



**“ENTREPRENEURSHIP :  
LEARNING AND NETWORKING”**

*4<sup>th</sup> Inter-RENT Online Publication*

**Editor**  
**Olivier TORRES**

European Council for Small Business and Entrepreneurship  
(ECSB)

© European Council for Small Business and Entrepreneurship (ECSB)  
and Authors

Published by

European Council for Small Business and Entrepreneurship

Turku, Finland, march 2008

4<sup>th</sup> Inter-Rent Online Publication

## TABLE OF CONTENTS

Entrepreneurship: learning and networking

*Olivier TORRES*

The influence of social and business ties on the internationalization choices of entrepreneurs

*Colm O’GORMAN and Natasha EVERS*

From Methods to Outcomes – Analysing Entrepreneurship Training Programmes in Five European Countries

*Elisa AKOLA and Jarna HEINONEN*

University – Industry Relationships - What Academics Actually Do and Think about it

*Clas WAHLBIN and Caroline WIGREN*

The Role of Ties for Manager’s Ethics: Microfirm Management in the French Context

*Jean-Marie COURRENT and Katherine GUNDOLF*

# **Entrepreneurship: learning and networking (Editorial)**

**Olivier TORRES**

## **The Inter-RENT workshop 2007**

The idea for the Inter-RENT workshop came originally from the Board of the ECSB and was developed by the ECSB secretariat together with a group of ECSB members (such as the editors of the first Inter-RENT publication, Tom COONEY and Pasi MALINEN).

Inter-RENT has been established to create further interaction and co-operation between ECSB members. In the initial phase, its objective is to activate and test the existing discussion area at [www.ecsb.org](http://www.ecsb.org) (Members' Area – Members' Forum). This tool enables ECSB members to work with each other in a forum type environment without the need for face-to-face meetings. Based on the experiences from the 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> Inter-RENT workshop (2004, 2005 and 2006 see <http://www.ecsb.org/eng/publications>) the technical interface has been improved.

The long-term goal of Inter-RENT is to create a forum that will enable ECSB members to deepen a selected conference theme from the previous RENT conference, leading to the publication of a number of high-quality articles. The organisers of Inter-RENT will be nominated based upon their expertise regarding the selected topic for the year and therefore the organiser(s) will change on a yearly basis.

## **A original process of reviewing**

For this year's Inter-RENT, ECSB has selected "Entrepreneurship: learning and networking" as the key topic based upon the papers presented at the RENT XIX Conference in Brussels, Belgium. We have selected nine papers to be developed further in our virtual research workshop.

Once the papers had been identified, the process began with an internal peer review of the papers. Each participant was asked to review one of the papers. Each

authors was then asked to revise their paper based upon the feedback received from their peers. Finally, a small committee which consisted of this year's Inter-RENT chair Olivier TORRES, and the former chairs 2005 and 2006, Friederike WELTER and David URBANO. 'Danke' Friederike and 'Gracias' David for your collaboration ! We don't forget Kaisu PAASIO who held lead responsibility for the website and for the final publication. 'Kiitos' Kaisu !

### **The Inter-RENT 2007 Best Papers**

The four papers presented in this online publication covering relevant topics in "Entrepreneurship: learning and networking", specifically themes concerning social capital, entrepreneurship training programmes and University – Industry relationships... These papers are very interesting not only for academics and practitioners but also for policy makers in the field of entrepreneurship and small business.

In the first article, C. O'GORMAN and N. EVERS explore the role of social and business ties in the internationalization of new ventures. Using the critical incident technique, they analyse the early and rapid internationalization of three new ventures from the aquaculture industry in Ireland. They find that the 'pre venture formation' social ties of the entrepreneur that were international in nature or orientation, and those ties that evolved during internationalization, are critical in explaining how entrepreneurs identify foreign opportunities and foreign exchange partners, and how they acquire the foreign market knowledge and the resources necessary to internationalise.

The second article proposed by E. AKOLA and J. HEINONEN is based on selected training programmes for (potential) entrepreneurs in five European countries this study aims at exploring how (potential) entrepreneurs are being taught and what are the respective learning outcomes. The focus is on delivery methods, the contents of the studied programmes as well as the objectives stated for the programmes and the learning outcomes achieved. Altogether 26 programmes were documented and analysed. In addition, three different training programmes were chosen for the in-depth case studies. Based on a study entrepreneurs learn through applications, doing,

experiences, examples and mistakes. The learning outcomes are created in a process where an entrepreneur experiments and then applies to in a real-life situation the knowledge and experiences gained. Entrepreneurial learning process integrates the learning outcomes related to the “science” and the “arts” of entrepreneurship. The learning of entrepreneurs identified in this study resembles the notion of entrepreneurial learning presented in the most recent research integrating the “science” and “art” of entrepreneurship. In entrepreneurial learning the content gains some meaning only when integrated with process which is taking place in a context familiar to an entrepreneur. Analytical tools learnt need to be applied in practice in order to secure the entrepreneurial learning process to take place. The research results are useful when planning and running training programmes for (potential) entrepreneurs. Finally, some directions for further research are discussed.

In the third paper, C. WAHLBIN and C. WIGREN study what Swedish academics actually do in research cooperation with industry and in commercialization of their knowledge, and their opinion about cooperation, with data from a survey of academics at five universities. The interest of this research is in differences between universities and between academics in different scientific areas. The authors find a strong pattern of participation in cooperation with industry for one university, but not for the four others, and for one scientific area, but not the others. Likewise, they find a strong pattern for one university when it comes to opinion, and for one scientific area (the universities and the scientific areas are, however, not the same). Their interpretation of the results is that more seldom does the university have a strong enough culture to be seen across the university, and more seldom is the common culture of a scientific area strong enough to be seen at all universities. In most cases, there is a local culture at the respondents' place of work at the university.

The last article of J.M. COURRENT and K. GUNDOLF analyse the link between the entrepreneurial network and ethical behaviour in the context of microfirms. A survey was conducted with head managers of 125 French microfirms. Two types of variables were analysed: (1) variables relative to the nature and the intensity of the relations between the company manager and his social environment (community membership, etc.), and (2) variables relative to the shape of manager's ethics. The results of univariate and bivariate analyses show significant statistical

relations between embeddedness variables and ethical variables. This result underlines the idea that "communities of ethics" may appear.

**Corresponding editor:**

Olivier TORRES, EM. LYON, 23 Avenue Guy de Collongue, 69 134, Ecully, FRANCE, E-mail: [oliviortorres@free.fr](mailto:oliviortorres@free.fr)

# **The influence of social and business ties on the internationalization choices of entrepreneurs**

Colm O’Gorman

DCU Business School, Dublin City University, Dublin 9, IRELAND

e-mail: [Colm.OGorman@DCU.ie](mailto:Colm.OGorman@DCU.ie)

Natasha Evers

School of Business & Humanities

Institute of Technology Blanchardstown, Dublin 15, IRELAND

e-mail: [Natasha.Evers@itb.ie](mailto:Natasha.Evers@itb.ie)

Keywords: social ties; networks; international new ventures; Ireland; trade associations



## 1. Introduction

Both the entrepreneurship and the international business fields of research have received increased attention from researchers in recent decades (Oviatt & McDougall, 1997, 2000; Zahra & Garvis, 2002), with some aspects of the two fields converging as researchers study the internationalisation of new ventures. Firm internationalization can be defined as 'the process of adapting firms' operations (strategy, structure, resources) to international environments' (Calof and Beamish, 1995:116). Similarly internationalization can be viewed as an entrepreneurial activity of the firm (Lumpkin and Dess, 1996; Zahra, Ireland and Hitt, 2000; Zahra and George, 2002) which can involve entrepreneurs taking innovative action that transcends domestic business and takes advantage of global opportunities (Cremer, De Bruin, and Dupuis 2001). Zahra and George (2002:11) broadly define international entrepreneurship as 'the process of creatively discovering and exploiting opportunities that lie outside a firm's domestic markets in the pursuit of competitive advantage'.

International New Ventures (INVs) constitute a form of international entrepreneurship, as they are entrepreneurial from the outset with a strong international orientation to derive all or a substantial proportion of its revenue from the sale of its products in international markets from the inception of the firm (McDougall and Oviatt, 1994:49). Entrepreneurs operate in both social and organisational networks, rather than working on an individual basis, in order to become successful (Burt, 1992; Hansen, 1995). A strong international business network, comprising the founder's personal business ties, has been put forward as one of the attributes that the INV must possess (Oviatt & McDougall, 1995). Founders of the INVs have been found to establish international relationships while working abroad previously (Bloodgood et al., 1996; Reuber & Fischer, 1997; Preece et al., 1999; Crick & Jones, 2000). The use of networks can lead to INVs using more alternative transaction governance structures than larger companies do (Oviatt & McDougall, 1994). Moreover, they must select international markets and foreign exchange patterns without the benefit of established organisational routines and contacts. How INVs select and enter foreign markets remains relatively unexplored.

At the same time the research on the internationalisation of small and medium sized firms (SMEs) has been limited to business networks; it has ignored the social dimension embedded in the network and focuses on business networks of a more formal business nature. Coviello and Munro (1997) have referred to both formal and

informal networks, but they have not detailed the precise nature of the informality. Studies on the role of networks in small firm internationalisation (Johanson and Mattsson, 1988; Bell, 1995; Coviello & Munro, 1997) have not included the role of social networks in any specific way. Oviatt and McDougall (1994) have suggested that entrepreneurs use existing personal networks, often developed from prior work experience, to acquire foreign market knowledge at start-up. Some recent work has identified social ties as facilitators in initialising the foreign-market entry of established SMEs (Axelsson and Angdahl 2000, Ellis 2000) and of high-technology INVs (Arenius 2002, Komulainen, Mainela and Tahtinen 2004). Social ties of the founder also warrant further exploration in the context of new venture internationalisation. In this paper we extend this work by examining how new ventures identify foreign market opportunities and foreign exchange partners during the initial and subsequent stages of their internationalization process.

## **2. Typology of social and business networks**

Two types of relationships may be important in understanding the internationalization of firms (Figure 1). Business ties are relationships based on the manager's and the firm's formal contracts and economic exchanges. We define business ties as relationships of a formal commercial nature, where an economic exchange takes place, such as those with industry associations, and vertical relationships with business organisations such as business partners, suppliers, agents and clients.

Social ties, often referred to as informal business relationships (Chetty and Blankenburg-Holm 2000), are relationships that consist mainly of social exchanges. Social networks may encompass business professionals and government officials, used for the purpose of business exchanges (Ellis 2000, Hoang and Antoncic 2003). Business and information exchanges that represent business networks can take place in a social context. Social networks can also be considered as a distinct set of relationships where no economic or business exchanges occur. For example horizontal networks, such as other firms in the industry, indirect and direct competitors, family, friends, relatives, government agencies, and social and community organisations could be considered as social networks. In this study we include two types of informal relationships: first, social ties such as business acquaintances of a non-exchange relationship located in the broader business network (Johanson and Mattsson 1988,

Chetty and Blankenburg-Holm 2000); and second, social ties that encompass family, friends, relatives, social and community organisations lying outside the business network.

See Figure 1

### **3. The Literature**

#### *3.1 Networks in small firm internationalisation*

Networks of social and business relationships enable small firms to overcome resource constraints, psychic distance and lack of foreign market knowledge when selecting and entering new foreign markets. Typically a firm's existing relationships influence internationalization, as knowledge of foreign market opportunities is developed through these relationships (Johanson and Mattsson 1988, Coviello and Munro 1997, Axelsson and Angdahl 2000). Social ties are important in the internationalization process, as social networks influence internationalization choices (Bjorkman and Kock 1995, Boojihawon 2004, Coviello 2006). For example, social ties influence how mature medium-sized and large firms acquire knowledge of foreign market opportunities and exchange partners (Ellis 2000, Bjorkman and Kock 1995). Ellis highlights the role of mutually connected third-party social ties who make introductions or act as 'go-betweens' between potential exchange partners (2000). Third-party groups can be entities such as distributors, associations, customers, suppliers and experts. For example, in established Finnish SMEs the manager's domestic social network was important for acquiring exporting information (Holmund and Kock 1998). More recent research on Tanzanian small firms found that the owner/manager used different types of personal networks extensively to facilitate initial market entry into foreign markets, and to obtain information about foreign markets and trade fairs (Rutashobya and Jaensson 2004). The types of networks were social, independent distributor, trade associations and local producers. In Coviello and Munro's (1997) case study research, high tech firms were able to internationalise quickly by linking themselves to extensive, established networks.

Rather than focussing on the contrasting role and nature of networks in the internationalisation process (social or business? international or domestic? strong or weak ties?) Johanson and Mattsson's network model argues that business takes place in a network setting and that the degree of internationalization of the market is in fact the degree of internationalization of the production net (1988). The production net is

composed of firms whose production and distribution activities are linked to a specific product area. Both the market assets (that is the network position of the firm) and the degree of internationalization of the production net influence the firm's internationalization process. According to their model of internationalization a firm's success in entering new international markets is dependent on its domestic and international relationships within current markets. However, in the case of INVs, such relationships do not, by definition, exist.

### 3.2 *Networks in the internationalization of new firms.*

Johannisson has described the entrepreneurs' personal social network as the 'most significant resource of the firm' (Johannisson 1990:10). Social networks are important to the founding of new firms as they provide access to information about opportunities and access to resources. New ventures that internationalize rapidly must not only overcome the 'liabilities of newness' but they must also overcome the 'liabilities of foreignness'. There is ambiguity in existing research as to how entrepreneurs identify foreign market opportunities and foreign exchange partners during the initial and subsequent stages of new venture internationalisation. Some prior research has suggested that entrepreneurs use major business network partners as the initial trigger for foreign-market selection (Coviello and Munro 1995); while network theory suggests that firms internationalise via domestic business networks (Johanson and Mattsson 1988).

In contrast others have argued that social ties are important to internationalisation in new ventures. Social networks may be particularly important to new ventures seeking to internationalise because emerging organisations typically lack established business ties (Aldrich and Zimmer 1986, Greve and Salaff 2003) and because the entrepreneur is not part of a structured international business network (Johanson and Mattsson 1988). Social networks are important because individuals experience what Simon (1976) labelled bounded rationality. The entrepreneur's social network may expand the boundaries of rationality by providing access to knowledge and information, thereby exposing the entrepreneur to new venture ideas and opportunities (Hoang and Antoncic 2003). Proactive entrepreneurs are said to 'scan for opportunities, show initiative, take actions, and persevere until they reach closure by bringing about change' (Bateman & Crant, 1993:36).

Initial awareness of foreign market opportunities may be the result of social ties (Lamont et al. 2000, Oviatt and McDougall 1994). As information is not spread evenly across actors, access to it may depend on the entrepreneurs' former social contacts (Granovetter 1985). Faced with the uncertainty involved in entering new markets social relationships help to minimise the risks to the entrepreneur. In INVs entrepreneurs may compensate for the lack of established business relationships by relying on the entrepreneur's prior international work experiences in the early stages of internationalization (Harveston et al. 2000, Moen 2002, McDougall et al. 1994, Pulkkinen and Larimo 2002, McDougall et al. 2003).

The network ties that facilitate internationalization may differ in terms of their nature. Antecedent ties of the founder may be a cluster of close, strong, personal informal ties and may be of a business or purely social nature (Oviatt and McDougall 1994, McDougall et al. 1994). Uzzi argues that entrepreneurs search deeply for solutions in existing relationships rather than widely for solutions across relationships (1997). In contrast, others suggest that weak ties are important for INVs initial internationalization (Sharma and Blomstermo 2003).

Networks ties may also differ in terms of the extent that they are domestic or international. Firms that operate in an international network may find it easier to go abroad than firms whose exchange partners are purely domestic firms (Majkgård and Sharma 1998, Bell 1995). For example, internationalising network partners may actually induce foreign market entry for some firms (Sharma and Johanson 1987); and involvement in international business networks can drive the rapid and successful growth of start-up firms on international markets, where the network connections guide their foreign market selection and provide a mechanism for foreign market entry (Coviello and Munro 1995). Hansen and Witkowski (1995) found that their US-based entrepreneurs who had network ties outside the US since the time of start-up were more active in internationalising their business abroad. However, Holmund and Kock argue that entrepreneurs' social ties are domestically focussed (1998).

There is evidence that the nature of ties important to a new venture may change as a new business emerges (Coviello 2006). Once internationalization has been initiated the new venture's acquisition of knowledge about foreign market opportunities and the choice of foreign markets may be influenced by emerging relationships. As the new venture acquires international knowledge from its relationships (Sharma and Blomstermo 2003), the continued internationalization of

the new venture is facilitated by knowledge supplied by network ties. Each foreign client becomes a source of new business ties and new knowledge (Sharma and Blomstermo 2003). Welch and Welch suggest that 'the development and utilisation of foreign networks is ...closely related to the learning process that underlies internationalization' (1996:12). Social relationships may be important to this process as they facilitate screening and evaluating potential exchange partners (Ellis and Pecotich 2001).

### *3.3 Research questions.*

In seeking to internationalise an entrepreneur requires information about business opportunities and about potential foreign business partners. International markets are typically selected as a result of the identification of a specific exchange partner or opportunity abroad (Ellis and Pecotich 2001). In the context of new ventures network ties influence market selection, foreign market entry, and choice of exchange partner (Majkgård and Sharma 1998, Sharma and Johanson 1987, Coviello and Munro 1995, Bell 1995). However, extant research hasn't explained how entrepreneurs in INVs identify foreign market opportunities and foreign exchange partners during the initial and subsequent stages of new venture internationalisation?

We expect that the pre-internationalization network ties of the founder that facilitate the internationalization process of the INV are internationally connected. We expect that in an internationalised production net, domestic networks may be neither applicable nor useful to the internationalization process of new ventures. If new ventures are international at inception the pre-internationalization network ties of the INVs will be more international than domestic in orientation. In the extended production net, we assume that the relationships of the founder are embedded in both vertical (where an economic exchange exists in the value chain with suppliers, export agents, distributors and customers) and horizontal (such as other firms in the industry, trade associations, trade unions, indirect and direct competitors, advisors, government agencies) network settings and will be of both a formal and an informal business nature and include groups of distributors, agents, advisors, competitors and non-competing firms, business partners, clients and associations. We frame our research questions as follows:

*Research question 1: What role do social and business ties play in (i) the identification of specific international market opportunities and (ii) in the choice of foreign exchange partners during the initial stages of new venture internationalisation?*

*Research question 2: What role do social and business ties play in (i) the subsequent identification of specific international market opportunities and (ii) the choice of foreign exchange partners in new venture internationalization?*

## **4. Research Method**

### *4.1. A qualitative research*

A qualitative case study methodology was selected. Qualitative data has a strong advantage over quantitative data in drawing insights that could not be gained with 'hard' data only (e.g., Mintzberg 1979; Smirchich 1983; Orum, Feagin and Sjoberg, 1991). Qualitative data is rich and holistic, with strong potential for revealing complexity. According to Spender (1996), the case study is a necessary methodology for understanding why things are as they are. Case studies provide explanatory evidence as to the reasons and motivations behind small firm internationalization (Bell, 1995; Coviello and Munro, 1995; 1997; Chetty and Blanckenburg-Holm, 2000; Larimo, 2001; Holmund and Kock, 1998). Jones (2001) has urged focusing on more narrowly defined groups of firms, generating rich data. Chetty (1996) has promoted the case study method for allowing researchers to study exporting as a dynamic process. Its strength lies in facilitating the study of the internationalization process from several perspectives and therefore facilitating a more thorough analysis of each firm than is possible in survey research.

Critical incident technique (CIT) will be employed as the main methodology for analysis and presentation of case data. CIT is a set of procedures for collecting direct observations of human behaviour in such a way as to facilitate their potential usefulness in solving practical problems (Ronan and Latham, 1974; Andersson and Nilsson, 1964). The method is not without its difficulties - as frequently it is hard to identify what is an 'event' and what is 'critical'. The use of the CIT method is still uncommon in international business research. We are familiar with only two studies

that have utilised the CIT methodology in the internationalization of INVs: Scharf et al.'s (2004) study of the export problems experienced by small international firms and Neupert et al.'s (2003) study of the exporting challenges encountered by SMEs in USA and Vietnam.

#### *4.2 Case selection.*

We use a bounded case design to study how entrepreneurs identify and choose international markets, foreign exchange partners and how they acquire the foreign market knowledge required to enter foreign markets. We focus on firms that can be classified as INVs using the criteria used in previous studies of INVs (Knight and Cavusgil 1996, Oviatt and McDougall 1994, Pulkkinen and Larimo 2002). For our study, to be classified as an INV a firm must have at least twenty five percent of its total sales in foreign countries in the first year of trading.

We choose the aquaculture industry in Ireland for our study as we sought a context that would be populated with some INVs, and because we wanted to study three to six case firms in a 'low-technology' sector, a context underrepresented in INV research. According to the state body responsible for developing aquaculture in Ireland, Bord Iascaigh Mhara (BIM), in 2003 there were 250 Irish indigenous seafood operators, including a small number of firms offering ancillary support services. The majority of these firms do not engage in direct exporting. An analysis of this database suggested that in 2003 eighty of these firms (thirty two percent of the total) were engaged in some exporting activity. We reviewed these eighty exporting firms and identified a subset of firms that focussed on the production of shellfish. We decided to limit our focus to these shellfish firms as BIM suggested that this sector would be more conducive to the emergence of early internationals given the small home market for such products (at the time less than three percent of total shellfish production in Ireland was sold in the home market (BIM 2003)). Excluding firms that did not meet all our criteria resulted in a list of twenty firms.

These twenty firms were contacted via telephone and email in March and April of 2004 to identify whether they could be classified as an INV. Based on this contact ten firms were identified who were small to medium (from five to 80 employees), highly internationalised, that had internationalised at start up, and were in the shellfish segment of the industry. The managing directors of these ten firms were invited to participate in our study. Five refused and five agreed. Of the five INVs that



agreed to participate we excluded one because it emerged that it operated in a diverse range of sectors, and a second when it became apparent that it was in direct competition with another firm in the study, requiring us to exclude one of the two firms. This emerged after the case process began and was done at the request of the firms involved. Thus we conducted case research on three Irish owned firms that produce shellfish for sale in international markets, and that internationalised within one year of founding.

#### *4.3 Data collection and analysis.*

In preparing for our case analysis we reviewed industry reports and secondary documentation, and the web sites of Irish seafood firms and support/research associations. We then conducted a number of interviews to get background knowledge on the sector. This first round of interviews were with three industry experts: the managing director of a mature seafood firm who had internationalised and had first-hand knowledge of the industry; an international marketing executive with BIM; and a business development officer in Enterprise Ireland, the state business development organisation responsible for supporting the internationalisation and growth of Irish owned firms in manufacturing and internationally traded services sectors.

We conducted our fieldwork between May 2004 and December 2004. For each case we conducted five to seven on-site personal interviews with the managing directors/owners. One firm had appointed an international marketing manager so we also interviewed her. All personal interviews lasted between one and a half and two and a half hours. The personal interviews were supplemented by a further four telephone interviews with the managing directors of each firm. Every interview was recorded and transcribed.

In collecting the data we framed each interview around a series of questions relating to the following topics: the background of the founder; the origins of the firm; the internationalization of the firm in terms of how it internationalised and why it had internationalised; the initial markets entered and how these were chosen; the subsequent internationalization of the firm; and the competitive strategies and competitive advantage of the firm. When respondents identified specific events relating to our research questions we asked them to tell the story of the 'critical incident' (Flanagan, 1954) and help us to understand its nature and consequences.

Following each interview we categorised the data into ‘critical incidents’ as a means of recording and analysing our data. We identified 48 critical incidents relating to internationalization across the three cases. In the context of the two research questions, these incidents selected were deemed critical when the firms used their network ties to identify exchange partners for gaining rapid foreign market entry. For each incident we recorded a short summary of the material from the interviews, typically about 40 words. Where possible we sought to triangulate data collection around ‘critical incidents’, by engaging in an iterative process of questioning, wherein for some of the incidents, we moved between the case firm founder, the marketing manager, if appropriate, and the relevant network tie. For the incidents where BIM executives were the network ties, we interviewed the executives involved in the incident for two of the case firms. We were able to do this for about sixty percent of the incidents. This helped us minimize retrospective bias of the main interviewee.

## **5. Research Context**

### *5.1 Industry context: The aquaculture industry in Ireland.*

We decided to limit our scope to aquacultural firms as the Irish seafood sector state agency (Bord Iascagh Mhara, BIM) indicated that this sector was more conducive to the emergence of early internationals given the poor home market for such products; less than three percent of total shellfish production in Ireland was sold in the home market (BIM, 2004). Aquaculture refers to the rearing and harvesting of marine foods in artificial circumstances, where stocks are controlled and monitored during their entire life cycle. In Ireland the sector currently cultivates two major species: finfish and shellfish. Most aquaculture produce is exported, with exports accounting for at least 76% of total production, though in the case of shellfish, exports account for 97% of production. The countries of the EU are the major consumers of aquaculture produce from Ireland.

The vast majority of the firms in the Irish aquaculture industry are located along the western coast of Ireland, a less populated and less developed region in comparison to the Eastern coast where Dublin city is located. The location decision of aquaculture producers reflects the necessity to locate close to unpolluted seawater, where the shellfish can be ‘produced’ or ‘farmed’. The seafood industry is dependant

on a raw material from the sea and requires technology to make the product market ready and market available. Hence technology plays an important role in the areas of production processes and logistics in the sector, though the technology is readily available. The sector is considered a low to medium knowledge intensive sector.

