate; on the contrary, they interact with each other. The flexible zone describes companies entering and leaving the market. For the profession, the core of the market is the profession's value chain that regulates and directs the operational logic of the market. Maturity of the profession is described by the entering and exiting happening in the field. In a mature profession, market protection prevents people other than those educated for the field from practising the profession; in other words, the markets are governed by an internal professional monopoly. There is market protection in operation in Norway at the moment, because legislation prevents people other than those educated according to the norms from entering the field. In Finland, the professionalisation process is still in progress because one can enter the accounting agency field freely.

Professional Growth as a Subject of Study

Professional growth can be represented by the circular model shown in the following figure, Figure 2. *Self-directed learning, transformative learning, critical reflection and their interaction form the core of professional growth. This core reflects changes to individuals, and from them to the organisation, and finally to the entire life of the profession. Pressures for change arise from within the individual, the organisation and also the global labour market.* (Ruohotie, 2001, lecture materials) In Figure 2, the outer circle of changes in professional life in the accounting agency field arise from external pressures for change: e.g. changes in technology and innovations or changes in the economic, political and social environments. Electronic business and new products are included in technological changes and innovations. Internationalisation and increased foreign trade are changes in the economic and political environments. Changes in legislation are changes in the social environment. Changes in the business practices of various organisations are changes in both the economic-political and social environments. Changes in the accounting agency entrepreneur also create pressure to develop within the profession, in addition to the pressures mentioned above.

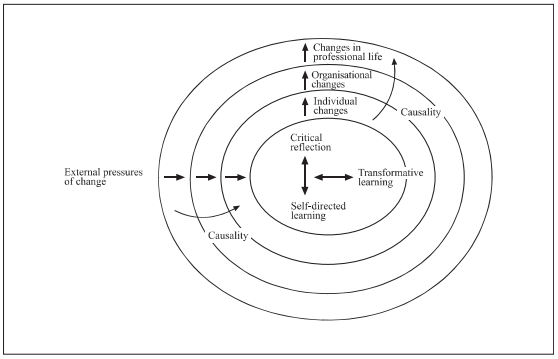

Figure 2. A circular model describing professional growth (Ruohotie, 2001, lecture materials)

The concepts of motivation and will are closely connected to studying professional growth. These concepts are in turn closely connected with regulating learning, which means the conscious control of learning. It requires conscious and critical consideration and evaluation of one's own operations. (Ruohotie, 2000, p. 75) The motivation and volitional processes of the learner, and the interaction between the individual and his/her environment play an important role when it is a question of planned and organised education or learning from every-day situations. (Ruohotie, 1999, p. 69)

Personality and intelligence have been placed on the highest level in the taxonomy concerning individual differences of construction. They are exten-

sive, partly overlapping concepts that are difficult to define. Personality and intelligence have been further divided into three areas: affection, conation and cognition. This division is important for understanding learning and entrepreneurship. (Snow, Corno & Jackson, 1996, p. 247)

Affection means the reactions felt to a certain object or idea. Sometimes it means a general reaction to something that one likes or dislikes. Conation refers to those processes of mind that help the learner to develop. It is a kind of intrinsic unrest or a conscious tendency to act or strive for something. Concepts describing conative structures include impulse, desire, volition and purposeful striving. (Ruohotie, 2000, pp. 75––76; Ruohotie, 1999, p. 69) Affective concepts include feeling, emotion, mood and temperament. Cognition is a general term for those processes that help the learner to recognise, organise and obtain information on a certain object. Cognitive concepts include perceiving, recognising, conceiving, thinking, reasoning and judging. (Ruohotie and Koiranen a, 2000, pp. 29––45; Ruohotie, 2000, pp. 75––76)

Consideration of conative structures helps in seeing certain differences between the accounting agency entrepreneur and accounting agency personnel, especially in the entrepreneur vs. intrapreneur dimension. Both have the cognitive knowledge and skills, the affective attitudes and values, but the accounting agency entrepreneur has the conative motivation and volition to make a career as an independent entrepreneur. In concept analysis, entrepreneurship is the main finding of the conative area. Entrepreneurship is a matter of will. The decision to become an entrepreneur presupposes motivation, after which the desire to maintain entrepreneurship is required. Entrepreneurship while being employed by someone means intrapreneurship. This becomes career orientation in the intrapreneur, who thus makes an excellent employee.