In Ireland the development of the aquaculture sector was seen as a means of developing economically deprived regions. For example, aquaculture has been described as ‘a sustainable native industry based in peripheral coastal areas where other employment aspects are negligible’ (IFA 1998). Bord Iascaigh Mhara (2000) states that ‘the Irish industry has become an important indigenous economic sector in its own right, but its ability to generate wealth and employment in remote and coastal locations is of fundamental importance in sustaining rural communities’.

*In Ireland a state body called Bord Iascaigh Mhara (BIM) is responsible for the development of the Irish seafood industry. BIM is charged with promoting the sustainable development of the fishing industry by stimulating investment, technological innovation, enterprise and growth, such that the sector contributes to both the national and regional economy. BIM has been a local and international support mechanism for the international activities of Irish seafood firms. Although the industry association is mainly publicly financed, it embodies the traits of a business support organisation. The members pay an annual subscription in return for services provided by the association. BIM represents a formal business tie for the case firms and regards itself as a business consultancy service for the industry. The marketing director of BIM considers the organisation as a business knowledge and support partner to the industry. She says: ‘You could nearly say that BIM is a consultancy service to the fishing industry. We would be a specialist consultancy service or service provider, providing knowledge-based services to the industry, right from technology and fisheries development, what nets to use, where the fish stocks are, monitoring vessels, quality control, right through to exhibitions at trade shows, commercialisation, with offices in France, Spain and Germany. So we are taking it right from guys on the boats to promoting it. (The) second important role, financial support to carry out the work, providing finance underpins the advice we give’.*

## 5.2 Case summaries

We now describe the three case firms. A summary description of the firms is provided in Table 1.

See Table 1

***Pisces Ltd:*** Joe Black, a marine biologist by profession, established Pisces in 1998. Pisces Ltd produces and exports live shellfish, such as mussels, oysters and clams, and crustaceans, such as lobsters and crab to customers in international markets such as Europe, Asia and the Middle East. The firm is located in a remote area on the west coast of Ireland (approximately a four hour drive from Dublin city and a two hour from the regional airport). The premises are situated at the edge of a bay with seawater classified as Grade A waters under the European Union water classification system. Pisces operates its own oyster- and clam-breeding and growing facilities. Before starting up Pisces, the founder, Joe Black, recognised that the firm would have to aggressively seek out foreign customers if it was going to survive as a seafood producer, because the domestic demand was too small and seasonal. The founder summed up the domestic and international market conditions when starting out his firm Pisces. He says: ‘I had no choice but to become international (as) (...) the market is international ... if I was going to survive ... (the) market here is too small.’

Pisces experienced rapid international export sales growth since its first international sale to Sweden, which occurred within 2 months of establishment. The firm exports 99% of its annual turnover, which stood at approximately €1 million in 2004.

Pisces strategy is to produce a high quality live product. The firm operates in a high-value niche market in the global seafood industry. Live seafood produce is considered a luxury/delicacy product by consumers. The key buyers of this product are restaurants, hotel chains and distributors. Joe Black has emphasised product quality, professionalism, reliability, on-time delivery and consistency in customer service in his strategy. The EU certification of Grade A waters has been a major selling point of product quality all over the world.

***Aquarius Ltd:*** Peter Munro's founded Aquarius in 1985 with his brother and four other local men, who subsequently left within a year of start-up due to a lack of commitment and an unwillingness to provide financial support to the new company, leaving Peter as sole owner and managing director. Aquarius specialises in the production of fresh and frozen shellfish for the retail, catering and secondary processors markets in ten markets in Europe, the USA and Japan. The firm is located on the Southwest coast of Ireland, near waters where it produces its shellfish (approximately a two hour drive from the regional airport and a seven hour drive from Dublin city). By 2004 annual turnover had grown to €4 million, all of which is exported, and the company employed forty workers, most of who are involved in the production of the shellfish.

The firm started out as an exporter due to low demand at home and the large demand abroad for seafood. Peter Green, said: 'Sales of shellfish in Ireland are limited and then the idea of making a market for a mussel product just wasn't ... acceptable ... to most people so we were obliged to go abroad'.

Aquarius has been focussed on international markets since inception, with virtually all output since 1985 sold in export markets. The firm has plans to continue to develop and grow markets in Germany, the UK, Asia and Eastern Europe. Since 1985, Aquarius had been exporting to France, which is currently their strongest foreign market, accounting for 60% of total firm sales for 2004. Other key markets include Denmark, Belgium, the UK and Holland. From the mid-1990s, the firm expanded its client portfolio to Malta, Italy, Chile, Germany, Japan and the USA, and more recently Cyprus and Turkey. More recently, Peter Munro has made inroads into Russia and Eastern Europe. When asked about his approach to acquiring sales abroad, Peter Munro described his approach as 'looking at the market opportunities, building relationships using international ties, and participating in trade shows.'

Peter was a deep sea diver for sea urchins, which he casually sold to France in the mid seventies. In 1977, Peter set up his own fashion retail trade with outlets in Cork and Dublin.

***Libra Ltd:*** Founded in 1987 by Liam White and his brother-in-law, Pat Cosby, Libra Ltd is a privately owned company, employing eighty people, and is situated in a small fishing town on the south-west coastal tip of Ireland (approximately a two and a half hour drive from the regional airport and an eight hour drive to Dublin city).

Libra's core business activity is in the processing of seafood products and it is the largest crab processor in the region and one of the largest in the country. It sells to both business and consumer markets at home and abroad. Its business customers are mainly wholesalers and caterers' distributors and processors. In recent years the firm has launched its own branded product range sold to Irish supermarkets. The firm has grown rapidly since its inception in 1987, with a turnover of €80,000 in 1987 increasing to approximately €6 million in 2004, giving an average growth of almost twenty five percent per annum.

Liam and Pat were local self-employed deep-sea fishermen by trade. They began to move closer to off-shore fishing as the dangers associated with long periods at sea was seen as being too high a risk to them and their families. Neither of the men had formal college education or international work experience. The firm was internationally orientated pre-start up as it was established to supply foreign market orders from France. The firm did not focus on the domestic market as the founders believed that the Irish palate was not inclined towards fish eating, especially shellfish, in the 1980s and up to mid 90s. Having achieved home market leadership by 1999, several external factors, such as the decline in home sales, forced Libra to revisit internationalization from 2000 onwards. Since their return, Libra has secured regular foreign sales to France, the US and the UK. From mid-2004, they have been selling to Spain, Italy and Greece.

Since the decision to refocus on foreign markets, foreign sales have grown rapidly within space of four years (2000 - 2004). Foreign export sales grew by eight hundred and seventy percent between 2000 and 2004. France now accounts for fifty percent of export sales, the UK accounts for thirty percent, and other markets for the remaining twenty percent. In 2004 export sales were thirty percent of total sales, and were forecast to reach fifty percent of total sales by 2007 according to the founders. In 2004 Libra was awarded the Irish seafood exporter of the year award by the Irish Exporter's Association.

## **6. Findings**

For each case we describe incidents relating to how internationalization was initiated, in terms of how specific market opportunities were identified and how a relationship with a foreign exchange partner emerged. Tables describe the incidents

we identified for each case (see Tables 2, 3 and 4). The events then describe how each firm identified subsequent international market opportunities and how they developed subsequent foreign exchange partners. Each incident represents an event or series of small events. The outcome of each incident is a development in the internationalization process.

### *6.1 Initial foreign market entry.*

How did these firms identify specific international market opportunities and initial foreign exchange partners? The founders of all three case firms used their existing social ties to identify opportunities, and to identify foreign exchange partners. These social ties were internationally connected and acted as an intermediary between the case firm and the prospective exchange partner. As export start-ups, the case firms did not suffer from the lack of credibility potentially stemming from the liability of newness because of the benefits of using a social tie as a link to their first foreign exchange partner. None of the three firms had prior experience of exporting their products and neither were they culturally close to their initial foreign markets.

**Pisces:** *In the case of Pisces, their first sale occurred in the year of start-up. Immediately prior to start-up Joe Black was co-managing director of Argot, an R&D venture for aquaculture production co-financed by private investors and BIM. While working for Argot Joe Black met a German supplier of aquarium systems, who was at the time on a European Research visit to Ireland. As part of this visit the supplier visited Argot. Joe Black maintained contact with the German supplier on an informal basis, though he had no commercial dealings with him. During this contact the supplier learnt that Joe Black was starting his own firm. Subsequently while the German supplier was installing a 'tanking system' to one of his Swedish clients he referred the Swedish client to Joe Black's company.*

**Aquarius:** In the case of Aquarius, when production was up and running, Peter Munro sought assistance from BIM to identify overseas sales. He was provided with a list of French buyers by the BIM network office in Paris. Peter Munro used this to screen potential clients. He started to seek orders. However, despite his awareness of the opportunities for his product in France, he found it difficult to establish credibility with potential French customers. His problems were confounded by his inability to speak the French language.

Prior to establishing Aquarius Peter Munro operated a retail clothes business near his home that sold to the local market. Cathy Whelan was a client of Peter Munro's clothes business. Cathy's husband, Jack Whelan, was an Irish national who lived in France. When Cathy was buying clothes in Peter Munro's clothes boutique in Dublin, Peter told her he was having problems selling his product into the French market. Cathy Whelan asked if Peter would be interested in meeting her husband, Jack Whelan, who had previously worked for BIM but now worked as independent export agent in Paris in the seafood business. Following a social engagement, Jack Whelan agreed to take Peter's product to the French market and get his business partner, Tom Coleman, to be Peter's agent in return for an agent commission. At the time the agent was selling product into France, the UK and Belgium.

**Libra:** *In the case of Libra, the founders became aware of foreign market opportunities prior to starting their new firm. Under an EU 'twin-town' or 'sister-town' initiative established in 1984, the Irish fishing town that was home to the founders, Liam White and Kevin Cosby, developed strong community links with its twin-town, near Lorient in Brittany, France. At the time and prior to starting Libra, Liam White and Kevin Cosby were local in-shore fishermen. The twin-town initiative led to regular exchange town visits amongst the town's community representatives, local residents, businesses, and local and city council officials. A high level of trust and goodwill developed between the two towns, and the founders became well acquainted with some of their French business counterparts, out of these community links. The French business ties alerted them to the large opportunities and they expressed an interest in their local fishing products, in particular their crab. Both founders also built up a good relationship with the mayor of the French town. Some of the French business representatives were seafood processors supplying to the large French supermarket multiples. They noticed the abundance of high quality fresh crab caught by the founders in the local fishing waters. The French processors offered to buy the crabs on a regular basis from the founders, their first order being of a sufficiently high value to warrant the starting-up of Libra Ltd in 1987.*

For all three firms the identification of specific initial foreign opportunities and foreign exchange partners was through the entrepreneurs' social ties. In all three cases these social ties were international, in that they resided in a foreign country. These social ties existed prior to the firm start-up. The social ties provided information on foreign opportunities and facilitated the development of relationships



with foreign exchange partners. These cases suggest that social ties were important in the identification of foreign market opportunities and the identification of exchange partners in foreign markets in the initial stages of new venture internationalization. In two of the cases the social ties operated by providing a referral to a potential exchange partner.

## *6.2 Subsequent Foreign Market Entry.*

How did the case firms identify subsequent international market opportunities and foreign exchange partners? As illustrated in Tables 2, 3 and 4, the entrepreneurs in the three case firms used a combination of social and business ties to identify subsequent foreign opportunities and exchange partners, to acquire foreign market knowledge and to acquire resources for internationalization. Their internationalization is not, however, exclusive to such ties, as the case evidence reveals the underlying importance of impersonal modes of foreign market entry such as trade fair activity and unsolicited orders as key explanatory factors in the process. In relation to the business ties of the founders, the findings suggest that BIM and current clients of the three case firms were influential international business ties in introducing the case firms to new foreign exchange partners, acquiring knowledge and resources required for internationalization. The founders' international social ties were primarily of an informal business nature and were important for identifying foreign exchange partners and acquiring knowledge of opportunities and markets.

***Pisces:*** For Pisces, existing foreign clients, the Irish seafood association (BIM) and social contacts were the most important network ties used to enter foreign markets (Table 2). In relation to international business ties, existing foreign clients were the most important source of referral to prospective foreign exchange partners (Table 2). For example, Pisces developed sales in Russia as a result of Russian airline staff operating out of Shannon airport, an important transatlantic airport operating in the region Pisces is located in. The airline staff bought Pisces products as gifts for Russian clients. A result of this was that a Russian buyer came across the product in Russia and contacted Pisces. Another example is the case of a Maltese client, from whom Joe Black acquired an unsolicited order via a fax, who referred Pisces to a large German-based wholesaler, who, in turn, made contact with Joe Black with sales then following in 2003.

The role of BIM in first identifying, and then acting as an exchange intermediary (facilitating introductions and meetings) was critical for Pisces's foreign market entry to Asia. For example, BIM brought a Hong Kong buyer that they had identified to Ireland to meet Pisces and other Irish suppliers of live seafood. In 2003 the Hong Kong buyer became an important customer of Pisces. Equally BIM alerted the founder of Pisces to opportunities in China and facilitated the firm's entry into China by co-ordinating and financing his participation in a trade fair, where he proceeded to acquire two clients.

See Table 2

*Aquarius:* In the case of Aquarius internationalization followed the initial identification of a foreign exchange partner in France. Networks ties of a social and business nature were equally important in the subsequent internationalization of Aquarius (Table 3). Export agents and existing clients were the most important international business network ties for Aquarius. For example, Tom Coleman, (see initial foreign market entry) the French based export agent, acquired clients for Aquarius in France, Holland and Belgium and helped grow international business for Aquarius in its early years. The firm built up a strong client base leading to further referrals. For example, in 1997, a Danish client first approached Aquarius looking to buy its product following a referral from a French client of Aquarius.

In relation to international social ties, Peter Munro relied on his informal business ties to a large extent for identifying foreign exchange partners and acquiring foreign market knowledge. For example, in 2000, Peter was trying to break into the US market with his new retail range. He met an old friend, Mike, at a Boston trade show. The founder knew Mike from working on an Irish university research programme with seafood products. Mike was now director of the aquaculture division of the World Bank and was very well acquainted with the US market where he was based. At Peter's request, Mike accompanied him to the Boston trade show and provided him with knowledge on how the market operated and with introductions to networks in the USA. Mike had a whole network of contacts. Prior to a trade show in February 2004 Mike made a list of US contacts, screening those with whom he thought Peter might like to work. Mike then emailed these eligible buyers, informing

them that Peter's new range would be available at the trade show and inviting them to try them out. A buyer agreed to meet with Peter to look at the products, and after the trade show, sampling took place. There were a lot of FDA regulations that Aquarius had to comply with to ensure their produce could be traded in the US. BIM assisted them with this information having dealt with other firms who had entered the USA market. After surmounting several export hurdles, Aquarius' product was received by the client for sampling, and in October 2004 sales commenced.

See Table 3

**Libra:** International business ties were crucially important for Libra's subsequent internationalization. The business tie most important was BIM in terms of identifying foreign opportunities and acquiring knowledge for foreign market entry. Existing foreign clients and international social ties of the founder were less influential than BIM.

As shown in Table 4, BIM's Paris office played a pivotal role in the re-internationalization of Libra. The firm had depended significantly on its business relationship with BIM and particularly on Louis O'Shea, the executive in the French BIM office. Having worked previously in the French food industry, Louis had been instrumental in obtaining a large cash and carry client for the firm and liaised between Libra and the French client to facilitate the transaction. The co-founder of Libra commented on the usefulness of this contact for establishing client introductions and for facilitating subsequent foreign sales: 'The market is structured in different ways, you've got wholesalers supplying restaurants and hotels but also the big thing in these countries is Cash and Carries. Now it's difficult to get into those markets. They (BIM) have been very helpful to us to get into the cash and carries'. Libra now has 15 customers in France, three of which were acquired through international informal business ties (Table 4). The rest were through the BIM Paris office. The BIM representative, Louis O'Shea, has assisted Libra significantly, has acted as a *de facto* business partner and has been a prime source of experiential knowledge for Libra's internationalization into France. Louis O'Shea identifies buyers, makes introductions, facilitates sales and sees them through, and acts as a foreign-based regular point-of-contact between Libra and customers. Libra has built up its relationship with BIM

Spain since 2003. Libra acquired Spanish clients through the Spanish BIM representative, Carla Enros, in 2003.

See Table 4

### *6.3 Market knowledge and resources for internationalization.*

The cases suggest that the founders' international social and business ties are important in acquiring knowledge about foreign markets and in acquiring the resources used in internationalization (Tables 2 to 4). The founders of the case firms used their network ties to access intangible resources embedded in their international business networks. The nature of such resources accessed by the case firms is knowledge-related capabilities possessed by their network tie. The incidents throughout the cases show that the firms accessed knowledge in their networks in the areas of technology, production and product development.

Knowledge about product development and about how to improve production facilities were accessed through BIM, through client and business partnerships that the founders came into contact with at trade fairs, and through their current business ties. For all three firms BIM provided important advice in the area of R&D in the early stages of venture creation. For example, Peter Munro (Aquarius,) noted how a BIM contact helped him acquire R&D expertise during his start-up: '(the contact, Ray) works in research and he has been a huge supporter since the early stages ... he has been a huge help. He is in research and development of the farming and the whole side of the development of aquaculture right across the board, a huge help. He is a mine of information and you could pick up the phone anyway and say "Ray, look, I have a problem with this, how do I handle it?".'

In terms of the financial resources required to internationalise each of the case firms acquired funding through their business ties in BIM (Table 5). The provision of finance to support the aquaculture industry is a key role of BIM. For example, finance channelled through BIM was used to support international trade fair participation, foreign business trips, international marketing budgets, product research, and the development and construction of premises and the purchasing of equipment. The founders attributed huge importance to BIM as a key source of financial support.

Liam White (Libra) said: ‘we wouldn’t be where we are now without that support’; with the founders of Aquarius and Pisces concurring by saying, respectively, ‘the main role is support (finance),’ and ‘my relationship with them would be financing market activities.’

See Table 5

## **7. Discussion**

### *7.1 The initial internationalization of new ventures.*

What role do social and business ties play in (i) the identification of specific international market opportunities and (ii) in the choice of foreign exchange partners during the initial stages of new venture creation? We conclude that the entrepreneurs in our cases were dependent on their social relationships to access critical information regarding international opportunities and for identifying their initial foreign exchange partner. The entrepreneurs relied on close ties when seeking to internationalize. In our cases the new ventures did not have a home-market base or did not depend on their domestic ties or clients to initiate internationalization. However the founder’s social ties were internationally connected and in seeking information and opportunities for internationalization, a natural solution for the entrepreneurs was to turn to partners with which a relationship already existed. As suggested by Ellis and Pecotich it appears that social ties of a third party nature can influence initial selection and entry by facilitating the entrepreneur in the identification of opportunities and exchange partners in foreign markets (2001). The close nature of international social ties, in the form of friends and social community links, created channels of information on foreign opportunities and linkages to initial foreign-based exchange partners.

### *7.2 Subsequent internationalization of new ventures.*

What role do social and business ties play in (i) the subsequent identification of specific international market opportunities and (ii) the choice of foreign exchange partners in new venture internationalization? We found that the international social and business ties of the founders were critical to explaining the choice of subsequent

foreign markets the entrepreneurs selected and entered. Operating in an international network provided the entrepreneurs with access to a broad range of international social and business ties, which gave access to, and knowledge of, (i) opportunities, (ii) clients, (iii) foreign market knowledge, and (iv) resources relating to internationalization.

First, in terms of knowledge of foreign opportunities, prior research has suggested that INVs seek out opportunities and use their former international experience and business contacts as a source of knowledge (Oviatt and McDougall 1994). While these may apply in some contexts, our findings indicate that the founders' informal business ties may also be important to the internationalization process by acting as sources of knowledge of foreign market opportunities. The cases suggest that foreign market selection followed opportunities presented by various network members, rather than being the result of a controlled or rationale decision making process (Axelsson and Agndal 2000). In this sense it could be argued that in making internationalization decisions the entrepreneurs relied on resources at hand (Baker et al. 2003). However, though their active involvement in the 'extended production network' the entrepreneurs generated a stream of new resources.

The concept of psychic proximity holds little explanatory power for the foreign market selection observed in our case firms. The cases suggest that being a member of an international business network renders the psychic distance assumption redundant for foreign market selection and supports the views that markets can be selected and entered via individuals and companies and not countries and cultural distances (Johanson and Mattsson 1988, Johanson and Vahlne 2003, Majkgård and Sharma 1998, Bell 1995, Rutashobya and Jaensson 2004).

Second, in terms of the identification of subsequent foreign exchange partners, the cases suggest that the international business ties of the industrial network can serve to identify foreign exchanges partners. This happens through the founder's access to internationalised production nets and network members. International business ties served as connectors to foreign markets by identifying foreign exchange partners for the cases, that is ties were, 'bridges to foreign markets' (Sharma and Johanson 1987:20).

Third, in terms of the acquisition of knowledge about foreign markets the entrepreneurs in the case firms relied on their international social and business ties to learn about foreign market operations prior to entering foreign markets. The idea that

the entrepreneur acquires foreign market knowledge via his/her international social and business ties contrasts with the Uppsala perspective (Johanson and Vahlne 1977), which posits that knowledge of foreign markets is gradually acquired as a firm internationalises, and that this occurs as a result of the firms being active and operational in foreign markets (i.e. a learning-by-doing approach).

The entrepreneurs used their international ties within the extended production net to acquire knowledge of foreign markets and thus reduce the time from identification of opportunity to foreign market entry. The case founders used their international social ties as an important source of experiential knowledge (Holmund and Kock 1998). The case firms acquired foreign market knowledge via business ties. This suggests that the firms' networks are important sources of experiential knowledge resources (Sharma and Blomstermo 2003, Sharma and Johanson 1987, Johanson and Vahlne 2003). We agree with Johanson and Vahlne in their assertion that internationalization can be described as a matter of learning through networks where business networks act as a primary vehicle for resource acquisition and knowledge generation. However, we argue that this assertion can be extended to include the argument that knowledge accumulation occurs from internationalising within the firm's social network relationships. Trade shows also represented an important meeting place for network ties to develop.

Fourth, in terms of resources for internationalization, the cases suggest that the entrepreneurs accessed resources and capabilities through their business ties in the form of formal and informal partnerships and collaborations and that the entrepreneurs accessed external intangible resources, know-how not available within the firm, through their network ties. This finding is consistent Johanson and Mattsson's (1988) network model that argues firms require resources controlled by other firms and with Oviatt and McDougall's (1994) INV theory, which suggests that INVs support a hybrid structure via franchising and licensing. However, we found alternative forms of informal collaboration with business ties such as foreign clients and the industry association (BIM). These were important in accessing capabilities in new product development, production and logistics, all of which were required for international growth and expansion. Following the logic of the resource dependency theory (Pfeffer and Salancik 1978), these findings support previous findings in the INV literature, where it has been argued that the INV entrepreneur may access important resources through hybrid structures to compensate for lack of knowledge

and resources required for internationalization (McDougall et al. 1994, Bell 1995, Coviello and Munro 1995). This finding supports to some degree Richardson's notion of indirect capabilities of the firm accessed in external networks, concluding that such knowledge and capabilities are embedded in external networks, representing indirect capabilities of the firm (1972).

More specifically, in terms of financial resources, the cases suggest that participation in a network provides access to resources. Financial resources critical to international marketing activities and capital investment required to increase international commitment to foreign markets were channelled through the business network. In the cases we studied BIM was the main channel of finance. Without finance from BIM they would not have been able to conduct effective international market activities or enter the production net.

### *7.3 The international production net.*

The cases we studied operated in an extended production net that is highly internationalised and characterised by a network of interconnected hubs spanning global markets. The internationalization activity of the case firms appears to be largely driven by existing network relationships developed as a result of membership in a highly internationalised extended production net, containing international customers, suppliers, trade associations, companies, and indirect and direct competitors (Chetty and Blankenburg-Holm 2000). The cases indicate that the entrepreneur develops and uses international social (informal business) and business ties that are located in the extended production net. In terms of business ties in the net, the findings indicate that the seafood industry's production net can be extended to include clients and industry association (BIM) (Chetty and Blankenburg-Holm 2000). Foreign clients and BIM were key business actors in facilitating the process of the case firms' internationalization in terms of (1) providing foreign market knowledge, (2) providing financial resources, and (3) facilitating foreign market entry by making introductions to prospective exchange partners. In the network internationalization model (Johanson and Mattsson 1988), the degree of internationalization of the market is in fact the degree of internationalization of the production net, which is composed of firms whose production and distribution activities are linked to a specific product area. A new venture's internationalization process depends on the network in which



the company operates, and that, in a very internationalised industry, such as seafood, the process is quite situation-specific and because of this, it may proceed more rapidly than usual. This observation supports Andersson's conclusion that industry context and stage of firm development influence the appropriateness of theories of internationalization (2004).