Motivational structures of conation are: internal and external goal-orientation, fear of failure, achievement expectations, self-esteem, belief in one's own abilities and opportunities, the value of incentive, and various attribution interpretations. Volitional structures are: persistence, the will to learn, endeavour and effort, mindfulness in learning, intrinsic regulation and evaluation processes, as well as various operational control strategies and styles of processing knowledge. (Ruohotie, 1994, 1998, 2000; Ruohotie & Koiranen, 1999)

Individual differences in construction described by structures in taxonomy, for example, traits of temperament, abilities, styles, strategies, orientation and approaches, are connected with learning results and they can themselves be understood as the results of learning. (Ruohotie, 2000, p. 78) In a learning situation changes occur in the learner's metacognitive abilities, motivation, beliefs and self-esteem. Therefore, changes do not occur only in the learner's knowledge structure. A person pursuing a professional career tries to develop the styles, values, beliefs, abilities and knowledge that are valued in that field. For the accounting agency entrepreneur, the central learning areas are: knowledge of accounting, taxation, the law and information technology.

Conation will now be considered more closely, because it refers to the mental processes that help the learner to develop. Conation is the basic structure of human motivation, will and purposeful action, the influence of which creates the human need to develop, to learn and to act purposefully. (Ruohotie, 2000, pp. 75––76; Ruohotie and Koiranen, 2000, p. 16) Conation contains conscious striving towards learning, which manifests itself as the will to learn, the will to succeed in one's career and the will to form an enterprise. The term "conation" is based on the Latin verb "conare" which means to venture. Conative concepts connected with the learning process are described in the following text.

Values, attitudes, interests mean the appreciation of working as an entrepreneur and a general appreciation of entrepreneurship. Attitudes mean a positive approach to entrepreneurship and the focusing of one's interests on establishing and developing one's own business. Key values of the accounting agency entrepreneur are: ability and a willingness to apply the rules and regulations of society and an appreciation of lifelong learning. (Tenhunen, 1998, p. 43)

Self-directed orientations mean a strong self-esteem (self-concept), appreciation of one's own entrepreneurial personality, as well as belief in one's ability to succeed as an entrepreneur as a belief in self-efficacy.

Achievement orientations mean the will to work profitably and in a developing way, the will to act independently (task and ego orientation), as well as the will to set learning and performance goals

for oneself to renew and develop. Achievement orientations of the accounting agency entrepreneur include the skill of working alone and the courage to make major decisions alone.

Commitment to action goals means emotion-based commitment. Commitment can be caused by economic realities or it can be based on loyalty. For example, a situation where the daughter commits to carrying on the business established by the mother, based on loyalty.

Action controls mean attentiveness and concentration that are closely connected with learning. This is analogous to enterprising because an entrepreneur makes decisions based on actions. The decisions include drawing the line between projects that the entrepreneur partakes in and the ones in which he/she does not participate. The direction and specialisation of the whole accounting agency can be decided at the same time. Specialisation can be geographical; in which case the accounting agency serves only customer companies of a certain area. Specialisation can be international so that the financial administration of customer companies operating on certain international markets is managed. Specialisation can also be based on product range so that the accounting agency specialises in, for example, producing financial administration services for real estate agencies. Different people within the same accounting agency can specialise in serving customer companies from different fields of business. An accounting agency can produce auditing services. This, however, requires independence, and that auditing services be kept separate from bookkeeping services. This involves a control strategy. The choice of method of action means a choice between entrepreneurship and intrapreneurship. The same choice can mean a choice between working alone as an entrepreneur or networking. The choice of services is a decision concerning the number of business locations, or the extent to which electronic bookkeeping is applied. Action control strategies for the accounting agency entrepreneur are confidentiality and an adherence to deadlines. The accounting agency entrepreneur reaches achievement through book-closure and finishing other extensive projects, which in turn form the values and attitudes of the accounting agency entrepreneur.

Achievements, outcomes and consequences mean the results of learning, the quality of service, the economic result and the continuity of the business. The primary result can be the amount of invoicing. Achievement is also shown by the chartering of the accounting agency and the number of chartered accountants working in the agency.

Other-directed orientations are social ability, empathy and persuasibility. Empathy means the accounting agency entrepreneur's ability to empathise with the customer entrepreneur. Persuasibility here means the extent to which the accounting agency entrepreneur can be persuaded, i.e. how eager the accounting agency entrepreneur is to serve, for example, to arrange meetings with customers in the evenings and at weekends. Persuasibility can be seen in ethical principles and following the rules and regulations of society; for instance, in cases where a line must be drawn between what is recorded as company expenses and what are personal expenses.