## **8. Conclusions**

This paper makes a number of important contributions. First we argue that internationalization choices and activities are strongly influenced by an entrepreneur's social and business ties. Our research extends prior work on social ties in SME internationalization (Coviello 2006, Ellis 2000, Holmund and Kock 1998) by studying the role of ties in INVs. Second, we argue that social ties that are international can enable early and rapid international market entry. We illustrate a context where prior international work experience is not a necessary condition of early internationalization. Pre-internationalization and pre-venture social ties that are internationally orientated can be highly influential in facilitating initial foreign market entry for new ventures via the identification of initial opportunities and foreign exchange partners. Third, the entrepreneur's social ties that are international in orientation are important for gaining access to the international industry network which, in the context we studied, was critical to internationalization. Fourth, entrepreneurs use social and business ties to identify subsequent foreign market opportunities, foreign exchange partners, and to acquire the knowledge and resources required for internationalization. An entrepreneur's business network can serve as a fulcrum to leverage resources required to overcome barriers to internationalization. Fifth, the internationalization process of the case firms was not exclusively dependant on such pre-internationalization ties. We found that the horizontal tie, BIM, and participation in trade fairs, were important factors in developing new ties. We suggest that further study of the role of horizontal and vertical networks in the internationalization of new ventures will provide useful insights.

There are important limitations to this research. The context we studied appears to be very important in understanding the internationalization of the case firms, and therefore the results may not apply in other contexts. The industry we studied is highly international, with internationally orientated network ties, and is

characterized by a Business Development Agency (BIM), that has actively supported the internationalization of the sector. These factors strongly influenced the internationalization processes in the firms and may limit the generalisability of these results to other industry contexts. That said, the context is neither unique nor trivial, and as Andersson (2004) has shown, context in terms of stage of evolution of a firm and stage of evolution of industry are important determinants of the nature of internationalization.

Finally in terms of managerial and policy implications we suggest the following. Entrepreneurs need to appreciate the benefits of collaboration with other organisations. In particular, in highly internationalised sectors entrepreneurs need to capitalise on ready-made international networks. However they also need to create and leverage vertical and horizontal network ties. Vertical co-operation with suppliers and distributors and horizontal collaboration with industry associations has become an increasingly important activity for low-tech manufacturers.

In terms of policy implications, our cases illustrate the role a horizontal tie, in this case a state funded business development agency, can play in the internationalization process of firms. This agency provided important human, knowledge, network and financial resources to the case firms. So in addition to providing financial support for internationalization activity, the business development agency, actively sought to develop the international activity of firms by introducing them, through their own overseas contacts and through trade fairs, to the international customers. So while we did not consider the costs of such policy supports, we do note that they played a pivotal role in the internationalization of the new ventures we studied.

## References

Aldrich, H. and C. Zimmer 1986 Entrepreneurship Through Social Networks, in *The Art and Science of Entrepreneurship*, D. Sexton and R. Smilor (eds), Cambridge, MA: Ballinger.

Andersson, B.E. and S.G. Nilsson 1964 Studies in the reliability and validity of the critical incident technique, *Journal of Applied Psychology*, 48:398-403.

Andersson, S. 2004 Internationalization in different industrial contexts, *Journal of Business Venturing*, 19 (6): 851-875.

Arenius, P. 2002 *Creation of Firm-Level Social Capital, Its Exploitation, and The Process of Early Internationalization*, Institute of Strategy and International Business, PhD Thesis, Department of Industrial Engineering and Management, Helsinki University of Technology.

Axelsson, B. and H. Agndal 2000 Internationalization of the firm: A note on the crucial role of the individual's contact network, Proceedings of the 16th IMP Annual Conference, Bath, U.K.

Baker, T., A. Miner and D. Eesley 2003 Improvising firms: bricolage, account giving and improvisational competencies in the founding process, *Research Policy*, 32:255-276.

Bateman, T. S., & Crant, J. M. (1993). The proactive component of organizational behavior: A measure and correlates. *Journal of Organizational Behavior*, 14, 103-118

Bell, J. 1995 The internationalization of small computer software firms: A further challenge to 'stage' theories, *European Journal of Marketing*, 29(8): 60-75.

Björkman, I. and S. Kock 1995 Social relationships and business networks: The case of Western companies in China, *International Business Review*, 4 (4):519- 35.

Boojihawon, D.K. 2004 International entrepreneurship and network relationships: the international marketing communications sector, in M.V. Jones and P. Dimitratos, eds.

*Emerging Paradigms in International Entrepreneurship*. Cheltenham, UK and Northampton, MA, USA: Edward Elgar, 217-248.

Bord Iascaigh Mhara 2000 *BIM Annual Review 1999*. BIM: Dublin.

Bord Iascaigh Mhara 2003 *BIM Annual Review 2002*. BIM: Dublin.

Chetty, S. and D. Blankenburg Holm 2000 Internationalization of Small to Medium-Sized Manufacturing Firms: A Network Approach, *International Business Review*, 9:77-93.

Coviello, N.E. 2006 The network dynamics of international new ventures, *Journal of International Business Studies*, 37: 713-731.

Coviello, N. and H.J. Munro 1995 Growing the entrepreneurial firm: Networking for international market development, *European Journal of Marketing*, 29 (7), 49-62.

Coviello, N. and H.J. Munro 1997 Network relationships and the internationalization process of small software firms, *International Business Review*, 6 (4): 361-86.

Ellis, P. 2000 Social ties and foreign market entry, *Journal of International Business Studies*, 31 (3): 443-70.

Ellis, P. and A. Pecotich 2001 Social factors influencing export initiation in small and medium-sized enterprises, *Journal of Marketing Research*, 38 (1): 119-31.

Flanagan, J.C. 1954 The critical incident technique, *Psychological Bulletin*, 51 (4): 327-359.

Granovetter, M. 1985 Economic action and social structure: the problem of embeddedness, *American Journal of Sociology*, 91(3):481-510.

Greve, A. and J. Salaff. 2003 Social networks and entrepreneurship. *Entrepreneurship, Theory, and Practice* 28(1): 1-22.

Hansen, E. L. and T. H. Witkowski (1995) Entrepreneur involvement in international marketing: the effects of overseas social networks and perceived barriers to action," in

*Research at the Marketing/ Entrepreneurship Interface*, Vol. 8, Gerald E. Hills, Daniel F. Muzyka, Glenn Omura, and Gary A. Knight, eds., Chicago: The University of Illinois at Chicago, 363-367.

Harveston, P., B. Kedia and P. Davies 2000 Internationalization of born global and gradual globalizing firms: The impact of the manager, *Advances in Competitiveness Research*, 8(1): 92-99.

Hoang, H. and B. Antoncic 2003 Network-based research in entrepreneurship: a critical review, *Journal of Business Venturing*, 18(2): 165–87.

Holmlund, M. and S. Kock 1998 Relationships and the internationalization of Finnish small and medium-sized companies, *International Small Business Journal*, 16(4): 46-63.

IFA (1998) cited in *A Socio-Economic Evaluation of the impact of Aquaculture in counties Donegal, Galway, Kerry and Cork* Aqua-Fact International Submitted to The Marine Institute, 80 Harcourt Street, Dublin. August 1998.

Johannisson, B. 1990 Community entrepreneurship- cases and conceptualization, *Entrepreneurship and Regional Development*, 2(1): 71-88.

Johanson, J. and L. G. Mattsson 1988 Internationalization in industrial systems- a network approach, in Hood N. and J. E. Vahlne, *Strategies in Global Competition*, New York: Croom Helm, 287-314.

Johanson, J. and J.E. Vahlne 1977 The internationalization process of the firm: a model of knowledge development and increasing foreign markets commitments, *Journal of International Business Studies*, 8 (1): 23-32.

Johanson, J. and J. E. Vahlne 2003 Business relationship learning commitment in the internationalization process, *Journal of International Entrepreneurship*, 1, 83–101.

Knight, G. A. and S. T. Cavusgil 1996 The born global firm: a challenge to traditional internationalization theory, in S.T. Cavusgil and T.K. Madsen, (eds.) *Export internationalizing research - enrichment and challenges*, (Advances in International Marketing, 8) (pp. 11-26). NY: JAI Press Inc.

Komulainen, H., Mainela T. and J. Tähtinen 2004 Social networks in the initiation of the high tech firm's Internationalization, in the proceedings of *the 20th IMP Conference 2004*, Copenhagen, Denmark.

Lamont, B.T., V. Sambamurthy., K.M. Ellis., and P. G. Simmonds 2000 The influence of organizational structure on the information received by corporate strategists of multinational enterprises, *Management International Review*, 40(3):231-252.

Majkgård, A., and D. Sharma 1998 Client-following and market-seeking strategies in the internationalization of service firms, *Journal of Business to Business Marketing*, 4(3):1-41.

McDougall, P.P., Shane, S. and B. Oviatt 1994 Explaining the formation of international new ventures: the limits of theories from international business research, *Journal of Business Venturing*, 9(6), 469-487.

McDougall, P. P., B. M. Oviatt and R. C. Shrader 2003 A comparison of international and domestic New Ventures, *Journal of International Entrepreneurship*, 1: 59-82.

Neupart, K., C. Bagn and D. Thanh Lam 2003 SME exporting challenges in transitional and developing economies: a two country comparison, paper presented at the fifth McGill Conference on International Entrepreneurship, Sept 22<sup>nd</sup> 2003.

Oviatt, B. and P. McDougall 1994 Toward a theory of international new ventures, *Journal of International Business Studies*, 25(1): 45-64.

Pfeffer, J. and G. Salancik 1978 *The external control of organizations: a resource dependence perspective*, New York: Harper & Row.

Pulkkinen, J. and J. Larimo 2002 Global orientation, competitive advantages and export strategies of different types of SMEs: empirical evidence from Finland, *Paper presented at the European International Business Academy (EIBA) Annual Conference, December, Athens, Greece.*

Richardson, G.B. 1972 The organisation of industry, *The Economic Journal*. Cited in Dosi, G., Nelson, R.R., and Winter, S.G. (2000), 'Introduction: The Nature and Dynamics of Organisational Capabilities' Pp. 1-22 in *The Nature and Dynamics of Organisational Capabilities*, edited by G. Dosi, R. R. Nelson, and S. G. Winter. Oxford University Press: Oxford.

Ronan, W.W. and G. Latham 1974 The reliability and validity of the critical incident technique: a closer look, *Studies in Personnel Psychology*, 6(1): 53-64.

Rutashobya, L. and J. Jaensson 2004 Small firms internationalization: exploring the network phenomena, *International Journal of Social Economics*, 31(1).

Scharf, F., J. Bell, S. Loane and R. Fletcher 2004 The export problems of internationalising SMEs: some empirical evidence using critical incident technique, in *Emerging Paradigms in International Entrepreneurship*, M. Jones. and P. Dimitros (eds). Edward Elgar.

Sharma, D.D. and A. Blomstermo 2003 The internationalization process of born globals: a network view, *International Business Review*, 12:739-753.

Sharma, D. D. and J. Johanson 1987 Technical consultancy in internationalization, *International Marketing Review*, Winter: 20-29.

Simon, H. 1976 *Administrative Behavior* (3rd ed.). New York, NY: The Free Press.

Uzzi, B. 1997 Social structure and competition in inter-firm networks: the paradox of embeddedness, *Administrative Science Quarterly* 42: 35-67.

Welch, D. and L. Welch 1996 The internationalization process and networks: a strategic management perspective, *Journal of International Marketing* 4(3): 11-28.

Figure 1: A typology of social and business relationships in INVs

		Nature of Relationship	
		<b>Business Tie: Economic Exchange Relationship i.e. contractual</b>	<b>Social Tie: Non - Economic Exchange Relationship i.e. Non-Contractual</b>
Relationship To The Firm	Vertical	Clients Suppliers to the firm Agents and intermediaries Ancillary suppliers to the firm	Former clients Other suppliers in the industry Other operators in the ancillary support firms i.e. packaging;R&D
	Horizontal	State support agencies and Export promotion agencies Sector trade associations Advisors/consultants Joint Venture partners Partners and alliances	Competitors Community organisations Friends Acquaintance firms



Table 1: Descriptive data on case firms

	Pisces	Aquarius	Libra
Product	Live shellfish such as lobster and crab	Processed shellfish	Processed shellfish
Year of start-up	1998	1985	1988
Year of first international sale	1998	1985	1988
Mode of foreign market entry	Exports to distributors/cateters	Exports to agents and distributors	Exports to wholesalers and end-user clients
Number of foreign markets	15	10	10
Export sales as percentage of total sales	99%	100%	30%

Table 2: The internationalization of Pisces

Year	Event	Description of event	Nature of tie/mechanism of foreign entry	Outcome
1998	Identification of initial exchange partner in Sweden	Joe Black befriended , Hans Gugau, a German supplier of aquarium systems when latter paid a trip to founder's R&D venture on EU research visit. Hans referred Swedish client to Pisces.	Informal business tie	Exchange partner
1998	Identification of foreign exchange partner	Hans Gugau referred his second client from Austria to Pisces in same year	Informal business tie	Exchange partner
1998	R&D Collaboration	Pisces founder collaborated in R&D with Irish university & BIM for increasing life span of crab product		Increased life span of product; financed and managed by BIM
2000	R&D Collaboration	Pisces founder collaborated in a 2 <sup>nd</sup> R&D project with Irish university & BIM for improving transportation of live animals for the industry		R&D leading to successful long distance transport; financed and managed by BIM
1999	Identification of exchange partner in USA	Acquired client at Trade show	Trade show*	Exchange partner
1999	Identification of exchange partner in Malta	Pisces advertised on an Irish seafood website set up in his local area. Unsolicited inquiry through fax from Maltese client.	Internet	Exchange partner
2001	Identification of exchange partner in Dubai	Pisces advertised on an Irish seafood website. From this, sales to Dubai were initiated via a fax inquiry, a number of exchange phone calls with client, and then follow-up by a BIM-financed visit by the client to Pisces's premises. The Dubai client has been an important and regular customer since 2002.	Internet and BIM*	Exchange partner
1999	Identification of exchange partner in Italy	Industry contact gave referral at Trade show	Informal business tie*	Exchange partner
2000	Identification of opportunities in China	Black was unaware of opportunities in China until BIM emailed the industry which alerted Pisces to market - specific opportunities in China for his product.	Business tie	Identification of foreign opportunities
2000	Foreign market knowledge in Chinese markets	Pisces contacted his Irish ties working in catering sector in Beijing for knowledge of the Chinese seafood market.	Social ties (friends)	Foreign market knowledge
2000	Identification of foreign exchange partner in Russia	Russian locally based airline brought back products as gifts to Russian clients. A Russian buyer came across product and wanted to buy it from Pisces.	Business tie	Exchange partner
2002	Identification of exchange partner in Germany, sales result in 2003	A Maltese client referred Pisces to a large German-based wholesaler, who made contact with Joe Black with sales then following in 2003.	Business tie (existing client)	Exchange partner
2002	Identification of opportunity and client in Hong Kong	BIM executives identified an important Hong Kong client for Pisces in 2003.	Business tie (BIM)*	Exchange partner

\* Financial support from BIM

Table 3: The internationalization of Aquarius

Year	Event	Description of event	Nature of tie/mechanism of foreign entry	Outcome
1985	Social tie of founder's wife referred to French-based Irish export agent	Founder's social tie was wife of French based agent Jack Whelan and arranged a meeting in Paris to discuss export partnership. Jack's partner Tom Coleman agreed to be export agent for Aquarius in Europe	Informal business ties	Exchange partner
1986-1990	Identification of foreign exchange partner	Tom Coleman subsequently acquired sales for Aquarius in France, Belgium and Holland	Business tie	Exchange partners
1986	Identification of UK exchange partner via informal business ties	Industry contact a UK Irish based agent contacted Aquarius proposed opportunity to supply to a large UK manufacturer	Informal business tie	Exchange partner
1992-1995	Product development and customer involvement in final stages of product development	Via a business contact of Peter Munro, Aquarius developed partnership with French company in final stages of new product development.	Business tie	Exchange partner, Knowledge resources via product collaboration; foreign market knowledge
1996	Identification of exchange partner in Denmark	Aquarius French client referred Danish processor to Aquarius Danish client visited Aquarius' premises and placed orders.	Business tie	Exchange partner
1997	A social tie identifying foreign exchange partner for Italy	The Managing director, Ray Mullen, of a local exporter was aware Peter was having problems in getting sales in Italy. Ray Mullen a close friend of Peter's referred him to good Italian export agent (with good client portfolio) at a trade show. The local export liaised between founder and exchange partner at show.	Informal business tie*	Exchange partner
1998	Identification of exchange partner in Germany	German sales developed through German agent who approached Peter at a trade show in Brussels	Trade show*	Exchange partner;
2000	Global fact finding mission: Acquisition of foreign market and international business opportunities	Peter Munro personally visited his international business and social ties in New Zealand, Canada, Chile, Denmark in search of new product ideas to get him out of imminent firm closure.	Informal business and social ties (friends)*	Opportunity identification; foreign market knowledge
2000	International Retail Product Partnership- informal business tie	In 2000, founder approached French industry tie of his to collaborate in retail product agreement to supply him retail product for French market under the French clients brand name.	Close informal business tie became business tie	Substantial exchange partner (25% of total sales)
2001	Identification of foreign opportunities and acquisition of foreign market knowledge in USA	Peter bumped into former contact, Mike, at the Boston Trade show. Peter got know Mike very in the 1990s working on an Irish university research programme with seafood products. Mike was now director of the aquacultural division of the World Bank and was very well acquainted with the US market where he was based. At the show, Mike introduced Peter to a person who was involved with the mussel industry in Maine, USA.	Informal business tie*	Foreign market knowledge; exchange partner

2002	Identification of exchange partner in USA	At the request of Peter, Mike accompanied him to the Boston trade show a year later and provided him with knowledge on how the market operated and networks in the USA. Mike short-listed and contacted US buyers for Aquarius. He then introduced founder to buyers. Sales followed.	Informal business tie*	Exchange partner
2002	Acquisition of knowledge capability in NPD via business tie	In 2002, while visiting a supplier in Canada, founder was referred to new product development contact from Scotland, Bob. He worked with founder for year to develop a new product range. Bob now works as agent for Aquarius in UK.	Business tie	knowledge capability; exchange partner
2002	Foreign market knowledge and exchange partner for Japanese market	A local exporter and social tie of founder referred a Japanese London based agent, Kato, to Peter who then acted as agent for Japanese market, winning him a large Japanese catering client. Kato provided knowledge of language and business culture to founder to facilitate entry.	Business tie *	Foreign market knowledge; opportunity identification, exchange partner
2003	Accessing knowledge through Danish social ties	Through a Danish client and friend of founder, two Danish students worked with Aquarius and conducted formal market research of Danish market, as well as developing website and marketing product material.	Business tie	Foreign market knowledge
2003/04	Acquire knowledge capability via Norwegian collaboration	Aquarius established business partnership for technological transfer with Norwegian salmon manufacturer met at a trade show in 2001.	Business tie	Technological capabilities in production
2003	Knowledge acquisition for targeting Spanish client via Business tie	Peter approached the Spanish office of BIM to liaise with a prospective Spanish buyer who had inquired about Aquarius products at trade show that year. The Spanish BIM representative, Isabella, acquired more information about the target client and then contacted them. She also provided language translations for Aquarius on product details.	Business tie (BIM)	Foreign market knowledge; Exchange partner
2004	Identification of UK retail client (distributor) via international business tie	Business tie of founder sourced and vouched for Aquarius to win contract to enter UK market	Business tie	Exchange partner
2004	Cyprus	Client acquired at trade show	Trade show*	Exchange partners
2004	Russian opportunities via international business tie	Founder's business tie in BIM Germany identified marketing opening for Aquarius' products in Russia and urged founder to attend Moscow trade show. Founder attended the trade show supported by BIM left with prospective leads and foreign market knowledge.	Business tie (BIM)*	Opportunity identification, foreign market knowledge*

\* Financial support from BIM

Table 4: The internationalization of Libra

<b>Year</b>	<b>Event</b>	<b>Description of event</b>	<b>Nature of tie/mechanism of foreign entry</b>	<b>Outcome</b>
1984	Twin Town Initiative community links and initial entry into France	Founders came into contact with large French buyer retail chains through EU Town Twinning	Social ties	Opportunity identification and incentivised start-up of Libra
1990	Acquisition of knowledge for production	In early 1990s, business tie (BIM reps) assisted to a large extent the firm's implementation of meeting HAACP quality standards and Health & Hygiene Directives for setting up processing factory.	Business tie*	knowledge in production
1997	Foreign Market entry via Business tie: UK	The founder approached his UK supplier to also agree to buy from him. UK supplier also became client.	Informal business tie	Exchange partner (also supplier)
1999	Exports to Hong Kong via local exporter and friend	A local smoked salmon firm referred his client, a Hong Kong based restaurant owner, to Libra. Libra acquired an order from restaurateur.	Informal business tie	Opportunity identification, exchange partner
1999	Canadian crab machine via local exporter	Through a local exporting firm and friend of founder's, Libra sourced machinery in Canada, which would allow Libra enter new product markets. BIM financed machine and foreign travel.	Informal business tie*	Exchange partner; (supplier); financially supported*
2000	Re-internationalization in 2000	Driven by shrinking domestic sales, Libra took its first stand at Brussels trade show 2001; BIM executive identified and introduced founders to three buyers. This trade show success and network support resulted in decision to re-enter export markets.	Business tie * (BIM)	Exchange partner
2001-2001	Entry into France via BIM Paris	BIM European executive identified and facilitated sales acquisition with a large French client.	Business tie (BIM)*	Exchange partner; knowledge capabilities
2001-2002	Institutional and operational knowledge	BIM European executive assisted with operational market knowledge for French client.	Business tie (BIM)*	Foreign market Knowledge; knowledge capabilities
2000	Italian exchange partner	Acquired client at trade show	Trade show*	Exchange partner
2000	Client in France via local exporter and friend	An industry social tie and local exporter referred his client to Libra. The French manufacturer then referred his two French neighbouring firms to Libra.	Informal business tie	Opportunity identification; three French clients in industrial estate
2000	Entry to the USA via introduction at show	Libra met its first US client at Boston Trade Show.	Trade show*	Opportunity identification; foreign exchange partner
2004	Portugal	Acquired client at trade show	Trade show*	Exchange partner
2004	Italy	Acquired client at trade show via BIM introduction	Trade show*	Exchange partner
2004	Greece	Acquired client at trade show	Trade show *	Exchange partner
2004	Identification of Spanish clients	The founder contacted the Spanish BIM executive he met at the Brussels trade show in 2004. Within a few weeks the executive in Madrid lined up three big customers.	Business tie (BIM)	3 exchange partners and foreign market knowledge

\* Financially support by BIM

Table 5: The financial role of BIM

Quote	Source
'It's more as a source of funding. It's financial support more than market support. You just do your own thing in the market but they will help finance your flight, accommodation, things like that, and if you want to hire consultants to get information they will support that as well.'	Pisces
'Their role is support (financial) rather than actually doing it.'	Pisces
'They will support me on the trade fair and then other trips I would do during the year ... I would put in a marketing budget for the year and they would support that .'	Pisces
'BIM have been a huge supporter along the way, like it comes and goes, like they have a brief, one year it is to invest in this and then another year it's invest in something else.'	Aquarius
'One of their main roles is finance for us.'	Aquarius
'Their big role is financial support.'	Libra
'We wouldn't be where we are now without their support.'	Libra

# **From Methods to Outcomes – Analysing Entrepreneurship Training Programmes in Five European Countries**

Elisa Akola

Turku School of Economics

Rehtorinpellonkatu 3, FIN-20500 Turku, FINLAND

e-mail: [elisa.akola@tse.fi](mailto:elisa.akola@tse.fi)

Jarna Heinonen

Turku School of Economics,

Rehtorinpellonkatu 3, FIN-20500 Turku, FINLAND

e-mail: [jarna.heinonen@tse.fi](mailto:jarna.heinonen@tse.fi)

Keywords: enterprise education, entrepreneurship, entrepreneurial learning, small business

## **1. Introduction**

Measures promoting entrepreneurship seem to lie high on the political agenda of national governments as well as of supranational institutions, such as EU (see for example Commission of the European Communities). Enterprise education and entrepreneurship training are means to promote entrepreneurship. Enterprise education refers here to activities promoting the individual skills, attitudes and capabilities, which support entrepreneurship and entrepreneurial process independent on the business life-cycle including, thus, also entrepreneurship awareness raising (see Hytti, 2002). Enterprise education comprises also entrepreneurship training, which is here understood as a narrower concept referring to training and educational activities aiming at supporting start-up or exiting entrepreneurs to cope with their (potential) businesses. It seems that new business creation and employment are important and ultimate goals of enterprise education and entrepreneurship training (Henry, Hill and Leitch, 2003).

Research in enterprise education and entrepreneurship training suffers from conceptual and contextual shortcomings, resulting in difficulties of combining the existing body of knowledge into deeper an understanding about what is really going on in the field (Matlay, 2005). However, at the same time the number of courses and seminars offered by practitioners and universities, as well as the wide range of academic literature and articles that have appeared, are indicative of the current interest in entrepreneurship and related education (Vesper and Gartner, 1997; Klofsten, 2000; Solomon, Duffy and Tarabishy, 2002; Henry et al., 2003; Katz, 2003; Kuratko, 2005). Despite a constantly increasing number of activities and courses in the field of enterprise education and entrepreneurship training, surprisingly few researchers have, until recently, analysed and discussed the very crucial issue of whether or not entrepreneurship can be taught at the first place, and if that is the case, then how it is to be done? (Henry, Hill and Leitch, 2005) Bearing in mind the great variety and number of programmes offered this study acknowledges, firstly, the lack of understanding on how entrepreneurs learn despite the fragmented literature in the field, and on the other hand, a plethora of methodological approaches used in enterprise education and entrepreneurship training.