Personal styles mean learning styles and strategies. In the present study style structures mean the intensity with which the accounting agency entrepreneur works with the customer company. One can function as an entrepreneur with many personal styles, for example, with zero growth as a business goal, gradual growth or leaping growth. The style can be traditional, innovative, risk seeking or risk avoiding. The customer service product can be superficial or profound. (Koiranen, 2001, lecture materials)

Problems and Method

The study addresses itself to the following research questions:

How do extensive megatrends affecting social change reflect on professional growth in the accounting agency field?
How do professionalism, professional identity and learning needs manifest themselves in the accounting agency business?
Does the accounting agency entrepreneur have sufficient knowledge and skills to practice the profession?

Sample and Methodology

The study is mainly conceptual. The hermeneutical pre-understanding before the in-depth study of literature was created by using questionnaires comparatively both in Finland (n = 668) and Norway (n = 1441) in the years 1998 - 2001. Descriptive statis-

tics, such as means, standard deviations and cross-tabs were used to classify the data. As a whole, the research method could be called an interpretative (or reflective) conceptual study based on both academic literature and empirical evidence. The approach is very similar to the so-called abductive logic.

Study Results

How do extensive megatrends affecting social change reflect on professional growth in the accounting agency field?

Economic growth: Unstable and unpredictable economic growth means changes and fluctuation in the number of enterprises. There is not necessarily a co-dependency relationship between economic fluctuations and the number of SM enterprises set up. The number of enterprises founded increases during an upswing; however, in Finland, during economic slumps various supporting measures have been made to boost SM enterprise establishment. Because of the globalised economy, international business for small companies has also increased. (Suomen Jobs and Society ry/Suomen uusyrityskeskukset, seurantatilastot, 2000) The expansion of markets means expansive business, which mainly causes economic growth at the micro level. Shorter lifespans of products cause sudden business termination decisions. The effect of disturbances in international markets spread around the world quickly. Sudden fluctuations in economic growth reflect on accounting agencies and the number of their customer companies and the volume of their operations. (Ruohotie, 1997, pp. 164––167) Accounting agency entrepreneurs prepare for these changes by developing the flexibility of their business. (Suomen Jobs and Society ry/Suomen uusyrityskeskukset, seurantatilastot, 2000)

Technological changes: Technological changes mean, in particular, the automation of data transfer in the accounting agency field. According to predictions, day-to-day bookkeeping will be almost entirely automated in the near future. This requires considerable fixed capital investments in information technology and a significant raising of the proficiency level, especially in small accounting agencies. The accounting agency entrepreneur directs technological changes concerning financial administration in the customer company. However, human work cannot totally be replaced by technological changes. Human input is needed in advisory services, the numbers of which are growing within the accounting agency business. (Schrey, 2001)

Markets: Markets will segregate in the accounting agency business. This can be seen in the primary chains of accounting agencies. In order for small accounting agencies to join chains, they must be motivated by the benefits resulting from linking up and operating in networks. The spread of expertise and specialisation are the advantages of chains. Individual accounting agencies can have their own areas of expertise, which are not only available to customer companies, but also to other accounting agencies within the network. The personnel will have good specialisation and career development opportunities because of internal labour markets within the network. (Schrey, 2001)

Communication: Information technology development makes real-time, direct and informal communication possible. This has a crucial effect on data transfer and the accounting agency business. At the same time, however, the negotiating and language skills of the accounting agency entrepreneur become ever more important. Although communication becomes to some degree informal, the accounting agency entrepreneur does need certain forms of communication skills, e.g. to carry out various assignments connected with taxes and the law. Globalisation and increased foreign trade increase the need for oral and written skills in foreign languages for the accounting agency entrepreneur.

Innovation: Critical innovations bring about new kinds of business, which means the founding of new enterprises and demand for accounting agency services. Critical innovations cause changes in accounting agencies and in the business of their customer companies through new products and new working methods. Technological changes and innovations will be the most significant change factors of the future. (Ruohotie, 1997, pp. 164––167)

Competitive advantage: Speed will be the competitive advantage of the accounting agency in the future, as a result of efficient electronic bookkeeping. Achieving speed requires general acceptance of the national form of accounts currently being planned, and moving gradually but entirely towards electronic invoicing. Maintaining the proficiency of the accounting agency entrepreneur also requires speed, especially in following the latest developments in information technology and legislation.

Customer relationship: Accounting agency entrepreneurs analyse their operations more from their customers' point of view nowadays. Day-to-day electronic bookkeeping has enhanced the importance of personal advisory services – by providing expertise in them, the invoicing opportunities of the accounting agency entrepreneur increase.