Based on selected training programmes for (potential) entrepreneurs in five European countries this study aims at exploring how (potential) entrepreneurs are being taught and what are the respective learning outcomes. The focus is on delivery methods, the contents of the studied programmes as well as the objectives stated for the programmes and the learning outcomes achieved. The paper presents the results of a survey carried out in Finland, Germany, Norway, Spain and United Kingdom. The selected training programmes aimed at promoting the start-up process of potential entrepreneurs or to develop the business of



existing entrepreneurs. The study has been carried out as a part of a project ENTLEARN<sup>1</sup> financed under the European Commission's Leonardo Da Vinci programme.

Next this paper discusses the previous literature on entrepreneurship training and entrepreneurial learning in its attempt to shed light on the theoretical grounds and premises in analysing the different training programmes. We move on presenting the methodology of our study as well as the empirical data subject to our analysis and discussion. The results and key findings of our study are then discussed in relation to previous knowledge on enterprise education, especially on entrepreneurial learning. Finally, we conclude and present some practical implications for programme promoters, planners and teachers as well as suggest some areas for further research.

## **2. Entrepreneurship training and entrepreneurial learning**

The extent to which entrepreneurship is teachable, or even worth teaching, is a matter of debate among scholars (Fiet, 2000). Recently it has become clear that entrepreneurship, or at least certain elements of it, can be taught – entrepreneurs are not just born but can also be made (Henry et al., 2005; Kuratko, 2005). This leaves, thus, room for enterprise education and entrepreneurship training attempting to develop and promote those “reachable” facets associated to entrepreneurship. Hytti and O’Gorman (2004) categorise the objectives of enterprise education as follows: 1) understanding about entrepreneurship, 2) entrepreneurial behaviour, and 3) becoming an entrepreneur. The categorisation is based on the different needs of the potential entrepreneur in different situations.

Teaching entrepreneurship involves both “sciences” (for example business and functional management competencies) and “arts” (for example creative and innovative thinking) (Jack and Anderson, 1999; Rae, 2004). This “science” of entrepreneurship is considered to be teachable, even via more conventional methods. Entrepreneurship is then considered as a linear planning and learning process where students learn necessary analytical tools and pass different steps (e.g., writing a viable business plan), and finally are capable of starting their business venture (Honig, 2004). Therefore courses include structured training to provide the entrepreneur with technical and personal entrepreneurial skills and tools (for example financial management, marketing) (Hisrich and Peters, 1998) complemented with informal support (for example mentoring, counselling, networking) in order to provide valuable elements of vicarious and social experience for the (potential) entrepreneurs (De Faoite, Henry, Johnston and van der Sijde, 2004). Usually the focus, however, is on content of the planning process, namely the choices, plans, and strategy rather than on process how to create and analyse the ones made or even more so, how to implement them. Learning outcomes

---

<sup>1</sup> This project has been carried out with the support of the European Community (project number FIN/04/C/F/RF-82501). The content of this project does not necessarily reflect the position of European Community, nor does it involve any responsibility on the part of the European Community.

include primarily analytical tools related to e.g., management, leadership and evaluation of the venture to be exploited in analytical decision making during the business creation process. (see Honig, 2004)

Rather than understanding entrepreneurship based on a causal model of planned behaviour entrepreneurial activities may be described as having a strong experimental focus. This “art” of entrepreneurship forms the very nub of creation and innovation, and does not appear to be teachable in the same way. It is highly subjective and is a skill that cannot be directly taught due to its fundamentally experiential nature. (Jack and Anderson, 1999) In order to make sense of the “art” of entrepreneurship there is a need for a greater understanding of how people learn entrepreneurial behaviour and how entrepreneurial capabilities are developed (Rae, 2004). It seems as if organisational learning theories were inappropriate when applied to entrepreneurial process and the small business context (Deakins and Freel, 1998). The budding entrepreneur does not need only knowledge (science), but also new ways of thinking, new kinds of skills and new modes of behaviour (arts). Entrepreneurial individuals tend to possess entrepreneurial skills (e.g., problem solving, creativity, persuasiveness, planning, negotiating, decision making) as well as certain entrepreneurial attributes (e.g., self-confident, autonomous, achievement oriented, versatile, dynamic, resourceful) (Gibb, 2002). The “art” of entrepreneurship addresses the development of these crucial skills and attributes which are mainly learned in the business environment through inductive, practical and social experience, less so in the educational setting (Gorman, Hanlon and King, 1997). The learning outcomes are, thus, related to personal properties (self-confidence), motivation (risk tolerance) as well as different cognitive factors, such as leadership and managerial experience (Honig, 2004).

It seems that universities have succeeded relatively well in teaching the “science” of entrepreneurship by providing a conceptual background of the phenomenon and stimulating the necessary analytical thought processes. By doing so some crucial notions of entrepreneurship may have been ruined as the analytical approach does not allow students’ imagination to soar and, thus, stimulate the “art” of entrepreneurship, even though it may otherwise provide a sound platform for entrepreneurial endeavours (Jack and Anderson, 1999; Kirby, 2004). It has been suggested to complement traditional delivery methods with entrepreneurial approaches (Gibb, 1993; 1996; 2002), which essentially include learning by doing and providing opportunities for students to actively participate in as well as control and mould the learning situation (Gorman et al., 1997; Fiet, 2000). The traditional lecture format with all its predictability may not be the most effective method as it ignores the essence of the phenomenon, that is the entrepreneurial process. Traditional approaches to teaching may, in fact, inhibit the development of the requisite entrepreneurial behaviour (Kirby, 2004). Even for entrepreneurship researchers and educators it seems to be hard to guardian the true meaning and intent of the word entrepreneurship (Kuratko, 2005). Similarly Hjorth (2003)

calls for entrepreneurship that is not managerial entrepreneurship and thus for education that acknowledges the creative, playful and passionate student.

The special challenge of enterprise education, thus, is in the facilitation of learning to support the entrepreneurial process, even in the class room setting. Entrepreneurial process refers here to the innovative process of an entrepreneur, where she/he searches, discovers and exploits the opportunity for renewal and change (Shane and Venkataraman, 2000). It is about a process of becoming, where the change involved usually takes place in quantum leaps in a holistic process in which existing stability disappears (Bygrave, 1989; Heinonen, 1999). Entrepreneurship is about entrepreneurial individuals interacting with their environment, thus discovering, evaluating and exploiting opportunities (Shook, Priem and McGee, 2003).

Previous research indicate that entrepreneurs learn the skills and competences needed in entrepreneurial process through entrepreneurship *per se* (learning "in" entrepreneurship) (Hjorth and Johannisson, 2007). Therefore entrepreneurial learning is often referred to when talking about learning and the teaching of entrepreneurs. Entrepreneurial learning means the process through which the individual learns and acquires the knowledge needed in the entrepreneurial venture and entrepreneurial process (see Harrison and Leitch, 2005).

According to Rae (2006) entrepreneurial learning is a dynamic process of awareness, reflection, association and application that involves transforming experience and knowledge into functional learning outcomes. It comprises knowledge, behaviour and affective or emotional learning (Cope, 2005). Entrepreneurial learning is affected by the context in which learning occurs and it includes the content of what is learned as well as the processes through which learning takes place (Politis, 2005). Entrepreneurial learning is both individual, with personal differences in ability producing different learning outcomes, as well as social and organisational (Corbett, 2005). There are also close connections between the processes of entrepreneurial learning with those of opportunity recognition (Dutta and Crossan, 2005), exploitation, creativity and innovation (Lumpkin and Lichtenstein, 2005).

In this article the methods and outcomes of the training programmes studied are analysed in relation to entrepreneurial learning. It is essential to explore, what kind of different methods and approaches have been used to promote the learning process of entrepreneurs. In addition, the case studies focus on the learning objectives and especially on learning outcomes achieved when attempting to support the learning of (potential) entrepreneurs.

### **3. Methodology**

The research work was co-ordinated by the Small Business Institute, Turku School of Economics<sup>2</sup> The research material in respective countries was collected in conjunction with

---

<sup>2</sup> Research Co-ordinator: Jarna Heinonen; Co-author: Elisa Akola

four other partners (Germany<sup>3</sup>, Norway<sup>4</sup>, Spain<sup>5</sup> and the UK<sup>6</sup>). Prior to the field work, a literature review on entrepreneurial learning was conducted both from national and international sources in order to delineate the different ways in which it is suggested that entrepreneurs learn in different national contexts taking into account the heterogeneity of the entrepreneurial population and of the businesses involved. Based on the literature review the concept of entrepreneurial learning was jointly discussed among the researchers responsible for conducting the research nationally in order to ascertain the quality of the empirical material to be collected.

Altogether 26 programmes were documented and analysed, of which 4 were from Finland, 5 from Germany, 5 from Norway, 6 Spain and 6 from the UK, in order to find out how learning of (potential) entrepreneurs is supported in the training programmes. The programmes aiming at promoting entrepreneurship in a general sense or increasing understanding about the phenomenon among a wider audience were left out from this study. Otherwise the partners were free to select representative samples of different kinds of existing training programmes for (potential) entrepreneurs within each country. A special emphasis in data collection was put on documenting different kinds of training programmes for (potential) entrepreneurs including information on delivery methods and approaches with potential of supporting learning. In terms of documenting the programmes, the project co-ordinator prepared a programme description form to ensure the comparability of the data collected for each programme across the different national contexts. In collecting the data describing each training programme, the national partners used multiple sources of information, e.g. brochures, evaluation reports, documents, and websites related to the programme. This phase aimed at identifying what kind of methods and approaches have been used in different types of entrepreneurship training programmes.

Based on the results from the previous phases of the study and the joint discussions among the partners, three different training programmes were chosen for the in-depth case studies. The programmes are run in different countries (Finland, Spain and United Kingdom) and they are examples of entrepreneurship training programmes tackling the different company life cycles from start-up to growth. The three programmes were considered to be interesting from the entrepreneurial learning point of view. In addition, the researchers had good access to the selected programmes.

As in the first phase, the case interviews were conducted by using the case-protocol, which was mutually discussed among the researchers and finalised by the scientific research co-ordinator. During this phase the preliminary programme descriptions prepared earlier were

---

3 National Co-ordinator: Jürgen Zick and Monique Wölk, Institute of Industrial Science, University of Kassel

4 National Co-ordinator: Per-Anders Havnes and Erik Arntsen, Agder Research

5 National Co-ordinator: Iñigo Isusi, Ikei – Instituto Vasco de Estudios e Investigación, S.A.

6 National Co-ordinator: Jane Silver and Claire MacLean, University of Salford

specified, and participating (potential) entrepreneurs and the programme manager/directors were interviewed. In addition to the background information of the entrepreneurs interviewed, their motives to participate to the programme, their perceptions on the teaching methods and their applicability as well as their learning processes were focused on. The interview of the project manager also concentrated on the feasibility and effectiveness of the teaching methods and approaches used.

Based on the cases it was attempted to identify the learning outcomes achieved during the studied entrepreneurship training programmes. The research material gathered was qualitatively analysed with a special focus on methods and approaches used and outcomes achieved as experienced by the entrepreneurs themselves as well as programme managers. The concept of entrepreneurial learning was taken as a starting point for the analysis. The results of our analysis are presented in the following section.

## **4. Training programmes for entrepreneurs and learning of entrepreneur**

### *4.1 General Overview of the Programmes Studied*

Across the 26 training programmes for potential or existing entrepreneurs we observed great variety in e.g. target groups, objectives, methods (approaches), scope, means of funding, solidity (established and regularly run vv. ad-hoc), and regional coverage of the programmes. Apparently the current policy discussion is reflected in the (selection of the) programmes analysed. Programmes for different kinds of start-ups seem to be in legion: examples cover women, disadvantaged people and/or in disadvantaged (e.g. rural or distressed) areas, university students (academic entrepreneurship), young people, or any other potential persons, willing to start-up one's own business. Of the 26 programmes analysed 21 is targeted at potential entrepreneurs and 12 for at existing entrepreneurs. In addition 4 programmes are targeted at either teachers, persons employed in the public sector and employed SME managers, who are not entrepreneurs by themselves.

Our results indicate that many programmes attempt to address several target groups at the same time. Six programmes were targeted at both potential and existing entrepreneurs, one programme at potential entrepreneurs and teachers of entrepreneurship, and two programmes at existing entrepreneurs and hired managers of SMEs. In addition, the target group of one programme consisted of potential and existing entrepreneurs as well as persons employed by the public sector.

The objectives of the programmes were studied according to the objectives of enterprise education categorization developed by Hytti and O'Gorman (2004). All programmes studied had a business focus as the objective of the programmes was to develop participants' skills and knowledge needed while setting up a business or managing it. Five programmes aimed solely at promoting the start-up process of potential entrepreneurs or to develop the business

of existing entrepreneurs (business focus). Most of the programmes had, however, more than one objective. 11 programmes had two of the mentioned objectives and ten programmes had all three of them.

The objectives of the programme form the basis for choosing the relevant methods and pedagogics. Consequently, perhaps, the delivery methods and approaches used within most of the programmes are very manifold using different delivery methods and approaches (Table 1). The methods used can be divided to participative methods (cases, exercises, group and teamwork, project work and interaction e.g. dialogue, tutoring and mentoring), methods based on working life (practical training in enterprises, company visits, entrepreneurs as lecturers, learning on the site, godparent enterprise), traditional teaching methods (lectures, teaching in the classrooms, reading literature, writing essays and taking exams), and methods modelling or imitating entrepreneurship (practice enterprises, business games and simulations) (see Honkanen, 2004).

Based on our data there were plenty of different kinds of delivery methods and approaches to support learning of (potential) entrepreneurs in the programmes. Altogether 203 delivery methods were identified in the 26 studied programmes. The programmes seemed to have "multi-method" approach benefiting an average of eight delivery methods or approaches supporting the learning. At the minimum there were two and at the maximum 13 methods used in the programmes. The most commonly used method in the programme was giving feedback and support which included individual or group counselling, mentoring and tutoring. Also different kinds of group works, such as group discussions, debates, workshops, project work and team work, reflection and self-assessment e.g. through learning diaries, and expert lectures were often used. The participative methods addressing the "art" of entrepreneurship are strongly visible in the programmes studied although the "science" of entrepreneurship is simultaneously promoted by traditional teaching methods providing analytical tools to entrepreneurs. Methods based on working life as well as methods modelling or imitating entrepreneurship have potential to address both the "art" and "science" of entrepreneurship.

**Table 1 Delivery methods and approaches used and objectives of the programmes**

		<i>Learning to become an entrepreneur (N=26)</i>		<i>Learning about entrepreneurship (N=19)</i>		<i>Learning to become entrepreneurial (N=12)</i>	
<b>Participative methods</b>	Feedback and support	23	89 %	16	84 %	10	83 %
	Group work	22	85 %	17	90 %	10	83 %
	Reflection and self-assessment	21	81 %	16	84 %	9	75 %
	Presentations and performances	16	62 %	11	58 %	9	75 %
	E-learning, distance education	11	42 %	6	32 %	6	50 %
<b>Methods based on working life</b>	Expert lectures	19	73 %	16	84 %	8	67 %
	Setting up a business	15	58 %	11	58 %	5	42 %
	Company visits / excursions	9	35 %	7	37 %	4	33 %
	Using films and videos	9	35 %	6	32 %	3	25 %
	Practical training	7	27 %	5	26 %	5	42 %
	Other	6	23 %	4	21 %	4	33 %
	Study visits abroad / to other regions	4	15 %	4	21 %	2	17 %
<b>Traditional teaching methods</b>	Lectures, reading literature, writing essays, taking exams	17	65 %	14	74 %	10	83 %
<b>Methods modelling entrepreneurship</b>	Business simulations and role playing	15	58 %	13	68 %	7	58 %
	Games and competitions	9	35 %	6	32 %	6	50 %
<i>Altogether</i>		<i>203</i>		<i>152</i>		<i>98</i>	

Based on the previous literature (for example Gibb, 1993; 1996; 2002; Gorman et al., 1997; Fiet, 2000; Kirby, 2004) entrepreneurship demands new ways of learning and the active use of “multi-methods” in order to encourage the entrepreneurial activity of a potential entrepreneur to take place. Our study reveals that training programmes include a great number and variety of attempts to support entrepreneurs’ learning, but the amplitude of methods used within a relatively extensive and multiple training programmes with a number of objectives makes it hard to identify the outcomes achieved.

Our research material gives us a reasonably good understanding of the objectives of and delivery methods used in the studied programmes. However, the data tells hardly anything of the learning outcomes achieved, i.e., how the programmes have managed to support the learning process of participants within entrepreneurship context. In the following section we present three cases conducted during the second phase of our research in order to illustrate particularly the learning outcomes achieved through specific methods and approaches when addressing the objectives and content of the programmes.

#### 4.2 Supporting the learning of an entrepreneur

We explored three different training programmes for entrepreneurship from Finland, Spain and United Kingdom. The programmes were targeted to different life cycle phases of companies: potential entrepreneurs (Entrepreneurship – An interesting opportunity?), women entrepreneurs in the early start-up phase (Training programme for women entrepreneurs) and more mature, but growth- and development-oriented companies (Mastering Innovation, Creativity and Enterprise).

*'Entrepreneurship – An interesting opportunity?' (Yrittäjyys – mielenkiintoinen mahdollisuus, Finland)<sup>7</sup>*

The programme was targeted at the eight research schools in the fields of chemistry, physics, information technology and bioinformatics, life sciences and medicine development at the BioCity of Turku. The objectives of this programme for potential entrepreneurs were as follows: to increase knowledge about entrepreneurship, to bring out new aspects of entrepreneurship at the individual level, and to support possibilities of starting up as an entrepreneur and offer access to new sources of knowledge about acquiring relevant business skills. Even though the participants were advanced in their doctoral studies within natural sciences, they had no basic knowledge on business or entrepreneurship.

The programme touches upon all the objectives related to enterprise education, namely understanding about entrepreneurship, behaving entrepreneurially as well as becoming an entrepreneur (see Hytti and O'Gorman, 2004). The training programme consisted of three integrated modules which based on the entrepreneurial-directed approach<sup>8</sup> (see for the approach Garavan and O'Cinneide, 1994; Heinonen and Poikkijoki, 2006) attempted to gently move the participants from knowledge and understanding of entrepreneurship towards experience and real entrepreneurial actions: Module I: Knowledge – What entrepreneurship is?, Module II: Experience – What possibilities entrepreneurship offers to me?, Module III: Action – How do I seize the entrepreneurial opportunity? The programme was altogether 9 months in duration and it included 9 contact days with related assignments (home assignments, reports, business plan, learning diary), participation in a 12-hour business simulation, and mentoring sessions.

The programme manager thought that through *business simulation* exercise the participants were able to recognise how the decisions made affected businesses. The simulation managed to enlighten the functioning of the market mechanism in particular.

---

<sup>7</sup> This programme was launched as a pilot training programme of the Academy of Finland. The students/researchers participating the programme have been studied from different perspectives before, during and after the programme (see e.g., Heinonen, Poikkijoki and Vento-Vierikko, 2005; Heinonen Hytti and Paasio, 2006; Heinonen and Poikkijoki, 2006; Paasio and Hytti, 2006).

<sup>8</sup> The teachers of the programme called the approach entrepreneurial-directed as they considered it described best the aims and content of the programme. The approach has been influenced on by various techniques, such as experimental and participative methods and action learning (see Heinonen and Poikkijoki, 2006).



*Group exercises* made it easier for them to learn more about themselves, especially in relation to entrepreneurship, as well as getting to know the others in the group. *The company cases and visits* exposed the participants to real-life entrepreneurship. Preparation of a business plan under professional guidance during the programme encouraged the participants to concretely ponder about potential future businesses starting from the very business idea. They needed, thus, to apply in practice the theoretical concepts learnt during the session.

There were 34 participants in the programme of which two males were interviewed (T and M). Both of them had clear plans to move from academia to business life – either as an entrepreneur or an employee. They emphasised the desire to understand what entrepreneurship is all about and what kind of opportunities entrepreneurship and businesses can offer for them. During their university studies in natural sciences entrepreneurship had been non-existent.

The interviewees considered that company visits and lectures given by entrepreneurs supported their learning the most as they allowed them to see what takes place in the day-to-day life of an entrepreneur.

*“...you could see and hear in a concrete way what one does in companies, including its history and background, how it all got started... realism and concreteness were of importance” (T)*

*“...failing and success. Some role models within our field ...” (M)*

According to the participants business simulation supported the experimental side of their learning. Preparation of a business plan contributed their learning process as they at the same time participated into the national Venture Cup -competition. They considered that preparing a business plan was useful only if one already had some idea to work with. Otherwise business plan writing might be useless and artificial.

They considered the exercises based on the entrepreneurial-directed approach (related to self-reflection and group dynamics) fruitless, but acknowledged that perhaps their attitude was not open-minded enough for these exercises.

*“...perhaps you could have gained something, had you had a right attitude. However, in relation to businesses and entrepreneurship, I don't know what. Perhaps there was some connection, but I didn't find it.” (T)*

On the other hand the interactive exercises supported in their opinion group formation and dynamics. They considered the web-based learning environment (WebCT) as a useful storage for assignments and learning material, but otherwise it was not supporting their learning. The learning diaries were also considered something which just needed to be accomplished in order to pass the programme.

*“...well, I wrote it in the last day and don't know what it was worth for.” (M)*

*“...if you systematically reflected and wrote it, it might be useful... for some people it is more natural to compile the diary. (T)*

The interviewees stressed the importance of hands-on experience and learning by doing in their learning. Also the role of one's own enthusiasm was emphasised. You need to be excited and take concrete steps in order to be able to learn through doing and experience. In

addition, the interviewees thought that entrepreneurship studies should be integrated as an elementary part of doctoral studies in natural sciences.

*'Training programme for women entrepreneurs' (Programa de Formación para emprendedoras y Empresarias), Spain*

The programme was run by the Woman Institute (Instituto de la Mujer) dependant on the Spanish Ministry of Labour and Social Affairs, in collaboration with the Industrial Organisation School (Escuela de Organización Industrial EOI). The content and the focal areas of the programme may vary each year. The programme was run by the EOI, and marketed by the Woman Institute, mainly to Spanish regional governments, which procure the courses relevant for their region's needs. The programme was targeted to women who have a business idea or have recently created their own business and need support in the early phases in evaluating and implementing their business idea. Majority of the participants were unemployed and still working on their business idea. In the year 2004 there were 278 participants in the programme.

The programme had a clear business focus and it attempted to support the entrepreneur in starting-up and running a company (see Hytti and O'Gorman, 2004). The programme consisted of three phases: I Business Idea, II The Business Launching and, III The Business Consolidation. In the beginning group work, presentations and performances of the participants and expert lectures were used to support the learning of the women, mainly on how to set up and run a business. The learning was also supported through individual and group feedback, that enhance the participant interaction within the group. In the second phase, which lasted about a year, the programme director gave personal assistance and mentoring support in order to encourage business start-up. The participants were also given legal advice to help with the setting up a company. Finally, the companies that had survived for a year in the market place continued to the third phase of the programme. The companies were provided with the possibility to get expert advice from the REDEPYME-network, which gathers together entrepreneurs from the previous programmes. This gave an opportunity for the entrepreneurs to exchange knowledge and experiences as well as learn from each other. The programme integrated in a customer-oriented way the theory and practise by using flexibly, different learning methods ranging from traditional lecturing to business simulations, company visits and finally setting up a real business.

The programme organisers thought that the success of the programme stems from very practice-oriented approach to learning, where the required knowledge is delivered in an understandable way to the very heterogeneous target group. *Group works* introduced the participants into a dynamic business environment. *The presentations and performances of the participants* increased their communication skills and ability to tolerate stress. *Expert lecturers* not only delivered teaching, but also provided them with useful and more accurate

knowledge, which was useful in their businesses. *Feedback system* increased the interaction between the participants and the teachers and, thus, promoted dynamic learning. *Personal legal expert advice* sped-up the start-up process considerably. Similarly *personal mentoring* supported the critical first phases of the company by providing the entrepreneurs not only with correct and ready-made answers, but rather giving them the possibility for self-reflection. Finally, through *REDEPYME-network* the entrepreneurs were able to learn from each others' mistakes, success and experiences (see social learning e.g., Rae, 1999).

Three women of different ages participating in the programme were interviewed (N, I and M). The youngest, N, had a university degree in the natural sciences and the eldest, I, an engineering background from the college. M had gained some college and vocational education in economics. N wanted to find out to what extent entrepreneurship was a viable career option for her. I had already decided to start up a company before participating in the programme, but wanted to gain more knowledge on business management. From the interviewed women only M already had a company, although only employing herself, and had a desire to increase her business competence.

*Setting up a real business and/or developing the business idea* were not only objectives of the programme but also practical activities, which were considered very effective. Because the participants had poor prior knowledge about setting up a company *the support and feedback received from the teachers* were highly appreciated. *The expert lectures* were well aware of the learning constraints of the participants and capable of delivering the business concepts in an understandable manner.

*The presentations and performances of the participants* in the front of professional audience gave the needed experience as they were not used to official events. *Group works* were feasible particularly if understanding of a new concept required reflection and the changing of experiences and views of the participants. Participative methods not only provided concrete knowledge and tools to the participants, but they also contributed the development of participants' personal skills and attributes such as self-confidence, problem solving and risk-tolerance. In addition, group work increased their communication skills. Traditional lecturing, on the other hand, was criticised.