Work ethics: Shared responsibility in management is also emphasised in the accounting agency. Work is divided between the accounting agency personnel according to customers, so that each employee will have full responsibility for managing financial administration in the named customer companies. The ethical responsibility of the accounting agency entrepreneur is based on following the laws and rules of society and avoiding misconduct. Aspiration towards continuous business and valuing sustained development are also ethical goals.

Source of authority: The source of authority is persuasion. (Ruohotie, 1997, pp. 164––167) This means that decisions are based on position decrease. Know-how and professional growth become sources of authority. The source of authority can also be viewed from the points of view of the accounting agency entrepreneur and the customer enterprise. The accounting agency entrepreneur's source of authority in relation to personnel is derived from professional expertise and know-how. The accounting agency entrepreneur must be able to sell the personnel his/her own development ideas. He/She is expected to possess more diplomatic skills instead of the earlier consensus thinking. The accounting agency entrepreneur's source of authority in relation to the customer enterprise is similarly know-how and expertise, on the basis of which the customer enterprise makes decisions on purchasing services.

How do professionalism, professional identity and learning needs manifest themselves in the accounting agency business?

A profession is a vocation based on expertise that is defined according to a specified scientific basis, education in a related field and a possible legitimising degree. Professionalism, as opposed to amateurism often reflects itself in professionals' norms, their customer and network relationships, as well as in their membership of organisations supporting their expertise, through which professionalism is also defined. The present study views the accounting agency entrepreneur's vocation as a profession and connects the profession's requirements to professional growth. Professionalisation is the development of a profession or a field of business with respect to relevant expertise, towards a more professional and specialised direction.

When Finnish and Norwegian accounting agency systems are compared with each other, it can be said that professionalisation has progressed further in Norway than in Finland through legislative means, to become a market monopoly. Education creates a group of producers of professional services, to whom society gives the right to produce these services. As a part of professional growth, education also creates an identity for the professional services that gives the customers criteria for choosing and evaluating those services. What is meant by the customers' criteria for choosing and evaluating services is the accounting agency entrepreneurs' customer companies, which carry out the evaluation and make the selection decision. Learning needs connected with professionalisation are defined through laws, norms, rules and regulations of the field. In Norway the learning needs have been defined in the law 109/1993 (Lov om autorisasjon av regnkapsførere, 4 §––7 §) and in Finland in the rules accepted by Tili-instituuttisäätiö. (Tili-instituuttisäätiön säännöt 1 §––10 §)

Profession, professionalism, professional identity and the connected learning needs have such closely related concepts as qualifications, competence, proficiency and the relationships between these three concepts. Because the present study considers the accounting agency as an organisation, the organisation's competence is also a closely related concept. Qualifications, competence, proficiency, their connections, as well as the organisation's competence have been defined and connected with the discussion on professional growth of the accounting agency entrepreneur at the same time.

Does the accounting agency entrepreneur have sufficient knowledge and skills to practice the profession?

The inquiry into educational requirements studied the correlation of basic education and additional degrees with professional tasks. It was considered that basic education correlated well with professional tasks. The Finnish respondents seemed more positive than the Norwegian ones when asked about

the correlation of studies with professional tasks. The replies form positive feedback for business education, especially that specialised in accounting. KLT accountants have done additional degrees in Finland. The most common additional degree was the HTM auditor's degree. In Norway the profession of an auditor is a separate career, the basic education for which is completed at university. The Finnish and Norwegian authorities agree that the operations of accountants and auditors should be kept separate and decisions have been made on the matter. In February 2001, the new instructions of SEC (U.S. Securities and Exchange Commission, 2001), which is the controlling authority in the U.S. securities market, came into force. The primary aim of these instructions is to define the limits within which auditors can carry out consulting. The main aim culminates in securing the independence of the auditor. (Kauppalehti 31 January 2001, p. 13). The willingness of the Finnish KLT accountants to do additional degrees shows the appreciation accounting agency entrepreneurs hold for the values of lifelong learning and the willingness to develop. There was a willingness to pursue additional degrees, but this was mostly prevented by a lack of time.