*"Lectures where a teacher just teaches are definitely not successful and I tend to lose my concentration... this takes place especially if the interaction between the teacher and the participants is difficult to maintain because the issue to be learnt is too theoretical, such as labour law or tax liability."* (N)

Despite the practice-orientation of the programme the interviewees considered that too much time was put into teaching theoretical concepts and too little on practical activities. The interviewees longed for more real-life case visits and entrepreneurs as lecturers (see Erikson, 2003 on vicarious and social experiences needed). In addition to *developing their own projects* during the programme they considered that business simulations and role-play

exercises could have been exploited more efficiently. They emphasised the importance of their own commitment and activity in their learning.

*"In entrepreneurship you need to be truly committed and engaged to your project ... On the other hand sometimes it is hard to remove your preconceived ideas about business. It is rather a question of un-learning of current thinking rather than of learning new thinking."* (N)

In addition the interviewees considered it important for the participants to have a business idea to work with.

*"I don't think that the programme is successful if one expects that the business idea is an outcome of the programme, as you cannot apply the acquired knowledge until you have the business idea."* (I)

The interviewees considered it significant that women have possibilities to join training programmes focused solely on women. They argued that women face different challenges in their businesses than men (e.g., balancing family and business, see also Naisyrittäjyys – nykytilanne ja toimenpide-ehdotuksia, 2005). However, they stressed that the issue needs to be tackled in a delicate manner and prevent any discussion on gender equality.

#### *'Mastering Innovation, Creativity and Enterprise', UK*

The training programme run by the University of Salford in the North West of the UK was financed by ESF (Regional Objective 3) and targeted at companies with entrepreneurs or senior managers willing to grow and widen their activities. The programme aimed at developing their creativity, innovation and enterprise skills and their ability to achieve efficiency and growth in their businesses. The focus was on up-dating and developing management competences through better managerial and IT skills. The programme had a clear business focus, but it also aimed at supporting the participants into behaving entrepreneurially (see Hytti and O'Gorman, 2004).

The programme supporting the problem-solving skills of the participants had the following learning themes: I New products/services – from inception to launch, II Developing products and services for profit, III Organising the business for the future, and IV Growth strategies. The programme exploited a number of different learning methods: action learning<sup>9</sup>, traditional lecturing and group work, virtual learning via web-based a portal, conventional and virtual networking and mentoring. The programme delivered a self-paced and self-directed learning environment, empowering entrepreneurs/managers with necessary tools, techniques and skills to manage innovation, creativity and enterprise to improve efficiency and growth within their own company. The focus was on solving a problem or a challenge related to company growth by working together with entrepreneurs/managers themselves, peers and networks, mentors, facilitators and university students (depending on the nature of the problem).

---

<sup>9</sup> Action learning refers here to a method of organisational and individual development, in which real people solve and take action on real problems in real time and learn through questioning and reflection while doing so (Marquardt and Waddill, 2004).

The programme was considered successful as it managed to create a wide network committed to solve the problems as well as to support the learning and development of the companies and entrepreneurs/managers involved (see Swann and Farrall, 2005). The programme manager emphasised the role of *one's own reflection and self assessment* in learning, that was also supported by *group work* and constant *peer review* within the networks. It was of utmost importance that during the programme the participants were able to achieve identifiable outcomes – not only increase their theoretical knowledge and understanding – which were immediately applicable in the companies.

There were 250 participants in the programme of which three were interviewed: a female partner of a confectioner company with a college/upper secondary education employing more than 10 persons (E), managing director with a vocational background working in mobile communications employing more than 10 persons (J, male), and an entrepreneur with an university education in humanities and education working in marketing and employing a few persons (P, male). The interviewees wanted to take the business forward – to gain deeper understanding about businesses and acquire new competences to make better decisions in their companies.

According to the participants *group works* were successful in their learning. University teachers participated in the groups and delivered the theoretical background knowledge. Discussions, debates and exchanging experiences, i.e. more practise-oriented part of activities, were, however, considered the most fruitful elements.

*"We learned from each others' experiences as well as helped each other to solve business problems."* (E)

*Company cases* attempting to solve the real-life problems brought up by entrepreneurs were considered fruitful as reflection and learning were then based on real problems and challenges in existing companies. The interviewees appreciated highly also *mentoring*. Its success stemmed from the professional and experienced mentor chosen, who was trusted and capable of catalysing the group into interactive and productive discussion. The mentor was able to apply relevant theoretical concepts and models in each company case and to encourage entrepreneurs to exploit them in solving the problems. It was considered as a kind of an *action learning* set, where processing and solving the problem contributed learning in real-life situations. The expressions such as learning by application and by examples as well as through experience and mistakes were related to the way they believed the entrepreneurs were learning.

*"By example and application. I don't learn anything well without the opportunity to apply it."* (P)

*"...from my own practice and own mistakes!"* (J)

*"...from discussion with experts and business people ... by application and from each others' real business problems."*(E)

The programme outcomes were related to growth of both the participant and his/her business by recognising key skills and attributes to enable the participant to become more

entrepreneurial and by providing concrete tools for the business development. The interviewees longed for even stronger personal expert assistance and mentoring. It was considered potentially very useful if they would have been able to continue the discussions with the experts for at least a year. Similarly some follow-up activities would have been useful.

## **5. From learning of entrepreneurs towards to entrepreneurial learning**

The study explored how (potential) entrepreneurs are being taught and what are the respective learning outcomes. The focus was on delivery methods, the content of the training programmes as well as achieved learning outcomes and objectives. Our results reveal that the studied training programmes (26 in total) exploited a great number of different learning methods in a variety of ways. Most of the programmes were “multi-method” –programmes attempting to address both “science” and “art” of entrepreneurship by providing the participants with tools to analyse, manage and evaluate their business as well as by giving them an opportunity to develop their entrepreneurial skills, attributes and motivation through experience.

Through more in-depth case studies we focused on learning objectives and particularly on learning outcomes as perceived by entrepreneurs themselves and programme managers. Our research results are indicative based on the analysis of secondary data and interviews related to the training programmes from three countries. Even though the research group followed a predetermined research protocol during all phases of the study (see methodology), it is evident that the results are originated from national and international multi-phased interpretation process. Despite its limitation our study gives new and interesting information about learning of entrepreneurs in various contexts.

Based on our study, entrepreneurs learn through applications, doing, experiences, examples and mistakes. The learning outcomes of the interviewees were created in a process where an entrepreneur experiments and then applies the knowledge and experiences gained in a real-life situation. Entrepreneurial learning process, thus, integrates the learning outcomes related to the “science” and “arts” of entrepreneurship. Although the learning outcomes related to the “science” are more easily identifiable, the learning outcomes related to the “arts” of entrepreneurship are also noteworthy. This study illustrates how especially participative methods, but also methods based on working life and modelling entrepreneurship seem to be more likely to promote the “arts” of entrepreneurship, i.e., personal properties and motivation. The learning of entrepreneurs identified in this study resembles the notion of entrepreneurial learning presented in the most recent research (see Rae, 2006) integrating the “science” and “art” of entrepreneurship. Our study portrays the learning of entrepreneurs as a highly holistic and synthetic process as entrepreneurship itself,

and needs to be addressed accordingly in order not to lose the true meaning of the word entrepreneurship (Akola and Heinonen, 2006; see also Hjorth, 2003; Kuratko, 2005).

Based on the study a number of approaches supporting learning of (potential) entrepreneurs can be highlighted. Company cases and visits were able to expose the participants to entrepreneurship and the real-life of entrepreneurs. Business simulations and games gave the participants an opportunity to “taste” this reality. These participative methods as well as methods based on working life and modelling entrepreneurship supported the “arts” of entrepreneurship by giving the participants a possibility to experience entrepreneurship. Similarly, advancing a real project, such as planning, setting up and running a business, supported their learning. Analytical tools gained and finally needed during their real project were usually provided via more traditional methods supporting the “science” of entrepreneurship. However, if the project was not firmly integrated into practice (e.g., working out of a hypothetical business idea or business plan), learning outcomes were more modest. The analytical tools were not enough for entrepreneurial learning process *per se* to take place but needed also to be applied in the real life context.

Although the process of learning is highly individual, the persons around entrepreneurs can support their learning. The group is there to catalyse and extend the thinking of entrepreneurs rather than to squeeze it into any existing analytical framework. In our study the others were considered as a source and forum for exchanging experiences and knowledge as well as of reflection. The role of reflection, assessment and interactive pondering is of crucial importance in the learning of entrepreneurs (see Järvinen and Poikela, 2001). According to Mezirow (1991) successful reflection is a pre-requisite for new ideas and innovative working modes. Reflection and exercises *per se* are not objectives, but the fact that during reflection and exercises new knowledge, skills and experience are integrated in a practical setting. In addition to peers and groups, a capable and experienced mentor (content and process wise) can support learning of entrepreneurs.

Finally, our study demonstrates that the enthusiasm and commitment of entrepreneurs affect their learning. The process of entrepreneurship is about innovative action and extending life beyond experiences, the learning of which requires an innovative approach inviting reflective and intellectual activity (see Hjorth and Johannisson, 2007). This does not imply that the content to be learnt would not matter and only the process would be of any importance. It rather means that entrepreneurs seem to learn entrepreneurially, when content (knowledge and analytical skills to be learnt) and the learning process proceed side by side. In entrepreneurial learning the content gains some meaning only when integrated with process which is taking place in a context familiar to an entrepreneur. Analytical tools learnt, thus, need to be applied in practice in order to secure the entrepreneurial learning process to take place. Therefore, it is of crucial importance not only to exploit learning methods supporting the learning of entrepreneurs, but also to integrate them clearly with the content to

be learnt (see Fiet, 2000). If the method and content do not "negotiate" and are unbalanced the opportunities for effective entrepreneurial learning to take place reduce (see Rodrigues, 2004). Then there is a danger that either the delivery process or content to be learnt become the end in itself, and the holistic notion of entrepreneurial learning fades away.

## **6. Practical implications and suggestions for further research**

The research results are useful when planning and running training programmes for (potential) entrepreneurs. Regardless of the educational background of the participants and whether they already run a company or not, from the learning point of view it is important that the programme is concrete and practical enough. Different assignments (e.g., working on a business idea or a plan) do not support learning if they are not embedded in a real-life situation, and are easily considered artificial and useless. Therefore, it is worth emphasising the need of tailor-made and well-targeted training programmes for pre-selected entrepreneurs. This idea is further supported by the fact that personal guidance and mentoring enhance entrepreneurial learning, and smaller groups (or classes) make it possible to include elements of firm interaction in the learning process. All these participative methods develop entrepreneurial personal properties and motivation, and provide (potential) entrepreneurs with some entrepreneurial experience addressing, thus, also the "art" of entrepreneurship. When awareness-raising and changes in entrepreneurial attitudes are not at stake, but the programme rather attempts to support an entrepreneur to start-up and run a company, would it not be better to have a smaller number of very successful learning outcomes than greater number of poor ones?

Our cases also demonstrate the role of professional and competent guidance in exploiting participative methods as well as methods based on working life and modelling entrepreneurship. In entrepreneurship training a good facilitator or mentor is not only a pedagogic expert but also one possessing a deep knowledge and understanding of the content – entrepreneurship – as the content and process are to be taken forward and tandem. This brings great challenges to educators in the field of entrepreneurship as only a few educators are experienced enough in entrepreneurship and pedagogy at the same time.

Finally, our research brings up some questions worth further research. Our results are based on the subjective opinions of the participants and project managers about learning of entrepreneurs. More important questions, however, are how the learning outcomes are transferred into practice and do the learning outcomes lead to better entrepreneurs or more successful companies? It is a question of looking separately how much and what participants learn and whether what they learn is relevant (Honig, 2004). Learning outcomes *per se* are not the ultimate goals. As Kirkpatrick (1994) has presented it is relevant to differentiate between four levels of effects when assessing the learning outcomes of the students, namely



reactions, learning, performance/behaviour, and results<sup>10</sup>. All four levels are worth studying and need to be handled with care in order not to mix up the different kinds of learning outcomes. The impacts on performance and final results ('What impact has the training achieved?') are not only the most interesting ones, but also the ones which are most difficult to capture. It is more important to focus on how the results of the learning outcomes can be identified in the business. The training and learning of entrepreneurs is, thus, a part of a much wider picture, the researching of which becomes even more challenging.

## 7. References

- Akola, E., Heinonen, J., (2006), "Does Training of Entrepreneurs Support Entrepreneurial Learning? A Study of Training Programmes for Existing and Potential Entrepreneurs in Seven European Countries", *Paper presented in the 51st ICSB World Conference*, Melbourne, Australia, 18–21 June, 2006. Published in conference proceedings in CD-ROM.
- Bygrave, W. D., (1989), "The Entrepreneurship Paradigm (II): Chaos and Catastrophes among Quantum Jumps?" *Entrepreneurship Theory and Practice*, Vol. 14, (No. 2), pp. 7–30.
- Commission of the European Communities (2003), *Green Paper: Entrepreneurship in Europe*, Brussels 21.1.2003, COM(2003) 27 final.
- Cope, J., (2005), "Toward a dynamic learning perspective of entrepreneurship", *Entrepreneurship: Theory and Practice*, Vol. 29, (No. 4), pp. 373–397.
- Corbett, A.C., (2005), "Experiential learning within the process of opportunity identification and exploitation", *Entrepreneurship: Theory and Practice*, Vol. 29, (No. 4), pp. 473–491.
- Deakins, D., Freel, M., (1998), "Entrepreneurial learning and the growth process in SMEs", *The Learning Organization*, Vol. 5, (No. 3), pp. 144–155.
- De Faoite, D., Henry, C., Johnston, K., van der Sijde, P., (2004), "Entrepreneurs' attitudes to training and support initiatives: Evidence from Ireland and the Netherlands", *Journal of Small Business and Enterprise Development*, Vol. 11, (No. 4), pp. 440–448.
- Dutta, D.K., Crossan, M.M., (2005), "The nature of entrepreneurial opportunities: Understanding the process using the 4I organizational learning framework", *Entrepreneurship: Theory and Practice*, Vol. 29, (No. 4), pp. 425–449.
- Erikson, T., (2003), "Towards a taxonomy of entrepreneurial learning experiences among potential entrepreneurs," *Journal of Small Business and Enterprise Development*, Vol. 10, (No. 1), pp. 106–112.
- Fiet, J.O., (2000), "The pedagogical side of entrepreneurship theory", *Journal of Business Venturing*, Vol. 16, (No. 2), pp. 101–117.

---

<sup>10</sup> *Reaction of students* – what they thought and felt about the training, *learning* – the resulting increase in knowledge or capability, *behaviour* – extent of behaviour and capability improvement and implementation/application, and *results* – the effects on the business or environment resulting from the trainee's performance (Kirkpatrick, 1994).

- Garavan, T.N., O’Cinneide, B., (1994), “Entrepreneurship education and training programmes: a review and evaluation – part 1”, *Journal of European Industrial Training*, Vol. 18, (No. 8), pp. 3–12.
- Gibb, A., (1993), “The enterprise culture and education. Understanding enterprise education and its links with small business, entrepreneurship and wider educational goals”, *International Small Business Journal*, Vol. 11, (No. 3), pp. 11–34.
- Gibb, A., (1996), “Entrepreneurship and small business management: Can we afford to neglect them in the twenty-first century business school?” *British Journal of Management*, Vol. 7, (No. 4), pp. 309–321.
- Gibb, A., (2002), “In pursuit of a new ‘enterprise’ and ‘entrepreneurship’ paradigm for learning: Creative destruction, new values, new ways of doing things and new combinations of knowledge”, *International Journal of Management Review*, Vol. 4, (No. 3), pp. 233–269.
- Gorman, G., Hanlon, D., King, W., (1997), “Some research perspectives on entrepreneurship education, enterprise education and education for small business management: A ten-year literature review”, *International Small Business Journal*, Vol. 15, (No. 3), pp. 56–77.
- Harrison, R., Leitch, C., (2005), “Entrepreneurial learning: Researching the interface between learning and the entrepreneurial context”, *Entrepreneurship: Theory and Practice*, Vol. 29, (No. 4), pp. 351–371.
- Heinonen, J., (1999), *Kohti asiakaslähtöisyyttä ja kilpailukykyä. Sisäinen yrittäjäyys kunnallisen yksikön muutoksessa* (Towards customer orientation and competitiveness. The potential of intrapreneurship in the change process of a municipal service unit), Dissertation, Publications of Turku School of Economics A-5/1999: Turku.
- Heinonen, J., Poikkijoki, S-A., Vento-Vierikko, I., (2005), “Entrepreneurship – An opportunity for academics? A case study of a training programme for bioscience researchers”, *Paper presented in the RENT XIX Conference* in Naples, Italy, November 17–18, 2005. Published in a conference proceedings in CD-ROM + Abstract in Conference Abstract Proceedings, 18 p.
- Heinonen, J., Hytti, U., Paasio, K., (2006), “Impacts of entrepreneurship programme for bioscience researchers – a longitudinal study of entrepreneurial intentions”, *Paper presented in the EFMD 36th EISB (Entrepreneurship, Innovation and Small Business) Conference* in Southampton, United Kingdom, September 6–8, 2006, 15 p.
- Heinonen, J., Poikkijoki, S-A., (2006), “An entrepreneurial-directed approach to entrepreneurship education: Mission impossible?” *Journal of Management Development*, Vol. 25, (No. 1), pp. 80–94.
- Henry, C., Hill, F., Leitch, C., (2003), *Entrepreneurship education and training*. Ashgate, Aldershot, Hants.
- Henry, C., Hill, F., Leitch, C., (2005), “Entrepreneurship education and training: Can entrepreneurship be taught? Part II”, *Education + Training*, Vol. 47, (No. 3), pp. 158–169.

- Hisrich, R.D., O’Cinneide, B., (1986), “The Irish entrepreneur: Characteristics, problems and future success”, in Ronstadt R., Hornaday J. A., Peterson R., Vesper, K. (Ed. by), *Frontiers of Entrepreneurship Research. Proceedings of the Sixth Annual Babson College Entrepreneurship Research Conference*, Babson College: Wellesley, MA.
- Hisrich, R.D., Peters, M.P., (1998), *Entrepreneurship*, Irwin McGraw-Hill, Boston, MA.
- Hjorth, D., (2003), “In the tribe of Sisyphus: rethinking management education from an “entrepreneurial” perspective”, *Journal of Management Education*, Vol. 27, (No. 6), pp. 637–653.
- Hjorth, D., Johannisson, B., (2007), “Learning as an Entrepreneurial Process”, In *Handbook of Research in Entrepreneurship Education* (Ed. A. Fayolle), Cheltenham: Edward Elgar, 46-66.
- Honig, B., (2004), “Entrepreneurship Education: Toward a Model of Contingency-Based Business Planning”, *Academy of Management Learning and Education*, Vol. 3, (No. 3), pp. 258–273.
- Honkanen, V., (2004), “Yrittänyttä ei laiteta – Ammattikorkeakoulujen yrittäjäyyskoulutuksen viisasten kiveä etsimässä (Nobody is blamed for trying - In quest of philosopher’s stone of enterprise education in polytechnics)”, Turun yliopisto, Koulutussosiologian tutkimuskeskus, RUSE (University of Turku, Research Unit for the Sociology of Education, RUSE).
- Hytti, U., (2002), *State-of-Art of Enterprise Education in Europe – Results from the ENTREDU project*. Turku School of Economics and Business Administration, Small Business Institute.
- Hytti, U., O’Gorman, C., (2004), “What is ‘enterprise education’? An analysis of the objectives and methods of enterprise education programmes in four European countries”, *Education + Training*, Vol. 46, (No. 1), pp. 11–23.
- Jack, S.L., Anderson, A.R., (1999), “Entrepreneurship education within the enterprise culture. Producing reflective practitioners”, *International Journal of Entrepreneurship Behaviour & Research*, Vol. 5, (No. 3), 110–125.
- Järvinen, A., Poikela E., (2001), “Modelling reflective and contextual learning at work”, *Journal of Workplace Learning*, Vol. 13, (No. 7/8), pp. 282–289.
- Katz, J.A., (2003), “The chronology and intellectual trajectory of American entrepreneurship education 1876–1999”, *Journal of Business Venturing*, Vol. 18, (No. 2), pp. 283–300.
- Kirkpatrick, D., (1994), *“Evaluating Training Programme”s*, San Francisco, CA: Berrett-Koehler Publishers, Inc.
- Kirby, D., (2004), “Entrepreneurship education: Can business schools meet the challenge?” *Education + Training*, Vol. 46, (No. 8/9), pp. 510–519.
- Klofsten, M., (2000), “Training entrepreneurship at universities: a Swedish case”, *Journal of European Industrial Training*, Vol. 24, (No. 6), pp. 337–344.
- Kuratko, D.F., (2005), “The emergence of entrepreneurship education: development, trends, and challenges”, *Entrepreneurship: Theory and Practice*, Vol. 29, (No. 5), pp. 577–597.
- Lumpkin, G.T., Lichtenstein, B.B., (2005), “The role of organizational learning in the opportunity-recognition process”, *Entrepreneurship: Theory and Practice*, Vol. 29, (No. 4), pp. 451–472.

- Marquardt, M., Waddill, D., (2004), "The power of learning in action learning: a conceptual analysis of how the five schools of adult learning theories are incorporated within the practice of action learning", *Action Learning: Research and Practice*, Vol. 1, (No. 2), pp. 185–202.
- Matlay, H., (2005), "Researching entrepreneurship and education. Part 1: What is entrepreneurship and does it matter?" *Education + Training*, Vol. 47, (No. 8/9), pp. 665–677.
- Mezirow, J., (1991), *Transformative Dimensions of Adult Learning*, Jossey-Bass, San Francisco, CA.
- Naisyrittäjiys – nykytilanne ja toimenpide-ehdotuksia* (2005), (Women Entrepreneurship – present situation and proposals for measures) KTM Julkaisuja 11/2005, elinkeino-osasto, Edita Publishing Oy.
- Paasio, K., Hytti, U., (2006), "Entrepreneurship Programme for PhD Students – A Longitudinal Study of Entrepreneurial Intentions", *A Paper presented at the SMU Edge Conference*, Singapore, July 2–5, 2006.
- Politis, D., (2005), "The process of entrepreneurial learning: A conceptual framework", *Entrepreneurship: Theory and Practice*, Vol. 29, (No. 4), pp. 399–424.
- Rae, D., (1999), *The Entrepreneurial Spirit: Learning to Unlock Value*, Blackhall, Dublin.
- Rae, D., (2004), "Entrepreneurial learning: a narrative-based conceptual model", *Paper presented in Institute for Small Business Affairs 27<sup>th</sup> National Conference*, Newcastle Gateshead, United Kingdom, November 2–4, 2004.
- Rae, D., (2006), "Entrepreneurial learning: A conceptual framework for technology-based enterprise", *Technology Analysis & Strategic Management*, Vol. 18, (No. 1), pp. 39–56.
- Rodrigues, C.A., (2004), "The importance level of ten teaching/learning techniques as rated by university business students and instructors", *Journal of Management Development*, Vol. 23, (No. 2), pp. 169–182.
- Shane, S., Venkataraman, S., (2000), "The promise of entrepreneurship as a field of research", *Academy of Management Review*, Vol. 25, (No. 1), pp. 217–226.
- Shook, C.L., Priem, R.L., McGee, J.E., (2003), "Venture Creation and the Enterprising Individual: A Review and Synthesis", *Journal of Management*, Vol. 23, (No. 3), pp. 379–399.
- Solomon, G.T., Duffy, S., Tarabishy, A., (2002), "The state of entrepreneurship education in the United States: A nationwide survey and analysis", *International Journal of Entrepreneurship Education*, Vol. 1, (No. 1), pp. 65–86.
- Swann, K., Farrall, N., (2005), *Mastering ICE programme review survey*, E-LMI.
- Vesper, K.H., Gartner, W.B., (1997), "Measuring progress in entrepreneurship education", *Journal of Business Venturing*, Vol. 12, (No. 5), pp. 403–421.

**University – Industry Relationships**  
**- What Academics Actually Do and Think about it**

Clas Wahlbin,  
Jönköping International Business School,  
Post Box 1026, 551 11 Jönköping, SWEDEN  
e-mail: clas.wahlbin@hj.se

Caroline Wigren,  
Jönköping International Business School  
Post Box 1026, 551 11 Jönköping, SWEDEN  
e-mail: Caroline.Wigren@ihh.hj.se

Key words: University-Industry relationships, research commercialization, entrepreneurship, culture

## **1. Background**

Etzkowitz (1998) argue for the second revolution in academia, meaning that social and economic development is today part of the university's mission. The old mission, teaching and research, is still continued. He compares the old forms of university-industry relationships with the new. While the old ones were payment for services rendered, received either as consultation fees or endowment gifts, the new ones are capital formation projects, e.g. real estate development and formation of firms, in which faculty members participate. The university is according to him the most important actor when it comes to regional economic development. University research is extended into development and, furthermore, industrial research goals are set by the university. The trend to commercialize academic research is according to Etzkowitz (1998) a result of a change in attitudes among faculty members, i.e. an increased motivation, and more internal capacities to administer research services. The term the entrepreneurial university has been launched (Clark, 1998), which is a university working with a strategic direction both regarding academic goals and regarding knowledge transfer, i.e. turning knowledge into economic and social utility.

Swedish universities shall conduct research and education, and they are required by law to do that in cooperation with the surrounding society. The cooperation task is interpreted by the Swedish National Agency for Higher Education as including the following three parts: to inform and communicate about research to the general public; to cooperate in order to further knowledge development and growth; and to cooperate in order to give better education. The agency emphasizes that cooperation is something that should be part and parcel of all activities.

No study has so far mapped what Swedish academics actually do and think about university-industry relationships. Rather, focus has been on comparative analysis between the Swedish case and other countries, such as US (e.g. Goldfarb and Henrekson, 2003). Some studies have been made with a focus on company start-ups by researchers (e.g. Olofsson and Wahlbin, 1993) and commercialization of patented research results (e.g. Riksrevisionsverket, 2001).

## **2. The Purpose and Research Questions of the Paper**

This paper is focused on cooperation in order to further knowledge development and growth in society. That includes university-industry relationships of all kinds, including when researchers start a company and thus become part of the industry themselves. The paper is

based on the first survey in Sweden of what academics actually do in cooperation and what they think of it. The paper also reports some few of the main results of the survey.

Universities are ascribed an important role in knowledge intensive societies (Etzkowitz, et al., 2000), and especially regarding technological innovations (Goldfarb and Henrekson, 2003). Furthermore, universities are often considered to be a seedbed for entrepreneurship, and new firms are expected to be founded by students and faculty.

More in detail, studies have explored reasons for cooperation (Gomes et al., 2005), barriers to cooperation (Lopez-Martinez et al., 1994; Cyert and Goodman, 1997; Gomes et al., 2005), benefits from cooperation (Behrens and Gray, 2001), and strategic alliances between universities and corporations (Elmuti, et al., 2005).

There are several reasons for universities and firms to cooperate. Gomes et al. (2005) mention the following reasons: creative breakthrough, academic freedom, social change, outsider's perspective, flexibility of research (Nissani, 1997); learning from one's partner, access to knowledge networks, funding (Sáez et al., 2002); global improvement of both management research and management practice (Amabile et al., 2001). Furthermore, they argue that universities get access to funding, empirical data, and interesting research questions through collaboration with industry. Elmuti et al. (2005) discuss that businesses create alliances with academic institutions to raise global competitiveness, to stimulate innovations in products and processes, to lower R&D expenditures, and to create technological transfer opportunities.

Our interest is in basic facts, and in fact-based analysis. If a reason to cooperate is to increase academic freedom, how many in the Swedish academic profession actually think that cooperation increases academic freedom, and how many that it decreases it? If a reason to cooperate is to learn from one's partner, how many have actually taken part in a joint research with industry partners, and how many have taken part in commissioned research? How many in the Swedish academic profession have actually started a company? How many think that cooperation makes for better research, and how many that it makes research worse?

For this paper, we are particularly interested in the differences between different universities in both participation and opinion, in the differences between academics in different scientific fields, and possible explanations of such differences in terms of cultures and subcultures. We use the term scientific tribe when we discuss the academics within a specific scientific field. When discussing culture, we rely on Martin (2002). We look for integrated cultures within a whole university, and cultures for scientific tribes that can be traced at whatever universities they work.

In what follows, we describe the empirical study and some of the general findings. Next, we report on participation in cooperation for knowledge development and growth, and then on opinions on cooperation, ending with a discussion of the findings.

### 3. The Empirical Study – Method and Data

The data for this paper are some of the findings from a study investigating cooperation in general, i.e. in all three areas given above. The purpose of that study was to investigate what teachers and researchers do when it comes to cooperation and their perceptions towards it.<sup>11</sup> The data were collected at the very end of 2005 and in early 2006. Cooperation partners were broadly defined in the study, including not only the business society but also governmental actors, non-profit organizations, etc. since the study investigated academics in all scientific areas. Five Swedish universities were included in the study: Göteborg University, Jönköping University, Linköping University, Umeå University, and Växjö University.

Some basic data about the five universities are given in Table 1, for use in the discussions of results. We have included indicators of age as an academic institution; of size in education and research; of the relative size of different areas of science; and of cooperation with the surrounding society. The indicator share of research externally funded is the share of research that is not directly funded by a long-term government appropriation. 50 per cent external funding means that for each crown in government appropriation, the researchers manage to get one crown in external financing in competition with other universities, research institutes etc., 66 per cent means two external crowns for each “government crown”, etc.

<i>2005, shares in per cent</i> <i>FTE= full-time equivalents</i>	<i>Göteborg</i>	<i>Jönköping</i>	<i>Linköping</i>	<i>Umeå</i>	<i>Växjö</i>
Year of start of academic education	1891	1977	1967	1959	1967
Undergraduate and master students, FTE	25824	6634	18041	16904	7414
- share in humanities, law and social sciences	50	42	35	42	55
- share in natural sciences	15	4	17	14	10
- share in technology	1	24	24	10	7

<sup>11</sup> The study is part of a national program initiated and founded by Nutek, The Swedish Agency for Economic and Regional Growth. The focus of the program is on the entrepreneurial university, and on cooperation between academia and small and medium sized firms (SME). The program runs from 2004 to 2007 and involves 13 experimental cooperation projects in which 19 Swedish universities participate. The total budget of the program is 40 million Swedish crowns (roughly 4 million euro) and it is headed by the author Caroline Wigren. The study reported in this paper is a small part of the whole program, and was initiated because many in the program saw a lack of basic facts. The study was designed as a pilot study for a full-scale national study, and such a national study will be made in early 2007.



Rights to award Ph.D. degree	All fields	Humanities and social sc.	All fields	All fields	All fields
- year of above rights	1954	2004	1975	1963	1999
Ph.D. students, fall 2005, FTE	1209	39	823	790	136
- share employed by the university	39	90	69	64	71
Academic staff, FTE	2151	310	1346	1599	410
- share with Ph.D.	60	34	61	54	38
- share full professors	20	10	20	15	10
Research income, million Sw. crowns	2442	139	1253	1574	208
- share of total income	58	24	50	54	31
- share with external financing	47	66	54	45	31
- share commissioned research	7	20	7	9	31 <sup>12</sup>

Table 1. Some characteristics of the five universities in the study<sup>13</sup>

The universities in Göteborg, Linköping and Umeå are all large by Swedish standards, and go back three decades or more as academic institutions with research and Ph.D. education. The universities in Jönköping and Växjö are much younger as academic seats of learning – Jönköping got the rights to award Ph.D.s only in 2004, and in humanities and social sciences only<sup>14</sup>.

The education (and research) profiles are different. The city of Göteborg is also the home of Chalmers University of Technology, and education in technology is given by Chalmers. (In research, they cooperate, for instance having joint departments in physics and chemistry since the 1960s.) Göteborg and Växjö have half or more of their students in humanities and social sciences, while Jönköping and Linköping have a quarter in technology (engineering).

At the three older universities, research and Ph.D. education is half or more of their operations, while at the two younger it is around a quarter. At the older universities, more than 50 per cent of the academic staff have a Ph.D. and some 15-20 per cent are full professors. At the younger ones, the corresponding shares are 35-40 and 10 per cent. The two younger universities have a larger share of research income as commissioned research. Share of research externally funded has no correlation with age as an academic institution. The two youngest universities have both the largest and the smallest share.

<sup>12</sup> That is equal to the total share of research that is externally funded, and we suspect a data error in the statistics of the Swedish National Agency for higher education, but we have not had the time to check with them.

<sup>13</sup> The figures come from the key figure database at The Swedish National Agency for Higher Education, [www.hsv.se](http://www.hsv.se)

<sup>14</sup> Jönköping has some 50 employed Ph.D. students in technology, but they are registered at other universities since Jönköping does not have the right to award a Ph.D. in technology.

The five universities are located in different areas in Sweden. The three older universities represent quite well different types of older universities in Sweden, and the two newer quite well new universities with the right to award Ph.D.s. Not covered in the sample are those without such rights, and “single-science” universities like Chalmers in technology or the Karolinska Institute in medicine.

Jönköping University was a government university until 1994, when it and Chalmers “went private” by a parliament decision, and were set up as foundations. There are some few other private universities and colleges in Sweden, but with the exception of Stockholm School of Economics they are quite small.

The survey was web-based and the population investigated was teachers and researchers of all kinds and Ph.D. students employed by the universities, with a cut-off for inclusion of being employed 40 per cent of full time or more. Ph.D. students not employed by the university were not included.<sup>15</sup> The sample population was those in the population that had an e-mail address registered at the university. At the three larger universities (Göteborg, Linköping and Umeå) random samples of 1 000 were drawn, at the two smaller all were sampled. 7 per cent of the sample was outside the population, having left the university, being on long-term sick leave or on maternal/paternal leave etc. For the rest, the response rate was 53 per cent, ranging from 42 to 63 per cent, the lowest due to a computer environment at part of the university that did not work well with the web-based survey. For Swedish standards at least, the response rate is high, e.g. Riksrevisionsverket (2001) had 27 per cent.

The questionnaire had 55 questions and a number of background questions. The internal non-response on question 55 was 12 per cent, ranging between 9 and 14. This is quite low. The questionnaire was available for the respondent in a Swedish and an English version, and between three and six per cent answered the English version at the five universities.

There were 29 questions on participation in different activities in 2005 of the type: “Have you, in 2005, founded a company (alone or together with others)?”, with three alternatives for answers: “Yes, in (number of) start-ups”; “Not in 2005, but earlier”; “No, never”. Some few questions had a follow up question if yes, e.g. the one above: “If yes, was any co-founder a person not employed by a university?”

The questions asked regarding participation could be categorized into eight categories (not shown to the respondents). The questions used in this paper are seven questions on

---

<sup>15</sup> There were 18639 active Ph.D. students in Sweden 2005, in FTEs 13113, that is, more than the number of teachers and researchers with a Ph.D, 12509 in FTEs. Much of the academic research in Sweden is done by Ph.D. students. 55 per cent of the Ph.D. students were employed by a university, 45 per cent not.

participation in research co-operation and five questions on commercialization activities, i.e. 12 questions. The other 17 questions were in the six areas: participation in popular science; lectures and arrangement of conferences, seminars, and workshops with other than students or university people being the majority; cooperation in undergraduate and graduate education; helping students to get a job; employment outside the university; and formal assignment in cooperation at the university. All questions are presented in Appendix 1, to give the reader the chance to see the context of the questions used in this paper. The questions were partly based on Schartinger et al. (2002) and Inzelt (2004).

There were 26 questions of the type: “In my opinion, cooperation according to the cooperation mission of Swedish universities...”, with a seven-point answer scale with wording for the extremes of the type: “... strongly diminishes academic freedom”, “... strongly increases academic freedom”. In most, but not all questions, the middle point is a neutral answer. The opinion questions are presented in Appendix 2. From an attitude measurement point of view, some of the questions try to measure the respondents’ cognitive, affective and intentional attitude components, with varying attitude objects.

The final part of the survey consisted of background questions. In this paper, we use only the background variables of university (which was known from the sample) and that of scientific field. Scientific field was measured by the Statistics Sweden categorization which is quite detailed and which worked very badly for some scientific fields<sup>16</sup>. Many answered more than one field<sup>17</sup>, and a lot of work had to be put into categorizing into the seven disciplines: Humanities (including religion); Social sciences (including law); Mathematics and natural sciences; Medicine and odontology; Technology; and Health care. We also worked with a category called “others”, which is a mixed bag and not used in the analysis.<sup>18</sup>

In this paper, we use tabulations and cross-tabulations as the basis for our analysis. We mention some results of multivariate analyses made, but do not report them<sup>19</sup>. Our approach is descriptive and exploratory, and our reasoning is inductive.

---

<sup>16</sup> Unfortunately, the 32 persons that pre-tested the questionnaire in detail did not complain about the classification.

<sup>17</sup> Which was allowed since this was a pilot study for a national study.

<sup>18</sup> The background variables not used in this paper were academic position/education, how long the respondent has been employed at the university, and if the respondent has a tenure or not, number of publications from 2003 until now in the categories scientific publications, popular science publications, and conference papers, research funding, age, and gender.

<sup>19</sup> We thank Anna Jenkins, Ph.D. student at Jönköping International Business School for running the multivariate analyses. The tabulations and cross tabulations used in this paper were done by Mohlin Marknadsinformation AB as a part of conducting the survey.

#### 4. The Empirical Study – Some General Results

Participation in activities range from some where half of those surveyed had participated in 2005 to those where only a few per cent had participated. Three examples, out of the 29 are: 32 per cent had participated in research projects where also persons not employed by any university participated; 21 per cent had participated in radio or TV and 4,0 percent had started a company in 2005.

The last figure, while small as a number, came as a surprise in Sweden. In Sweden, the discussion about academic entrepreneurship as reflected in starting a company is biased towards companies that are based on patented research (or rather patentable, the patent is often granted and sometimes also applied for after the company is founded), and such start-ups could be at most in the range of 50 per year<sup>20</sup>. The 4 per cent figure, if extrapolated to all Swedish universities and also to non-employed Ph.D. students<sup>21</sup>, means that some 750 companies were started by academics and Ph.D. students in 2005<sup>22</sup>, and that those based on patentable research results is a small fraction of all companies started by academics.

Opinions differ between individuals. On each and every of the 26 questions, there was always at least one respondent in every of the alternatives 1-7.

The opinion toward cooperation with the surrounding society is generally very positive. As an example, the mean on the question on the over-all effect on the respondent's university was 5,5. Behind this average, 79 per cent of the respondents gave a positive opinion (4-7), 17 per cent were neutral (4) and 5 per cent were negative (1-3). On most questions about opinion, the share that is positive is much larger than that which is negative. That includes the career value of taking part in cooperation, where in the debate in Sweden it is stressed that universities should give more career value to cooperation. The assumption behind is that the career value is negative, and that thus academics shun away from cooperation. For that particular question, the grand mean is 4,7 and the positive group is 58 per cent, the neutral 26 per cent and the negative group is 16 per cent, so the majority of Swedish academics

---

<sup>20</sup> Based on ongoing work in the Innovation policy group of the Association of Swedish higher education with reports in work.

<sup>21</sup> The share was 4,0 per cent for full professors, for other researchers/teachers and also for employed Ph.D. candidates. For participation in other activities, there is generally quite large differences between these groups.

<sup>22</sup> There were (in FTEs) 23237 teachers/researchers at Swedish universities in 2005, and 13113 Ph.D. students, together just over 36000. 4,0 per cent of 36000 is 1440, and if there is an average of 1,9 academic founders for each company (estimated from other sources), that means over 750 firms started (Olofsson and Wahlbin, 1993).

(extrapolating from our survey) actually think that taking part in cooperation is positive for their own career.

Another debated question in Sweden is the effect of cooperation on academic freedom, which is debated from a general and principal standpoint. It is often taken for granted that academics think that academic freedom is affected in a negative way. We asked them, and the groups that think that cooperation actually increases academic freedom is as large (30 per cent) as the group that think that it decreases (31 per cent), the grand mean being 4,01.

One of the questions about opinion (where a negative/positive/neutral interpretation makes sense, which is most of them) had a grand mean below 4,0, the question on whether cooperation decreases or increases the time available for other tasks. Here, the group that said that the time for other tasks decreased was 45 per cent, the share that said that time for other tasks increased was 26 per cent, and the grand mean 3,7.

A couple of the opinion questions tried to measure what the respondents knew about cooperation (cognitive attitude components). One was “My university has, compared to an average Swedish university Very low/Very high share of externally financed research”. Generally speaking, the respondents did not know the position of their own university in this respect, with the exception of those in Växjö.<sup>23</sup>

Some of the questions tried to measure what the respondents wanted to do (intentional attitude components). One such question was “As a whole, I would like to work much less/much more with cooperation than I do now”. On this question, 64 per cent stated that they wanted to work more, 32 per cent were neutral, and 4 per cent wanted to work less for a grand mean of 5,0.

The results of the study have been reported back to the participating universities but also to governmental actors working with university-industry relationships and it has generally created a lot of interest. Those working with cooperation with the surrounding society at the participating universities say that the study helps them in their daily work. Instead of relying on assumptions about cooperation with the surrounding society they have, for the first time, facts that they can rely on. One of the five universities made a special analysis of those that had never participated in the cooperation activities, viewing them as a “cooperation reserve” that could be mobilized. Another university did exactly the opposite, studying those that had ever participated. The results have many general practical implications for how cooperation can be developed. One is that attitude campaigns, which are very common (“first attitudes, then action”) are not needed. There are large groups that have a positive opinion and want to do more, and development of cooperation could focus on them, giving them opportunities

---

<sup>23</sup> The national average in 2005 was 53 per cent, the shares for the five universities are shown in Table 1.

and support to act. Swedish universities who did not participate in the study have expressed an interest in being part of the planned national study, they need data for their universities as a base for action.

Policy makers are also interested in the results and in a national study, since they have had no basic data of the kind the study gives. Evaluations of cooperation of Swedish universities have relied heavily on qualitative descriptions of operations rather than results, and have generally speaking been focused more on good ways to work than results of these good ways in terms of volumes, etc.

In the national study the participation questions will be refined, the number of opinion questions will be very much reduced since there is a strong factor structure among them, and the background questions will be much clearer.

In the two following sections, we turn to the main questions of our paper, that of differences between the universities and between academics in different tribes in participation in cooperation with industry and in their opinions. First, we turn to differences in actual participation with industry, then to differences in opinions. The results reported here are all descriptive and give an idea about the differences that exist in the five universities and between different scientific tribes.

## 5. Participation in Research Cooperation and Commercialization Activities

Participation in research co-operation (for knowledge development and growth) is summarized in Table 2. In the rows of the table, first the grand share for all universities and tribes are given, then the highest and the lowest share for a university (all tribes included) and the highest and lowest share for a tribe (all universities included).

<i>Participation in research co-operation in 2005, per cent</i> <i>Have you, during 2005, ...</i>	<i>Yes 2005 All</i>	<i>Highest university</i>	<i>Lowest university</i>	<i>Highest tribe</i>	<i>Lowest tribe</i>
participated in any research project financed (partially or fully) by others than a university or governmental research council (FAS, Formas and The Swedish Research Council)?	41,2	45,8 (LiU)	31,9 (VxU)	58,1 (Med)	24,0 (Hum)
supervised students and/or research students together with persons not employed by a university?	18,2	23,6 (LiU)	14,6 (GU)	41,6 (Techn)	11,5 (Hum)
participated in any research project in which people not employed by a university were doing research	32,0	38,9 (LiU)	27,1 (UmU)	47,3 (Techn)	19,8 (Hum)

work?					
done commissioned research/development work/other projects for others than a university?	29,6	32,4 (JU)	27,3 (UmU)	37,2 (Soc)	20,2 (Hum)
published a scientific publication together with someone not employed by a university?	13,9	19,4 (LiU)	8,3 (VxU)	27,2 (Med)	8,7 (Soc)
participated in making equipment at your university available (for example by renting) to others than a university?	11,3	12,6% (LiU)	10,3% (GU)	19,1% (Techn)	7,2% (Soc)
recruited staff from outside universities to your university?	7,2	12,4% (JU)	5,1% (VxU)	9,0% (Techn)	4,4% (He)

Table 2: Participation in research co-operation (Med=Medicine and odontology; Techn= Technology; Soc=Social science and law; Hum=Humanity and religion; He=Health)

In five of the seven questions above Linköping University has the highest share that participated. In two of the seven it is Jönköping. 12, 4 per cent in Jönköping have participated in recruiting staff from outside the university, this is a quite high figure compared to the average which is 7,2 per cent. The high figure is probably a result of that Jönköping University is in an expansive phase.

In general those in the field of technology and medicine and odontology participate most in activities related to research cooperation for knowledge development and growth, with the exceptions exception of commissioned research where those in social science and law do most. Those in the field of health, and in social science and law participate least. The differences between the highest and lowest scientific area is generally larger than between universities.

In order to show the more detailed picture and how our analysis was done, we show the simultaneous breakdown by university and scientific area for one of the questions, that of cooperation in research projects.<sup>24</sup>

<i>Participation in joint research projects 2005, per cent</i>	<i>All tribes</i>	<i>Humanities/ Religion</i>	<i>Law/Social sciences</i>	<i>Mathematics/ Natural sciences</i>	<i>Medicine/ Odontology</i>	<i>Technology</i>	<i>Health care</i>	<i>Range</i>
All universities	32	20	28	31	45	47	35	27
Göteborg	31	25	25	28	56	(40)	29	21
Jönköping	32	8	32	(17)	44	55	37	47

<sup>24</sup> For reasons of space, we do not give the full set of twelve such tables; they are also difficult to make sense of for questions with low shares.

Linköping	39	29	38	36	47	48	38	19
Umeå	27	13	20	36	36	31	38	25
Växjö	30	14	29	14	(50)	52	21	38
Range	12	21	18	22	20	24	17	

Table 3: Participating in joint research projects, by university and area of science. (The figures in brackets are means that are based on less than ten answers.)

The patterns are easier to see if the ranks across rows and across columns are studied (not shown). For instance, Linköping University ranks first on two of the tribes, shares first rank on two others, and has rank two and three for the others. Technology ranks first in three universities, and fourth in a fourth (since the cell for technology is missing at Göteborg University, there are four ranks for technology). Humanities rank between a shared rank four and rank six, another fairly consistent pattern, and medicine/odontology between one and a shared second rank.

Looking at both ranks and actual figures in Table 3, humanities and religion is always low, but there are large differences, from 8 per cent participating at Jönköping University to 29 per cent at Linköping. Technology is always high in participation, but also with large differences between universities, from 31 per cent at Umeå to 55 in Jönköping, as is the case with medicine/odontology.

Thus, for this question, there is a clear pattern for Linköping University and for technology and medicine/odontology (ranking high, as it were), and a pattern for humanities ranking low.

These results are not surprising. The fields of technology and medicine and odontology are known for having a lot of cooperation with the surrounding society. Within the field of technology applied research is common. Furthermore, many universities have during the last decade established support structures such as science parks, technology transfer centers, etc. to support commercialization of research. In the field of medicine there is a continuous interaction between medical training and practice. Furthermore, there are established relationships between researchers in medicine and pharmaceutical manufacturers, like Astra and Pharmacia. Clinical research is furthermore frequent medicine. That a professor has employment both in academia and at a hospital is also common.

The other area of cooperation studied in this paper is commercialization, summarized in Table 4.

<i>Participation in commercialization activities in</i>	<i>Yes 2005</i>	<i>Highest</i>	<i>Lowest</i>	<i>Highest</i>	<i>Lowest</i>
---	-----------------	----------------	---------------	----------------	---------------



<i>2005, per cent Have you, during 2005, ...</i>	<i>All</i>	<i>university</i>	<i>university</i>	<i>tribe</i>	<i>tribe</i>
participated in the development of a product/service sold or intended to be sold on a market (within or outside your position at your university)?	14,8	17,5 (LiU)	12,6 (UmU)	28,1 (Techn)	5,4 (He)
founded a company (alone or together with others)?	4,0	4,8 (HJ)	3,1 (GU)	7,1 (Techn)	2,7 (He)
actively supported colleagues who have started their own business?	3,9	4,8 (UmU)	1,8 (VxU)	8,2 (Techn)	1,8 (He)
actively supported students who have started their own business?	3,8	7,0 (HJ)	2,5 (UmU, VxU)	7,5 (Techn)	0 (He)
received a patent/copyright (for other than a scientific text), trademark, protection of a design or the like?	3,2	4,8 (LiU)	0,7 (VxU)	6,3 (Techn )	0,9 (He)

Table 4: Participation in commercialization

Academics (including Ph.D. students) at Linköping University have the highest share both when it comes to receiving patents/copyrights, trademarks, protection of design or the like and participation in development of a product/service sold or intended to be sold on a market. When it comes to founding companies and supporting students who start firms Jönköping University comes out highest. There is a well developed system in Jönköping for student start-ups, and 50-60 companies are started annually, mainly by business and engineering students in parallel with their studies. The support system serves also teachers and researchers, but most companies started by those groups are started without the help of the system.

The scientific tribe participating most in activities related to commercialization is that in the field of technology. As said above they do also participate most in research co-operation. Since applied research is common within the field of technology it makes perfectly sense that they are active in the above activities. Academics participating least in the above activities are those in the field of health.

We have not showed the detailed analyses for each variable, but the result is that which Table 2 and Table 4 suggest: A clear pattern of high participation on most variables for Linköping University, and a clear pattern of high participation for academics in technology at all universities. The two patterns may (but need not necessarily) be a reflection of the large share of operations (and thus staff) in technology at Linköping University.

Other patterns of participation (whatever the level, it just so happened that the two clearest have high participation) are more of sub patterns, they are not nearly as consistent

across all variables as the two mentioned. Humanities and social sciences are low in research cooperation, and health science in commercialization.

The interpretation in terms of culture is that we have found one strong university culture, so strong that it makes for an integrated culture at the university. Further, we have found one strong national tribe culture, strong enough to influence academics in technology at whatever university they work. For the rest of the work-places of the respondents, the culture is a specific work-place culture within the university, which may have elements of tribe cultures, but not consistently.

## 6. Opinions about participation

Based on the results of a factor analysis and of our choice of questions that are of a particular interest from different points of view, we show below the opinions given on six questions. The first three are opinions on the effects of cooperation with the surrounding society for the respondent's university as a whole: Whether it is negative or positive as a whole, whether it has a negative or positive effect on academic freedom, and whether it takes or gives room for other tasks. Thereafter follows two questions that are related to the place of work of the respondent at the university; whether the overall climate is negative or positive and whether participation in cooperation is negative or positive for the career. The sixth question is whether the respondent would like to decrease or increase his/hers own cooperation.