The skill and knowledge of the future will be the fourth qualification, know-how concerning information technology. The Finnish law and practice followed by authorities allows books to be kept without the use of paper according to the Accounting Act and statute. (Kirjanpitolaki 1336/1997 and Kirjanpitoasetus 1339/1997) Only the balance book should exist in paper form according to the law. Official notifications of the balancing of books can already be done partly electronically. There is a study in progress where the several payments and notifications to the public sector would be gathered together to rationalise operations. This would concern at least the accounts of with-holding tax, value added tax and advance payments. (Laitinen, 2001). The aim of this is also to ease the load of administrating SM businesses. The groundwork for automation has been laid in Finland, but it can function only after standards for accounting have been created. Some accounting agencies already have their own applications of network or electronic accounting models. The chart of accounts is expected to be nationally standardised in Finland soon. When the accounting model and the chart of accounts are standardised, all the document material for accounting will have been standardised. With the help of the network invoice, the bookkeeping of purchases can be standardised. The purchase invoice includes posting which in turn requires a standardised chart of accounts. KHT auditor Pauli Vahtera forecast that in 2004 more than half of the invoices made in Finland would be paperless. (Kauppalehti, 3 May 2000, p. 51). This has not yet been realised in practice.

Automation changes the professional know-how requirements of KLT and ARF accountants quickly and in a profound way. The importance of information technology qualifications has not yet been fully understood or given sufficient seriousness at the moment. Operations in accounting agencies will become automated mainly in the area of day-to-day bookkeeping. Closing of books cannot be fully automated. The role of human work will stand out in such services in ways that the accounting agencies are not accustomed to at the moment. People are needed in advice services. This should be planned so it can be founded on a wide network of specialists in the virtual office of the future. This means that there will be chains of accounting offices in each branch. The first significant chain was born in December 2000 when Tilitoimistoketju Pretax and Konekirjanpito-yhtiöt joined forces to become the largest enterprise in the field in Finland. The chain operates in 16 locations and employs about 300 people. The concern has 5000 customers. The accounting agencies of the concern continue to operate under their own names (Schrey, 2001), and the numbers are still increasing.

A pre-condition for the formation of chains must be motivation on the basis of which individual small accounting agencies can benefit from the chain and operation within a network. The advantages of chains include the spreading of expertise and specialisation. Individual accounting agencies may make their own special know-how available to not only their customer enterprises but to the other accounting agencies operating in the network. The personnel have specialisation and career development opportunities because there is an internal labour market within the network. Shared purchases can induce cuts in costs: shared equipment and device investments, premises, purchases of educational services, and marketing campaigns. Customer companies can be served efficiently with jointly produced information material and other training sessions for customers. A system of substitute employees is possible among accounting agencies in a network. Updating the skills and

knowledge of chartered accountants, central to which is the following of legislation, becomes more efficient and adds to the know-how of accounting agencies in the chain. Many advantages of chains reduce the costs of accounting agencies, although at the same time the quality of operations rises. Customer enterprises benefit from the chains when buying accounting agency services because they can choose from competitive and versatile offers. The chain needs a centre. It is an organisation that maintains the know-how of the personnel of the accounting agencies in the network, and co-ordinates common operations. The problems with chains include realising advantages in costs if the chain is formed between accounting agencies that are not of similar size. However, the chains of accounting agencies of various sizes can form further chains. At the moment 75 % of accounting agencies are customers of Tietoenator Oy, which means that the chain has been formed through the deliverer of the information system (Schrey, 2001). In the future, efficient chains and central organisations for them will be needed instead of loose chains. Since global chains have come to the auditing field, they will similarly appear in the accounting agency business. The main advantage of a chain for the individual accounting agency is the increase of know-how and thus competitive operations. The core competence of the accounting agency as described by Prahalad and Hamel, as a tree, grows from this (Prahalad & Hamel, 1990, pp. 79 – 91, Hamel & Prahalad, 1994). Chains of accounting agencies mean guaranteed quality, versatile and competitively priced services for the customer enterprises.

In the future the customer enterprise will be expected to buy such services from the accounting agency that improve the enterprise's competitiveness and so add value to it. These services are especially those connected with planning financial administration and its management. Because of the three-layered market structure, the various levels of markets are not separate but interact in a network with each other. For the profession, the core of the market is the profession's chain of value that regulates and directs the operational logic of the markets. The chain of value consists of all those accounting agency operations that are needed to meet the expectations of customer enterprises. Every operation in the chain of value must add the value of the product to the customer enterprise of the accounting agency.

On the basis of tentative conceptual reflection and tentative empirical analysis, a summary of the qualifications of the accounting agency entrepreneur was formed, as described in the following figure, Figure 3.

Conclusions

In the twenty-first century the accounting agency business will move from basic technical bookkeeping to customer-oriented advising, consulting and service (Schrey, 2001). At the moment bookkeeping can often be seen as a passive or one-way activity, with movement from the customer to the bookkeeper. In the future, customer companies will require an active, professionally sound customer relationship, instead of technical and passive basic bookkeeping. Accounting agency entrepreneurs and their staff do not have the sufficient know-how in all aspects, as required by technological changes. Therefore, it is necessary that accounting agencies should start to change their practices and develop their know-how. New attitudes and reorganisation are more or less inevitable. Strategic guidelines, skills development, learning organisations, the development of new practices and a willingness to change will create opportunities. Increasingly, practices of the future will be the provision of advisory services such as: tax advising, planning the balancing of accounts, analysing book-closure, giving information on changes in laws and regulations and their effects, calculating profitability, and calculations connected with investment planning. (Norges Autoriserte Regnkapsføreres Førening 2001; Kirjanpitotoimistojen Liitto ry, 2001; Schrey, 2001)

This study has also revealed the difference between accounting agency entrepreneurs and intrapreneurs. It is the conative dimension of a person's personality that defines this difference. In the area of cognitive abilities (knowledge and skill) the two groups of professionals are very similar. But in the area of whether the person was working as an employee or as a self-employed professional, the conative factors are of vital importance.

The new social innovation is an improved programme for training accounting agency entrepreneurs. If this suggested programme is taken into use it will considerably improve the level of professionalism. Hopefully, this positive change will be witnessed not only by professionals but also by their clients in the not - too - distant future.