The figures in brackets in the tables are means that are based on less than ten answers. As is expected from the profiles of the universities presented above, that is the case for technology at Göteborg University and natural sciences in Jönköping, and also medicine/odontology (and in one table also health care) in Växjö. In the tables, the row maxima and minima are marked (HI and LO).

<i>Cooperation negative/positive for university</i>	<i>All tribes</i>	<i>Humanities/ Religion</i>	<i>Law/Social sciences</i>	<i>Mathematics/ Natural sciences</i>	<i>Medicine/ Odontology</i>	<i>Tech-nology</i>	<i>Health care</i>	<i>Range</i>
All universities	5,5	5,4	5,5	5,2	5,3	5,8	5,6	0,5
Göteborg	5,4	5,5 HI	5,4	5,2 LO	5,4	(5,7)	5,4	0,5
Jönköping	5,9	6,0 HI	5,8	(5,3)	5,9	6,0 HI	5,6 LO	0,4
Linköping	5,6	5,8 HI	5,7	5,3	5, 2 LO	5,7	5,6	0,6
Umeå	5,3	4,8 LO	5,4	5,2	5,1	5,7	5,8 HI	1,0
Växjö	5,5	5,3	5,4	5,2 LO	(5,7)	5,8 HI	5,7	0,6

Range	0,6	1,2	0,4	0,1	0,8	0,3	0,2	
-------	-----	-----	-----	-----	-----	-----	-----	--

Table 4: Opinions about the overall value of cooperation for the university, by university and area of science.

We have already mentioned in the foregoing that the grand mean, 5,5, reflects that 79 per cent of the respondents gave a positive opinion (4-7), 17 per cent were neutral (4) and 5 per cent were negative (1-3). A first question is whether the differences between universities and tribes make a difference. Is there a real difference between the lowest cell mean in the table, 4,8 for those in humanities at Umeå University, and the highest, 6,0 for those in humanities and in technology at Jönköping University? 4,8 reflects that 60 per cent are positive. 25 per cent neutral and 15 per cent negative; 6,0 reflects that almost everybody is positive. There is a difference, but whether it is of interest in a real-world decision situation depends on the situation, and generally speaking the grand mean on this question is so high that whatever the difference, the majority is positive, and outweighs by far the negative.

The strongest pattern in ranks for a university (not shown) is for Jönköping University, which ranks first in four cells and a shared fourth in a fifth (the cell in natural sciences not ranked due to few observations). Linköping also has somewhat of a pattern, ranking one, two, two, three and a shared third. The clearest pattern as to tribes is that natural sciences tend to rank low, and technology tends to rank high. Thus, most cells show no influence of a joint culture.

<i>Cooperation decreases/increases academic freedom</i>	<i>All tribes</i>	<i>Humanities/ Religion</i>	<i>Law/ Social sciences</i>	<i>Mathematics/ Natural sciences</i>	<i>Medicine/ Odontology</i>	<i>Technology</i>	<i>Health care</i>	<i>Range</i>
All universities	4,0	4,0	4,0	3,6	4,1	4,1	4,6	1,0
Göteborg	3,9	3,9	3,8	3,5 LO	4,1	(5,0)	4,2 HI	0,7
Jönköping	4,4	4,3	4,4	(4,3)	4,5	4,2 LO	4,5 HI	0,3
Linköping	4,0	4,1	3,8	3,5 LO	3,9	4,1	4,8 HI	1,3
Umeå	4,0	3,6 LO	4,2	3,7	4,0	3,9	4,6 HI	1,0
Växjö	4,0	4,0	3,9 LO	4,3	(4,0)	4,0	4,8 HI	0,9
Range	0,5	0,7	0,6	0,8	0,6	0,3	0,6	

Table 5: Opinions about whether cooperation decreases or increases academic freedom, by university and area of science.

Here, “differences make a difference”. At Jönköping University, 40 per cent say that cooperation increases academic freedom and 22 that it decreases. At Gothenburg, 25 say that

it increases, and 36 that it decreases. Of all respondents in natural sciences, 18 per cent are positive and 31 are negative; of all in health sciences, 49 are positive and 16 negative.

Here, Jönköping University again ranks high, four first ranks and one fourth. No other university has such a clear rank pattern. Health science has a very clear rank pattern, ranking highest at four universities and a shared first at the fifth. Again, most cells show no influence of a shared culture.

<i>Cooperation takes/gives room for other tasks</i>	All tribes	Humanities/ Religion	Law/ Social sciences	Mathematics/ Natural sciences	Medicine/ Odontology	Technology	Health care	Range
All universities	3,7	3,8	3,7	3,3	3,8	3,7	3,9	0,6
Göteborg	3,6	3,8	3,4	3,2 LO	4,0	(5,0)	4,1 HI	0,9
Jönköping	3,9	4,7 HI	3,8 LO	(3,6)	3,9	3,9	4,3	0,9
Linköping	3,8	3,8	4,0 HI	3,5 LO	3,9	3,6	4,0 HI	0,5
Umeå	3,7	3,6	3,7	3,3 LO	3,6	3,9 HI	3,7	0,6
Växjö	3,7	3,5	3,8 HI	3,1 LO	(4,2)	3,5	3,6	0,9
Range	0,3	1,2	0,6	0,4	0,4	0,4	0,5	

Table 6. Opinion on whether cooperation takes or gives time for other tasks, by university and area of science.

Here, Jönköping and Linköping show rank patterns, but not as clear as for the foregoing question. Health science shows a high pattern and natural sciences a low.

<i>Negative/positive climate at place of work</i>	All tribes	Humanities/ Religion	Law/ Social sciences	Mathematics/ Natural sciences	Medicine/ Odontology	Technology	Health care	Range
All universities	5,1	4,7	5,1	5,0	5,0	5,5	5,0	0,8
Göteborg	4,8	4,5 LO	5,0	4,8	5,0 HI	(4,2)	(4,3)	0,5
Jönköping	5,3	5,4	5,3 LO	(5,0)	4,9	5,7 HI	5,4	0,5
Linköping	5,2	5,0	5,3	5,3	5,0	5,6 HI	4,4 LO	1,2
Umeå	4,9	4,4 LO	4,9	5,0	5,0	5,0	5,4 HI	1,0
Växjö	5,2	4,9 LO	5,2	4,9 LO	(5,4)	5,4	5,7 HI	0,8
Range	0,5	1,1	0,4	0,5	0,1	0,7	1,3	

Table 7. Opinion on the overall climate at the work-place, by university and area of science.

Again, Jönköping and Linköping show rank patterns. There are no obvious rank patterns for tribes, although health science has high ranks except at Linköping University, and medicine also tends to be high.

<i>Negative/positive for own career</i>	<i>All tribes</i>	<i>Humanities/ Religion</i>	<i>Law/ Social sciences</i>	<i>Mathematics/ Natural sciences</i>	<i>Medicine/ Odontology</i>	<i>Technology</i>	<i>Health care</i>	<i>Range</i>
All universities	4,7	4,6	4,5	4,7	4,7	5,1	5,0	0,5
Göteborg	4,6	4,6	4,3 LO	4,8 HI	4,7	(6,3)	4,7	0,5
Jönköping	5,0	5,3	4,8 LO	(4,1)	4,9	5,3	5,6 HI	1,2
Linköping	4,8	4,5 LO	4,7	4,8	4,7	5,2 HI	4,5 LO	0,7
Umeå	4,5	4,4 LO	4,4 LO	4,8	4,5	4,5	4,9 HI	0,5
Växjö	4,8	4,3 LO	4,7	4,7	(5,6)	5,0 HI	(5,8)	0,7
Range	0,5	1,0	0,5	0,1	0,4	0,8	1,1	

Table 8. Opinion on whether participating in cooperation is negative or positive for own career, by university and area of science.

Here, the pattern for Jönköping is very clear, in ranks first across all tribes. No other university has any clearer rank pattern. Health science tends to rank high, and natural sciences to rank low.

<i>Cooperate less/ more as a whole</i>	<i>All tribes</i>	<i>Humanities/ Religion</i>	<i>Law/ Social sciences</i>	<i>Mathematics/ Natural sciences</i>	<i>Medicine/ Odontology</i>	<i>Technology</i>	<i>Health care</i>	<i>Range</i>
All universities	5,0	5,0	4,9	4,8	4,9	5,0	5,3	0,4
GU	4,9	5,1	4,7 LO	4,9	4,7 LO	(5,2)	5,2 HI	0,5
HJ	5,2	5,4	5,1	(4,9)	5,8 HI	4,9 LO	5,6	0,9
LiU	4,9	5,2 HI	5,0	4,8 LO	4,8 LO	4,8 LO	5,2 HI	0,4
UmU	4,9	4,8	5,0	4,7 LO	4,8	5,1	5,3 HI	0,6
VxU	5,0	4,8	4,9	4,7 LO	(5,1)	5,2 HI	4,8	0,5
Range	0,3	0,6	0,4	0,2	1,1	0,3	0,4	

Table 9. Wish to decrease or increase own participation, by university and area of science.

Here, Jönköping has a clear pattern with four first ranks and one third, no other university has any clear pattern. Health science tends to rank high, and natural sciences to rank low.

What we have found is one strong university culture (Jönköping) and one strong tribe culture (health sciences). Natural sciences show a pattern on five of the six questions, generally on the low side, except for career value of engaging in cooperation. We expect a culture on cooperation to be consistently positive, in the middle or negative, so we refrain from labeling natural science a tribe culture.

The culture in health care towards cooperation is very positive. Academics in health sciences want to increase their cooperation more than others, they have a high opinion on general value and less fear of cooperation infringing on academic freedom. The culture is generally strong enough to be unaffected by the local university culture (if there is one) or by the local workplace culture, but not without exception, as the examples of climate at the work-place and value for own career at Linköping University show (Table 7 and 8).

Turning to the differences between universities, it is clear that there is a strong local positive culture at Jönköping University.

A preliminary conclusion of our inspection of opinions is that only the tribe culture in health sciences is strong enough to be seen almost always across universities in our data, and that only Jönköping has a university culture strong enough to be seen across tribes. In other cases, the local culture at the respondents' work-place (department, school, laboratory etc.) at the university dominates, being the explanation for absence of patterns in the data.

## **7. Discussion**

In the following discussion we will elaborate upon the cultures at the different universities, and within the different scientific tribes. We are aware that different scientific studies approach culture in different ways and that the concept of culture has been extensively explored by a number of researchers. In this paper, we use data on behaviour and on opinions, both given by respondents as answers in predetermined dimensions in a survey. We use analysis of these data as a starting point for discussing the possible being of a culture on cooperation at universities and among academics (including Ph.D. students) in a scientific field. Whether there is a shared, integrated culture (Martin, 2002) on cooperation at a university or within a scientific tribe is an empirical question in this paper. In our study we can see what people do, their participation in different activities, and their opinions regarding certain issues related to cooperation with the surrounding society.

What we have found in our data is that there are some patterns both in participation in cooperation and in opinions that may merit labeling them a culture, in the sense that they can be found consistently at the university or among persons belonging to the same scientific field at different universities. But in both participation and opinions mostly the culture, as expressed by patterns in our data, seems to be a local workplace culture. Those workplace cultures could be interpreted as subcultures (Martin, 2002), where those at the workplace share the same norms and values – or at least they have a pattern in their average opinions.

In actual behaviour, one university, Linköping, has a clear university culture pattern. Among academics the clearest pattern is for respondents in technology. They happen to have the highest participation both in research cooperation and in commercialization.

In the Linköping context, a tentative explanation is that the university culture has actually been formed largely by the field of technology. Technology is a large part of operations (see Table 1), and technology has always been powerful. An example is that while technology was one of the faculties of the university, the sign at a building at the main campus for many years read “Linköping University and Institute of technology”. Furthermore, there has always been a strong relationship between the university and SAAB, which is located in Linköping. In 1981 the university opened a Center for Technology Transfer, with the purpose to spread research from the university to the industry (Etzkowitz and Klofsten, 2005). According to Etzkowitz and Klofsten (2005) about 40 companies were spinning-off from the university between 1981 and 1984. In 1983 the first incubator was created, TeknikByn.

In opinions given on cooperation, there is a pattern for one university, Jönköping, and for one scientific tribe, health care (both positive towards cooperation, as it happens). At other universities and in other fields of science, there tend to be varying local workplace cultures (faculty, departments or whatever is the relevant subunit), with no common pattern. Thus, culture as measured by shared opinions on cooperation is sometimes – in one case of five in our study – something strong enough to be labeled shared by all academic staff and Ph.D. students at a university regardless of their scientific area, sometimes – in one case out of six in our study – something strong enough to be labeled shared among academics in a scientific area regardless of their university, but most commonly something that is not strong enough to take over the local culture at the workplace, which consequently becomes the dominating culture. Those local cultures can be understood as subcultures.

Turning to the question of what makes a tribe culture strong enough or a university culture strong enough to become the dominating culture at a workplace, possible explanations in our two cases are the following.

A possible explanation for the strong common culture in health and care as described above is both historical and structural. Education in health care was run by the county authorities (landstingen) until the turn of the millennium, when it was taken over by universities. The county authorities were also (and still are) monopoly providers of health care together with the local authorities, the municipalities. Thus, cooperation with the professional life has always been natural and easy – and homogeneous by the monopoly situation. It may be noted that cooperation with the professional life is also natural (and

necessary) in medical education, but such education has always been run by the academic system, and that difference may explain why there is not such a strong tribe culture in medicine as in health care.

The local culture on cooperation in Jönköping happens to be well known to us; we both work in it. When Jönköping university went private in 1994, it won the competition for one of the two slots offered because it had plans made for an international business school, where cooperation e.g. in education by giving every student a host company was one of the new ideas. The idea of cooperation in all activities was carried over to the whole university, and has been communicated as one of the four principles of development of the university for many years. Host companies have been given also to all engineering students.

The host company scheme with a pool of 800 companies is closely coupled to the regional industry, which has one of the largest share of small and medium-sized industry firms in Sweden and also one of the highest share in manufacturing industry. The culture has been reinforced by some amount of success that has been attributed to cooperation: a very high share of externally funded research, and good recruitment. But interestingly, Jönköping does not stand out by small differences between different tribes in the tables above, in that respect the culture is not more homogenous than at other universities. The Jönköping university culture is characterized by strong common traits, not by homogeneity.

Trying to generalize what we have found on culture of cooperation by analysis of data on participation and opinions about cooperation, we note that the results are similar in an important aspect: University and tribe cultures tend not to be strong enough to dominate neither actual behaviour or opinion. We depict our general conclusion graphically in Figure1.



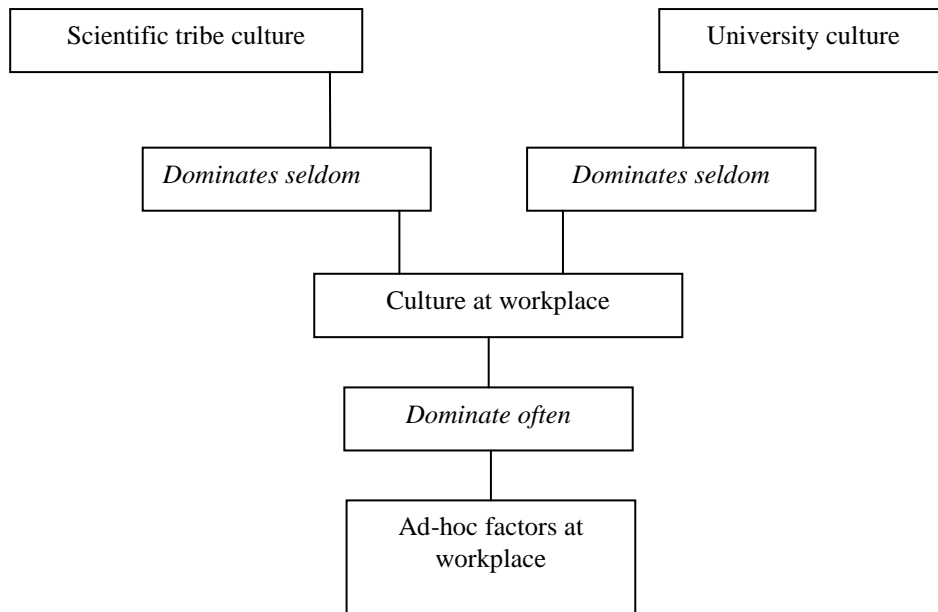


Figure 1: A tentative conceptual model of how the dominating culture at an academic work-place (school, department etc.) is determined. (Relations in italics.)

When comparing the more detailed results for behaviour and opinions, two intriguing questions immediately arise: Why is it that the university culture that is strong enough to dominate is found at one university (Linköping) for participation and at another (Jönköping) for opinion? And why is it that the tribe cultures that are strong enough to dominate are different; technology for behaviour, and health care for opinion? An answer to the first question could be the strong relationship Linköping University historically has had to SAAB, and that this relationship has influenced the university. Jönköping on the other hand is a quite young university and have since it became a private university in 1994 internally and externally, communicated the importance of cooperation with the surrounding society. An answer to the second question is that technology as a scientific field historically has been very important for the development of the industry in Sweden. And again, it is a field in which applied research is common. For the scientific tribe health care a possible explanation is given above. Why there are different universities and tribes showing strong cultures for behaviours and opinions, respectively, we do not know at this stage.

As a conclusion of this section and the paper, we speculate briefly on why it is that university or tribe cultures do not dominate more.

One clue for university culture is that most if not all Swedish universities emphasize that they are very decentralized. We do not necessarily agree (compared to e.g. modern firms

when it comes to formal decision-making), but we certainly agree that there is a general “let a thousand flowers bloom” mentality. The notion of focusing and making strategic priorities is new to Swedish universities. In fact, only in 2002 were the boards of Swedish government universities explicitly given the task of making strategic priorities. In the case of Linköping, perhaps the university culture has grown out of a technology tribe culture that came in power during a formative period at the university, as speculated above. In the case of Jönköping, in our perhaps biased view, Jönköping is one of the few universities in Sweden that has made clear strategic priorities, e.g. on focusing on entrepreneurship and small business in business and engineering education and research. One further clue is that there are few conscious attempts to build a common university culture like what is done in business firms. Given these factors, it is perhaps not surprising that we did not find more dominating university cultures in our study; they should be the exception, not the rule.

For tribe cultures, the discussion is even more tentative. Professional cultures may be dissolving at large in the ICT society. Professional associations no longer have a monopoly on information – they were often formed to exchange and share professional information among its members, and are now dissolved or trying to find new missions. This is also true for academies (but they can usually rely on the prestige of being a member), academic professional associations etc. The increasing multi-science mode of science should also mix and diffuse different tribe cultures, more in sciences where team research is more common like in natural sciences and technology. If this speculation is true, tribe cultures have been stronger than they are today, but that we do not know.

## References

- Amabile, T.M., Pattersson, C., Mueller, J., Wojcik, T., Odomorik, P.W., Marsh, M. and Kramer, S. (2001). Academic-practitioner collaboration in management research: a case of cross-professional collaboration. *Academy of Management Journal*, Vol. 44:2, pp. 418-31.
- Behrens, T.R. and Gray, D.O. (2001). Unintended consequences of cooperative research: impact of industry sponsorship of climate for academic freedom and other graduate student outcome. *Research Policy*, Vol. 30:2, pp. 179-99.
- Clark, B. (1998). *Creating entrepreneurial universities: Organizational Pathways of Transformation*. Pergamon Press, New York.
- Cyert, R. and Goodman, P. (1997). Creating effective university-industry alliances: an organizational learning perspective. *Organization Dynamics*, Vol. 25:4, p. 45-57.
- Elmuti, D., Abebe, M. and Nicolosi, M. (2005). An overview of strategic alliances between universities and corporations. *The Journal of Workplace Learning*, Vol. 17:1/2, pp. 115-129.
- Etzkowitz, H. (1998) The norms of entrepreneurial science: cognitive effects of the new university-industry linkages, *Research Policy* 27 (1998), pp. 823–833.
- Etzkowitz, H., Webster, A., Gebhardt, C. and Terra, B. (2000). The future of the university and the university of the future: evolution of ivory tower to entrepreneurial paradigm. *Research Policy*, Vol. 29, pp. 313-330.
- Etzkowitz, H.E. and Klofsten, M. (2005). The Innovative Region: Toward a Theory of Knowledge-Based Regional Development. *R&D Management*, Vol. 35, No. 3, p. 243-255.
- Goldfarb, B. and Henrekson, M. (2003). Bottom-up versus top-down policies towards the commercialization of university intellectual property. *Research Policy*, Vol.32, pp. 639-658.
- Gomes, J., Hurmelinna, P., Amarla, V. and Blomqvist K. (2005). Managing relationships of the republic of science and the kingdom of industry. *The Journal of Workplace Learning*, Vol. 17:1/2, pp. 88-98.
- Högskolan samverkar, Högskoleverket 2004:38 R
- Inzelt, A. (2004). The evolution of university–industry–government relationships during transition. *Research Policy*, 33:6-7(975-995).
- Lopez-Martinez, R.E., Medellin, E., Scanlon, A.P. and Solleiro, J.L. (1994). Motivations and obstacles to university industry cooperation (UIC): a Mexican case. *R&D Management*, Vol. 24:1, pp. 17-31.
- Martin, J. (2002). *Organizational Culture Mapping the Terrain*. Thousand Oaks: Sage.

Nissani, M. (1997). Ten cheers for interdisciplinarity: the case for interdisciplinary knowledge and research. *Social Science Journal*, Vol. 34, p.2.

Olofsson, C. and Wahlbin, C. (1993) Teknikbaserade företag från högskolan ("Technology-based firms from universities"), Institute for Management of Innovation and Technology (IMIT)

Riksrevisionverket (The Swedish State Audit Institution), 2001, Från forskning till tillväxt – statligt stöd till samverkan mellan högskola och näringsliv ("From research to growth – government support to cooperation between universities and industry"), Riksrevisionsverket 2001:11

Sáez, C.B., Marco, T.G. and Arribas, E.h. (2002). Collaboration in R&D with universities and research centres: an empirical study of Spanish firms. *R&D Management*, Vol. 32:4, pp. 321-41.

Schartinger, D., Rammer, C., Fischer, M.M., and Fröhlich, J. (2002) Knowledge interactions between universities and industry in Austria: sectoral patterns and determinants. *Research Policy*, Volume 31, Issue 3, March 2002, Pages 303-328

## **Appendix 1: Questions on participation in cooperation activities**

*In order of appearance to the respondents*

*Headings below not shown to the respondents*

*All questions started with the phrase: Have you during 2005...*

### *Research co-operation*

- participated in any research project financed (partially or fully) by others than a university or governmental research council (FAS, Formas and Swedish Research Council)?
- supervised students and/or research students together with persons not employed by a university?
- participated in any research project in which people not employed by a university were doing research work?
- done commissioned research/development work / other projects for others than a university?
- published a scientific publication together with someone not employed by a university?
- participated in making equipment at your university available (for example renting) to others than a university?
- recruited staff (for example adjunct professors) from outside universities to your university?

### *Popular science*

- published (in connection with your scientific subject) in non-scientific contexts?
- participated in radio and/or TV, related to your field of science?
- answered questions within your area of expertise from the public or others outside the university (in other than private contexts)?

### *Lectures, and arrangement of conferences, seminars, and workshops with mainly external audience*

- lectured, participated in a panel discussion, or in other ways taken part in conferences or seminars where the majority of the participants were not students or employed by a university?
- participated in arranging conferences, seminars, workshops or lectures where the majority of the participants were not students or employed by a university?
- participated as teacher/lecturer in any commissioned education lasting more than one week (apart from KY and Police education)?
- participated as a teacher/lecturer in any commissioned education lasting less than one week, for example seminars or workshops?

### *Undergraduate and graduate education*

- recruited guest lecturers from outside universities?
- arranged (except mandatory practice) for students in an academic course to visit companies or public organisations?
- acted as an intermediary for students to solve problems for companies or public organisations in for example project work, essays, diploma works, etc?

### *Recruitment of students*

- given any student a tip about a possible job?
- recommended an employer to recruit a student (not only given a reference)?

### *Commercialization*

- founded a company (alone or together with others)? If yes, was any co-founder a person not employed by a university?
- received a patent/copyright (for other than a scientific text), trademark, protection of a design or the like? If yes, was this (in any of the cases) received together with a person not employed by a university?
- participated in the development of a product/service sold or intended to be sold on a market (within or outside your position at your university)? If yes: Was this (in any of the cases) done together with a person not employed by a university?
- actively supported students who have started their own business?
- actively supported colleagues who have started their own business?

*Employment outside the university*

- worked as an employee in any organisation than a university?
- worked as an advisor/consultant for other organisations than a university (within or outside your position at your university)?
- been a member of a board outside the university (other than for co-owned apartments roads and the like)?

*Formal roles in cooperation at the university*

- participated in projects to develop cooperation with the surrounding society at your institution/faculty/university?
- had a formal assignment to develop cooperation with the surrounding society, for example as a member of an organisation unit for cooperation or likewise?