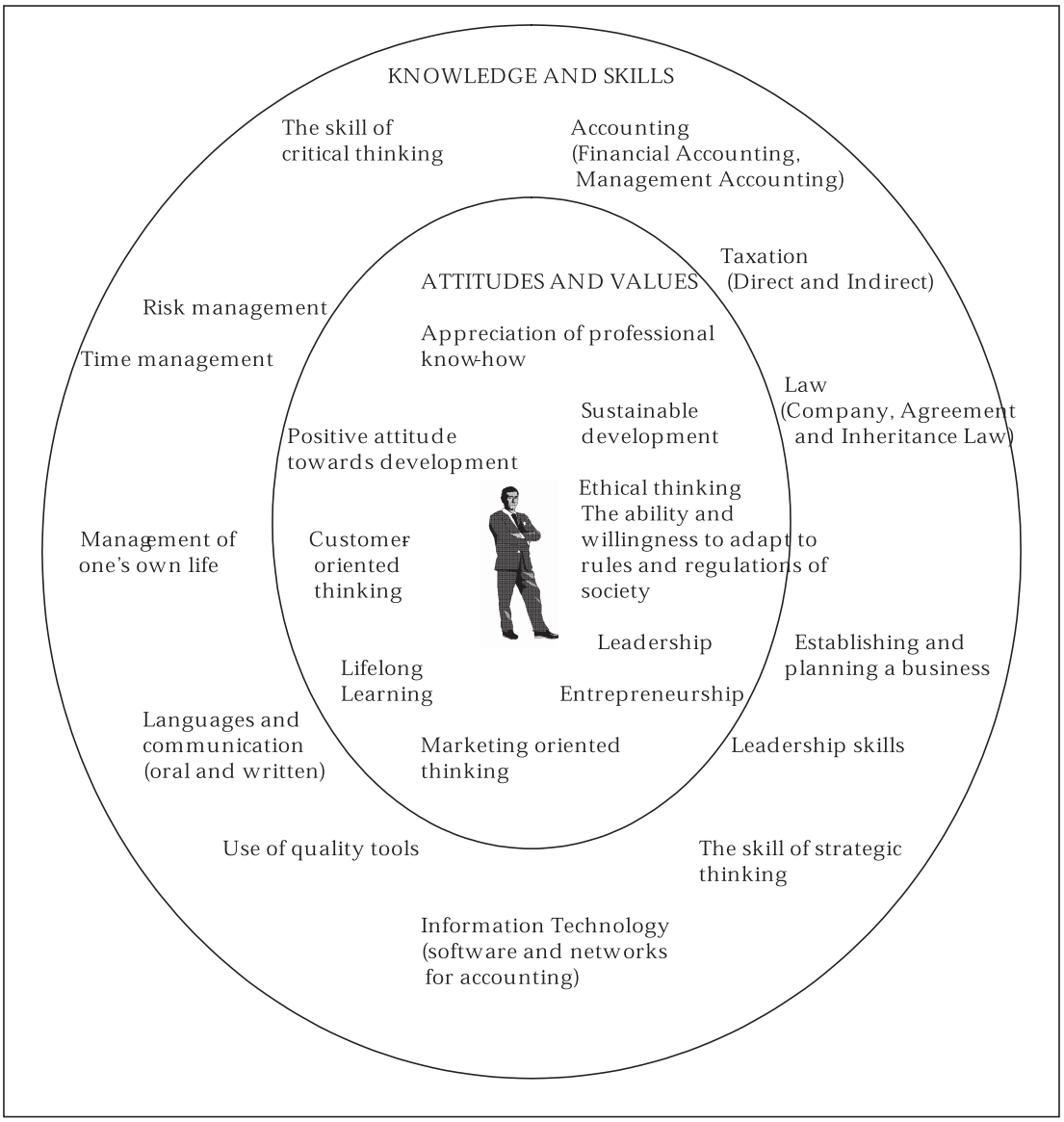

Figure 3. A frame of reference of the accounting agency entrepreneur's knowledge, skills attitudes and values (Tenhunen, 1998, p. 43)

A professionalisation approach has been applied to accounting agency entrepreneurship for the first time. Professionalisation was used as the conceptual approach in order to discover methods for these knowledge-intensive entrepreneurs to improve within their field. For the first time in Finland, this study highlights elements of the profession such as value chain considerations in professional services, market protection showing the maturity of the profession and the internal professional monopoly in the area of accounting agency entrepreneurs. The study results provide new understanding of the development needs of the Finnish, and also the Norwegian accounting agency fields, from the points of view of business and educational sciences. The beneficiaries of the results are accounting agency entrepreneurs and the national accounting organisations in both countries, as well as their several educational institutes.

Key words: Accounting agency, entre- and intrapreneurship, Finland, Norway, professionalisation, professional growth

References

Cyert, R. M. & March, J. G. 1963. A behavioral theory of the firm. Englewood Cliffs, New Jersey. Prentice-Hall.

Freidson, E. 1986. Professional powers. The study of institutionalization of formal knowledge. Chicago. The University of Chicago Press.

Gilbert, X. & Strebel, P. 1991. Developing competitive advantage. In Minzberg, H. & Quinn, J. B. (Eds.) The strategy process. Concepts, contexts, cases. Englewood Cliffs. Prentice-Hall. pp. 70-79.

Hamel, G. & Prahalad, C. K. 1994. Competing for the future. Boston. Harvard Business School Press.

Jobs and Society ry/Suomen uusyrityskeskukset. Seurantatilasto vuonna 2000.

Kauppalehti 31.1.2001. p. 13.

Keskuskauppakamari, Tilintarkastuslautakunta 1999. Tilintarkastuslautakunnan kannanotto tilintarkastustoiminnan ja tilitoimistotoiminnan yhteensopivuuteen KHT- ja HTM-tilintarkastajien riippumattomuuden kannalta 27.4.1999.

Kirjanpitoasetus 1339/1997.

Kirjanpitolaki 1336/1997.

Kirjanpitotoimistojen Liitto ry. 2004 <http://www.tilitoimistot.fi/>

Koiranen, M. 2001. Lectures 19.6.2001. Jyväskylä.

Konttinen, E. 1991a. Perinteisesti moderniin. Professioiden yhteiskunnallinen synty Suomessa. Tampere. Vastapaino.

Konttinen, E. 1991b. Professionalization as status adaption: the nobility bureaucracy, and the modernization of the legal profession in Finland. Law & Social Inquiry. 16(3).

Kredittilsynet 2001 http://www.kreditsynet.no/ 11.6.2004

Kyrö, P. 1995. The management consulting industry described by using the concept of ´profession´. University of Helsinki. Department of Education. Research Bulletin 87.

Kyrö, P. 1996. Suomalainen liikkeenjohdon konsultointi. Toimialaraportti vuodelta 1994. Helsinki. PKT-säätiön julkaisu 2/1996.

Laitinen, M. 2001. Ajankohtaiset verouutiset yrityksille. Kirjanpitotoimistojen Liitto ry:n tili- ja veropäivät 22.–23.1.2001. Helsinki.

Larson, M. S. 1979. The rise of professionalism. A sociological analysis. Berkeley. University of California.

Larson, M. S. 1990. ”In the matter of experts and professionals, or how impossible it is to leave nothing unsaid”. In Torstendahl, R. & Burrage, M. (Eds.) The formation of professions. Knowledge, state and strategy. The Swedish Collegium for Advanced Study in the Social Sciences. London. Sage. pp. 24-50.

Lov om autorisasjon av regnkapsførere 109/1993. Norges Autoriserte Regnskapsføreres Førening, NARF. 2004. http://www.narf.no/ 11.6.2004.

Parsons, T. 1954. Essays in sociological theory. Revised edition. Glencoe, Illinois. Free Press.

Parsons, T. 1965. Unity and diversity in the modern intellectual disciplines. The role of the social science. Daedalus. No 94.

Parsons, T. & Platt, G. M. 1974. The American university. Second Printing. Cambridge. Harvard University Press.

Partanen, U. (interview) 16.5.1999. Kirjanpitotoimistojen Liitto ry. Helsinki.

Porter, M. E. 1980. Competitive strategy. Techniques for analyzing industries and competitors. New York. Free Press.

Prahalad, C. & Hamel, G. 1990. The core competence of the corporation. Harvard Business Review, 68. pp. 79–91.

Ruohotie, P. 1994. Motivation and self-regulated learning. In Ruohotie, P. & Grimmett, P. (Ed.). New Themes for education in a Changing World. Tampere. Career Development Finland. pp. 15-60.

Ruohotie, P. 1997. Oppimalla osaamiseen ja menestykseen. Helsinki. Edita.

Ruohotie P. 1998. Motivaatio, tahto ja oppiminen. Helsinki. Edita.

Ruohotie, P. 1999. Growth prerequisities in organizations. In Ruohotie, P., Tirri, H., Nokelainen, P. & Silander, T. (Eds.). Modern Modeling of Professional Growth. Hämeenlinna. Research Centre for Vocational Education. Tampere. University of Tampere. pp. 5-36.

Ruohotie, P. 2000. Oppiminen ja ammatillinen kasvu. Porvoo. Werner Söderström Osakeyhtiö.

Ruohotie, P. 2001. Lectures 7.6.2001. Hämeenlinna.

Ruohotie, P. & Koiranen, M. 1999. Building conative constructs into entrepreneurship education. In Ruohotie, P., Honka, J. & Suvanto, A. (Eds.). The Developmental Challenges in Cooperation of Education and Training and Working Life. Helsinki. Ministry of Education. pp. 36-48.

Ruohotie, P. and Koiranen, M. 2000. Building Conative Constructs Into Entrepreneurship Education. In Beairsto, B and Ruohotie, P. (Eds.) Empowering Teachers as Lifelong Learners. Reconceptualizing, Restructuring and Reculturing Teacher Education for Information Age. Saarijärvi. Saarijärven Offset Oy. pp. 29-45.

Ruohotie, P. and Koiranen, M. 2000. In the pursuit of conative constructions into entrepreneurship education. Journal of Entrepreneurship Education, Volume 3. 2000 pp. 9−22.

Schrey, A. (interview) 19.2.2001. Pretax-Yhtiöt. Helsinki.

Schneider, S. C. And Barsoux, J-L. 1997. Managing across cultures. (HEC University of Geneva). London. (INSEAD.) Prentice Hall.

Snow, R. E., Corno, L. Jackson, D. 1996. Individual differences in affective and conative functions. In D. C. Berliner & R. C. Calfee (Eds.), Handbook of Educational Psychology. New York. Simon & Schuster Macmillan.

Svenska Revisorsamfundet SRS 2000. Vägledning för revisorer. Jäv och oberoendefrågor. Redovisningstjänster. Stockholm. SRS Service.

Tenhunen, M-L. 1998. Auktorisoidun tilitoimiston yrittäjyys ja koulutustarpeet. Suomalainen näkökulma. Chydenius-instituutin tutkimuksia 6, 1998. Kokkola.

Thompson, G., Frances, J., Levacic, R. & Mitchell J. (Eds.) 1991. Markets, hierarchies and networks. The coordination of social life. London. Sage.

Tili-instituuttisäätiö 2000. Pöytäkirja säännöistä 13.6.2000.

Tilintarkastuslaki 936/1994.

U. S. Securities and Exchange Commission 2001. Current SEC Rulemaking.

Vahtera, P. 2000. Vuonna 2004 yli puolet Suomessa tehtävistä laskuista paperittomia. Kauppalehti 3.5.2000 p. 51.

Volanen, M. V. & Alava, I. 1982. Ammatillinen koulutus ja ammatillinen jousto. Esitutkimus ja tutkimussuunnitelma. Työvoimaministeriö, Suunnitteluosasto. Työvoimapoliittisia selvityksiä nro 43. Helsinki.

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