**Appendix 2: Questions on opinions about cooperation**

*In order of appearance to the respondent*

*In my opinion cooperation according to the Swedish cooperation task for my university*

- Involves very large financial risks / Involves very small financial risks
- Provides very small financial opportunities / Provides very large financial opportunities
- Strongly decreases the academic integrity/freedom / Strongly increases the academic integrity freedom
- Gives strongly reduced shared views between different stake holders / Gives strongly increased shared views between different stake holders

*In my opinion cooperation according to the Swedish cooperation task for my university*

- Gives strongly decreased space for other tasks / Gives strongly increased space for other tasks
- Gives much lower quality in research / Gives much higher quality in research
- Gives much lower quality in education / Gives much higher quality in education
- Is best achieved when all cooperation is done through special units / Is best achieved when all cooperation is done integrated in regular activities
- As a whole is very negative / As a whole is very positive

*My university has, compared to an average Swedish university*

- Very low share of externally financed research / Very high share of externally financed research

- Very low share of research financed by commissions / Very high share of research financed by commissions

*At my own working place within my university*

- The attitude towards cooperation is very negative / The attitude towards cooperation is very positive
- There is no support for cooperation / There is very strong support for cooperation
- Engagement in cooperation is very negative for the career / Engagement in cooperation is very positive for the career

(without joint heading:)

- In my surroundings there are very small opportunities for cooperation for me / In my surroundings there are very large opportunities for cooperation for me
- In my scientific field there is no research done outside the universities / In my scientific field all research is done outside the universities
- My scientific field is very seldom occurring in the media / My scientific field is very often occurring in the media
- My scientific area is very difficult to communicate to someone who is not in the same area / My scientific area is very simple to communicate to someone who is not in the same area

*I would like to*

- Strongly decrease cooperation in my own research / Strongly increase cooperation in my own research
- Strongly decrease cooperation in my own teaching / Strongly increase cooperation in my own teaching
- Strongly decrease cooperation in my other activities / Strongly increase cooperation in my other activities
- As a whole work much less with cooperation than I do / As a whole work much more with cooperation than I do

*I feel*

- A very weak commitment to research / a very strong commitment to research
- A very weak commitment to teaching / a very strong commitment to teaching
- A very weak commitment to other activities than research and teaching / a very strong commitment to other activities than research and teaching
- A very weak commitment to cooperation as a whole / a very strong commitment to cooperation as a whole

# **The Role of Ties for Manager's Ethics : Microfirm Management in the French Context**

Jean-Marie Courrent

Researcher at ERFI (Université Montpellier-1), and GEREM (UPVD)

Université de Perpignan Via Domitia (UPVD),

52, av. Paul-Alduy - F-66860 Perpignan cedex – FRANCE

email: [jmcourre@univ-perp.fr](mailto:jmcourre@univ-perp.fr)

Katherine Gundolf

Montpellier Business School – GSCM –

2300, av. des Moulins - F-34185 Montpellier - FRANCE

e-mail: [k.gundolf@supco-montpellier.fr](mailto:k.gundolf@supco-montpellier.fr)

Keywords: Microfirm, social capital, business ethics



## **1. Introduction**

Microfirms represent a large part of European economy, and are responsible for job and wellness creation. Nevertheless, the heterogeneity of this research object makes it difficult for researchers to find a common ground and to build specific microfirm theories. Indeed, researchers agree that microfirms are generally related to their manager's visions and behaviour, and that they are thus, as diverse as humanity.

However, if manager behaviour is related to his enterprise, then, his personal ethical or moral dimensions should have also impact on business. But still, managers are not isolated actors as classical economic analysis may suggest. Indeed, they are embedded in personal and economic networks. Literature suggests that these networks play an important role for enterprise development, especially in microfirm context.

Thus, the aim of this paper is to analyse the link between manager's ethics and his relationships, in order to determine the repercussions this link may have on his management choices.

After a literature revue, we will present our method and the results of our survey. In a last part, we will expose our findings and discuss them, in order to suggest some future researches.

## **2. Literature**

Yet, microfirms or micro-enterprises (ME) have been largely ignored (Marchesnay, 2003) by researchers, and we had to wait for politicians (cf. recent EU programs focused on ME) to realize the economical importance of these very small structures. Actually, in France, more than 92% of the enterprises have less than 10 employees (1999 figures ??). They create more than 21% of added value, and employ 21% of all workers (Jaouen, 2005). On a theoretical point of view, we can, thus, underline the paradoxical lack of research studies on MEs according to their economical importance. This hesitation may be explained by the following reasons: (i) ME are often considered to be "small SMEs" and, then, their specificities are neither underlined nor explored ; (ii) the consequent lack of literature can't allow ME studies to build on a solid theoretical framework ; (iii) the ME diversity and heterogeneity, that underline the richness of this research object, are finally hindering its theorisation.

However, some efforts have been done recently. For instance, an SME conference 2004 in Montpellier was hold on the topic of ME. Some specific studies published on MEs (1) underline several characteristics attributed to SMEs (Gundolf, 2006): small structure, management centralisation, low task specialisation, intuitive and low formalised strategy, and simple information system (Julien, 1990 ; Gueguen, 2001) and (2) emphasize on some others:

structural lack of resources (Jaouen, 2005), urgency feeling (Mahé de Boislandelle, 1996), proximity (Julien, 2003), and the informal and personal nature of professional relationships (Pfeffer, Salancik, 1978, Marchesnay, 2003; Gundolf, Jaouen, 2005).

The need of resources may lead MEs, often highly specialised, to opt for cooperation, for instance through strategic alliances (Jaouen, 2005) or collective strategies (Astley, Fombrun, 1983 ; Astley, 1984; Fombrun, 1986 ; Yami, 1999), to develop without weakening their financial structure. The ME's urgency feeling comes from the difficulty to overcome external changes notably because of short-term management and focalisation on close environment. Proximity plays a determining role in very small structures (Torres, 2004) because of the personal and informal nature of the links the owner-manager keeps up with his social environment (and his employees). Networks embeddedness (Granovetter, 1985) of the entrepreneur which affects his personal and professional life may, thus, also influence his management decisions. His networks may not only bring him legitimacy, help, etc...; it also constitutes a frame for his social life because of the overlapping of economical and social interactions in MEs (Johannisson et al., 1994 ; Gundolf & Jaouen, 2005). In fact, ME manager's representations are largely influenced by the personal relationships he has within his networks and also by the opportunities and resources offered by his surroundings.

But, entrepreneurial networks do not only furnish advantages by structuring relations and exchanges, and thus, permitting coordination through trust; in fact, they also provide a frame for entrepreneurs' action. This frame imposes institutional and symbolic values, and conventions (Rindova, Fombrun, 1999 ; Julien, 2003). Moral obligations may therefore appear and limit the liberty of his action. In this perspective, entrepreneurs' ethics are strongly tied to its network.

The search for a unifying definition of ethics, particularly in the field of management, finds itself confronted with the multiplicity of the rules of action adopted and the paths taken by moral conscience. It would seem difficult to try to make a synthesis of these standards as a means of extracting a common concept for acting well. The solution thus lies not in this diversity, but, on the contrary, in returning to the original question of moral sense. Analysis of the major philosophical texts devoted to ethics effectively makes it possible to recall the profoundly individual nature of moral sense on the one hand and, on the other, the role played by morals in the preservation of the social links to which Man aspires beyond (or within the very heart of) his egocentric desires. From this, it is interesting to retain a definition of ethics that comes from an individualistic approach to the relationship with others.

An individual's moral acts, which shape his relationships with others, are a translation of his concept of (distributive) justice. "We can [thus] see in any moral act an *attribution* or allocation of something (rights, objects, feelings, intentions, etc.) to someone. Specifying this something comes down to *sharing* [...]" (Moessinger, 1996, 105).

The fundamental moral problem with which the actor is faced is thus focused on the way in which, by using these rules, he consciously tries to reconcile his search for personal interest with the respect of that of others. The quest for morality in action effectively comes up against the limited nature of the means at his disposal, which prevents him from dealing with all the parties concerned by his decision in the same manner, directly or indirectly. He is thus obliged to choose the partner(s) that he must privilege, morally speaking.

This principle of distributive justice that underlies all moral acts thus leads to a distribution of wealth. In other words, within the company, it leads to a distribution of added value.

*It is very widely accepted that morality (the object of which is to give human actions a framework liable to guarantee social cohesion, but which fights the centrifugal effect of each person's search for their own personal interests) tends to limit the ambitions of each individual, who must take his fellow man into account. Morality as we see it in an act is also a function of the consequences that are attributed to it in its satisfaction of the interests of others. It is in this sense that every moral act can be defined as an act of sharing.*

The result of this sharing is nevertheless not always enough to make it possible to judge the morality of an act. There must be, in addition, the respect of the interests of others. The notion of respect, as explained by E. Kant (in *Practical Reason*), is the very "moral motive" behind the decision, which pushes the actor to treat others as an end in themselves, and not as simple means. In order to be moral, an act must be *deliberate* and *disinterested*. Deliberate, because the respect of others must be one of, if not *the*, real motive behind the decision. Disinterested, because it must not be a conscious means of pursuing one's personal interests. If this were the case, it would no longer be a question of moral motive but of pragmatic motive (in Kant's sense).

As the actor, by means of both his decisions and his choices, nevertheless irremediably pursues his interests (material interest or moral satisfaction at having acted well), it is thus only the intention or motivation regarding others that gives the act its moral nature, independently of the vagaries of its implementation. It would nevertheless be inaccurate to

claim that an act is morally good *because* it satisfies the interests of others, just as it would be inexact to claim that an act is morally condemnable *because* it goes against the interests of others.

The moral qualification of acts thus appears to be very relative, as it is a function, when the actor has (or believes he has) interests opposed to those of others, of the recognized legitimacy of the satisfaction of his own desires. This relativity is double:

The judgement will vary with the identity of the moral judge, his personality, experience and position as regards the act (the judge can be the actor himself or an external observer who is more or less close to the actor).

Furthermore, the judgement, which is based on confrontation and the comparison of alternative interests, can only be expressed in terms of degree in most cases. It is thus generally an appreciation of the ordinal, rather than cardinal, type. Different scales for measuring ethics have thus been proposed (for example, Reidenbach & Robin, 1991; Skipper & Hyman, 1993) to understand the hierarchy established by the referee in terms of the morality of behavior.

Finally, the question of morals is only raised for the actor who, free in his decision-making, has power over his partners, that is, those involved in his choices.

The recognized moral character of an act is thus based on the representation (which is built up in the course of the act, that is, the 'enaction' in the sense used by Varela) that is made of its consequences.

*This representation concerns four elements.*

- It is based on the intention of the actor: judgement is based on the idea one has of the goal being sought.
- It is based on the nature of others, that is, on both the identity (physical and moral) of the different people involved in the decision and on the choice of those in whose interest one esteems oneself obliged to act out of priority. Not only is the decision made in a situation of limited rationality, but also the inextensible nature of the means at one's disposal force one to abandon the idea of simultaneously satisfying all the identified people involved, as they often have conflicting interests.
- It is thus also based on the idea that one has of the interests of others.

- Finally, it is based on the legitimacy of the actor's self-satisfaction in his own interests when, in the representation that he has of them, it is obtained to the detriment of others to a varying degree.

Morals, which is an ideal that guides action, aims for the absolute satisfaction of the interests of others. But the action itself supposes a degree of arbitration.

Actually three major obstacles interfere with moral action: (1) the actor (or the judge) has only a representation of others interests; (2) the different stakeholders (in the sense of Freeman, 1984, 1991) have often antagonistic interests; (3) in his decision, the actor also researches, consciously or unconsciously, to satisfy his own interest. Thus, the actor must grade the enacted interests of the stakeholders. Therefore, what is called "ethics" is the representation that we make of interests hierarchy, according to their legitimacy (Courrent, 1998).

The key question is thus knowing whether or not this legitimacy is sensitive to proximity. The partner can be more or less close, more or less distant. For example, can it be deemed more serious to steal from a friend than from a stranger?

As part of the teleological approach to ethics, where the morality of an act is measured by the yardstick of its consequences on others, it has been possible to demonstrate the influence on moral judgement of the proximity perceived with the partner involved in the decision (Misrahi, 1997; Dupuy, 1999): the closer the partner is considered to be, the greater the sensitivity to his perceived interests. Nevertheless, motivated by the same desire to act well, the actors obey the rules and/or patterns of logic of varied actions. For example, certain, using a Kantian form of logic, would systematically refuse to steal for the reason that, as theft cannot be built up into a universal law, it is intrinsically bad, whereas others would not hesitate, on occasion, to conceal a truth that could hurt someone. It is thus that those who respect the teleological concept of ethics favor the direct respect of the interests of others, whereas those who prefer a more deontological approach come out more in favour of indirect respect. For the latter, morality is born of the scrupulous respect of the rule that is the best guarantee of the respect of the interests of everyone, as it makes all decisions predictable and the standardization of behavior makes anticipation easier. Their approach is reason-based and is less sensitive to the affective dimension of interpersonal relationships than the teleological approach. There is little or no personalization of those involved. That said, the most fervent supporters of the deontological viewpoint are not strangers to cases of conscience caused by finding themselves incapable of respecting exactly these rules, which are necessarily too general to not, on occasion, be contradictory. Being obliged to come out in favor of one side

or the other thus forces them to explicitly evaluate the consequences of their act on the interests of others.

As the fundamental characteristics of ethical judgement thus waver between egocentricity (judgement is made using oneself as the starting point) and alterocentricity (it is made in relation to others), this leads us to wonder whether or not it is a relevant field of observation for the influence of social capital. In other words, *the question is whether or not the embeddedness of the small company director-owner in his local environment is the explanation for the classification of the stakeholders' interests drawn up through the ethical choices made.*

Thus, the purpose of this research is to study the influence of ties in ME management, by characterizing the relations between, (1), the links that connect MEs with their local environment, and (2), the nature of the manager's ethics.

Two assumptions were tested:

A1: A link between the nature of the relations and the shape of ethics exists.

A2: A link between the degree of relations and the shape of the ethics exists.

Relations were approached through their nature (i.e. affective, interpersonal, informal, etc.) and their result. In his research on innovative "milieus", Julien (2003) highlighted five patterns of proximities, or nature of relations between MEs and their local environment:

- Geographic: perception of spatial distance between enterprises.
- Social: community cohesion.
- Cognitive: collective competences.
- Inter-organisational: relation between local enterprises.
- Institutional: relation between enterprises and local institutions.

### 3. Methodology

A survey was conducted with head managers of 125 French companies, detaining less than 10 employees, and working in all type of business activities.

**Table 1 - Analysed micro-firms and their activities**

<i>Activities</i>	<i>Percentage</i>
agriculture	4,8%
industry	12,0%
construction	10,4%
crafts	22,4%
services	41,6%
trade	36,0%

Each of them responded to a questionnaire, made of closed questions, during a face to face interview. Two types of variables were retained for the analyses: (1) variables relative to the nature and the intensity of the relations between the company manager and his social environment (community membership, etc.), (2) variables relative to manager's ethics.

(1) The manager/environment relation was analysed using the five patterns of proximity proposed by Julien (2003): geographic, social, cognitive, inter-organizational and institutional. A five level scale was used for each of these patterns. Geographic proximity was measured by manager's perception of geographic belonging (town, region, country, Europe, World). Social proximity was measured by the nature of contacts (are they economically-based or not?). Cognitive proximity was measured by the level of shared knowledge and competencies. Institutional proximity was calculated by the frequency of links with institutions, and inter-organisational proximity by the frequency of contacts between "colleague"- enterprises.

**Table 2 - Questionnaire for proximity variables**

<i>Variables</i>	<i>Questions</i>
Geographic proximity (P1)	I belong especially to the: 1- town 2- region 3- France 4- Europe 5- World
Social proximity (P2)	The other managers I use to meet are my friends. 1- not at all 2- rather not 3- it depends 4- rather yes 5- absolutely
Inter-organisational proximity (P3)	For my work, I meet other managers. 1- never 2- rarely 3- occasionally 4- rather often 5- very often
Cognitive proximity (P4)	In my activity, I share important professional information. 1- not at all 2- rather not 3- it depends 4- rather yes 5- absolutely
Institutional proximity (P5)	I maintain relations with institutions. 1- never 2- rarely 3- occasionally 4- rather often 5- very often

(2) Ethics were measured by 25 variables. Five variables were related to the manager's general conception of ethics and their forms.

**Table 3 - Questionnaire on general conception of ethics**

<i>Variables</i>	<i>Questions</i>
(E1)	If you could not satisfy all your stakeholders, who would you privilege? (Classify) 1- Customers 2- Employees 3- State 4- Town 5- Region 6- Suppliers
(E2)	For you, to act ethically it is to do like: 1- most persons 2- religious principles 3- principle first (vs consequences) 4- your colleagues 5- your personal material comfort requires
(E3)	In daily activities, do you perceive ethics more as a constraint, or more as a mean to be competitive by bettering enterprise's image? 1- always a constraint 2- often a constraint 3- I don't know 4- often a business tool 5- always a business tool
(E4)	For business decisions, are economic requirements more important than personal values and convictions? 1- always 2- often 3- sometimes 4- rarely 5- never
(E5)	Does a code of ethics exist in your firm ? 1- yes 2- no

The other 20 questions, in form of scenarios (see appendix), helped us to refine our analysis on ethics.

In general, response variables described the manager's ethics and its influence on management practices (formalization and institutionalization of ethics, hierarchy of stakeholders' interests, as well as manager's attitudes facing current moral issues described by the scenarios method).

Complementary data was collected on the manager and his enterprise. This data will here not be explored as an explanatory variable, but only as descriptive data. The manager's profile was determined by data on following: age, gender, number of employees, years since creation, former job, and education.

On the two types of variables (proximity and ethics) univariate analyses were undertaken, then, in order to determine correlations, bivariate analyses on all variables (proximity, ethics, and ethic scenarios).

#### **4. Results**

The univariate data analyse showed several characteristics for the five proximity variables (P1-P5) and the five principal ethic variables (E1-E5). Concerning proximity variables, the



results are as following: (P1) Microfirm managers feel to belong to their municipality (30,4%) significantly more than to a larger territory ( $\chi^2 = 11,20$ ,  $df = 4$ ,  $1-p = 97,56\%$ ). (P2) They are significantly undecided (32,8%) about the nature of their relations with their colleagues ( $\chi^2 = 32,56$ ,  $df = 4$ ,  $1-p = >99,99\%$ ). (P3) But, their contacts with other managers are considered significantly as frequent (44%) ( $\chi^2 = 73,68$ ,  $df = 4$ ,  $1-p = >99,99\%$ ). (P4) They affirm significantly (32%) not to share information with their colleagues ( $\chi^2 = 34,80$ ,  $df = 4$ ,  $1-p = >99,99\%$ ). (P5) Concerning their relations to institutions, they are not significant.

The questions concerning general forms of ethics (E1-E5) showed following: (E2) Microfirm managers consider significantly (56%), that acting in a good way, is to act like most others do ( $\chi^2 = 86,62$ ,  $df = 3$ ,  $1-p = >99,99\%$ ). (E3) They consider also significantly, that ethics has to be used as a mean to improve enterprise's image and partner's trust ( $\chi^2 = 41,52$ ,  $df = 4$ ,  $1-p = >99,99\%$ ). (E4) They are significantly undecided (26,4%) about the question on the importance of economical requirements vs personal convictions ( $\chi^2 = 40,84$ ,  $df = 5$ ,  $1-p = >99,99\%$ ). (E5) Last, no respondent has a deontological code in his enterprise

Beside this univariate method, a bivariate analysis was undertaken for all variables (P1-P5; E1-E5; S1-S21). Statistically significant relationships were found. The following table summarises our analysis:

**Table 4 - Statistically significant relationships**

		Proximity				
		P1	P2	P3	P4	P5
General Ethics	E1					
	E2					22,08 (12) *
	E3			24,85 (12) *		
	E4		38,85 (20) **		15,86 (8) *	
	E5					
Scenarios on ethics	S1				36,56 (16) **	
	S2					
	S3		46,64 (16) ***	14,40 (4) **	57,85 (16) ***	
	S4					
	S5					56,22 (12) ***
	S6					
	S7		29,33 (16) *		23,11 (4) ***	
	S8				13,31 (4) **	
	S9					
	S10					
	S11					
	S12					21,21 (12) *
	S13					22,03 (12) *
	S14					
	S15		115,98 (16) ***	23,49 (12) *	78,56 (16) ***	
	S16					
	S17				30,40 (16) *	
	S18					
	S19					
	S20					25,79 (12), *

The empty cases show no significant relationship. Case content: value of chi<sup>2</sup> (degrees of freedom)  
 \* if p<0.05 (significant relation : S)  
 \*\* if p<0.01 (significant relation : S)  
 \*\*\* if p<0.001 (significant relation : VS)

First, significant relations exist between proximity variables (P1-P5) and general ethic variables (E1-E5). Social proximity (P2) is significantly related (on a 0,01 level) to entrepreneur's choice between economic and personal values (E4). This means, that if colleagues are often or very often considered as friends, then personal values are less often sacrificed to economic values. On the other hand, when entrepreneurs affirm to have no friends within their colleagues, then economic values generally dominate personal ones. A relation between inter-organisational proximity (P3) and the use of ethics as a toll (E3) exists on a 0,05 level. When the manager meets other managers, then he considers significantly often ethics as a tool. At the opposite, if he doesn't meet them, he considers ethics more as a constraint. There also exists a relation between cognitive proximity (P4) and the choice

between economic and personal values (E4) on a 0,05 level. This relation shows that, on the one hand, if managers consider economic values more important than personal values, then, they affirm not to share information with their colleagues significantly more often; and, on the other hand, the opposite is also true. A relation between institutional proximity (P5) and sources of moral judgement (E2) appeared. When managers have extremely rare relations with institutions, then, they build their ethic judgement primarily on action principals, and extremely seldom on imitation of others (colleagues or most people). On the other hand, when meetings with institutions are occasional, then, managers do more likely like « others » and do not follow general ethical principles; and when they frequent often institutions, they have no particular ethical behaviour.

Second, significant relations between proximity variables (P1-P5) and ethical scenarios (S1-S20) exist. A relation between social proximity (P2) and price agreements (S3) exists. This relation underlines the following: the more the manager has friends between colleagues, the more he will agree with accords on prices. Social proximity (P2) and aggressive price politics (S7) are significantly related. Less the entrepreneurs have friends between their colleagues, the more normal they find slash prices. Social proximity (P2) is also related to attitudes towards competitors client-data buying (S15). When managers have few friends among their colleagues, they are more willing to buy this data; on the other hand, when they have a lot of friends, they are extremely against this idea. A significant relation exists between inter-organisational proximity (P3) and price agreements (S3). Manager' accord on price agreements rises significantly with the frequency of meetings with other managers. On the opposite, frequenting less colleagues, their attitude is not significant. Another significant relation between inter-organisational proximity (P3) and clients-data (S15) exists. Frequenting few colleagues, managers agree with buying competitors clients-data. Frequenting them often, they are categorically against this behaviour. A significant relation between cognitive proximity (P4) and false information giving to competitors (S1) is shown. When managers do not often share information, the propensity to give false information is high; the contrary is also significant. A significant relation between cognitive proximity (P4) and price agreements (S3) is revealed. The more managers are used to share information, the more they will consent on price agreements; the opposite is also significant. A significant relation exists between cognitive proximity (P4) and attitudes towards aggressive price politics (S7). The more they share information, the less they will consent aggressive price politics. The opposite is also significant. A significant relation between cognitive proximity (P4) and prospecting competitor's clients (S8) is shown. When managers share information with their colleagues, they are hostile to competitor's clients prospecting. The opposite is not significant. A relation between cognitive proximity (P4) and competitor's client-data buying (S15) exists. When managers share information with their competitors, this behaviour is condemned; the opposite is also significant. A relation between cognitive proximity (P4) and

sense of responsibility towards employees (S17) is shown. The less managers share information with their colleagues, the more they will feel responsible of their decisions towards their employees. At the opposite, there is no significant relation between information sharing and responsibility feelings. There is a significant relation between institutional proximity (P5) and attitudes towards public markets (S5). When managers have only rare relations to institutions they are against public market catching by using these relations. On the other hand, when these relations develop, their attitude is no more significant. A significant relation between institutional proximity (P5) and environmental responsibility (S12) is shown. When managers have rare relations to institutions, they consider significantly that microfirms are responsible for the pollution it produces. This link is no more significant, when relations to institutions develop. A significant relation between institutional proximity (P5) and employee treatment (S13) exists. Having infrequent or much relations to institutions, managers consider significantly to treat their employees equally. This relation is not significant at a medium level of relationship. A significant relation between institutional proximity (P5) and charity (S20) is underlined. When managers have rare or greatly institutional links, they think that it is normal that their enterprises help charity associations. This link is not significant at a medium level of institutional relationship.

## **5. Implications and discussion**

If we try to understand the role of social capital on the ethical dimension of microfirm management, two types of results have to be analysed: first, the panorama of manager's general ethics, by offering explication elements of these ethical attitudes; second, searching within embeddedness factors, by analysing their link to ethical variables, those elements which support our general assumptions and, thus, describe the possible effects of embeddedness on management practices.

Describing the logics of ethical decision taking, is trying to make the preferences for either deontological (as a duty by respecting former established rules) or teleological (trying to act "good" and knowing to evaluate decision consequences) approaches appear. The distinction between these two logics is sometimes difficult, as the moral evaluation methods become complementary, as soon as the level of principles is passed and their practical application is considered: the problem's complexity often needs a multiple evaluation of the taken decisions. However, the individual has, consciously or unconsciously, a preference for a particular value judgement conception.

*Our first findings are that enterprise deontologies are quasi inexistent in microfirm context* (zero in our sample). The general trend of low formalised decision taking in small organisations may explain, that microfirm managers do not use ethical or conduction codes inside their enterprise. The absence of inter-enterprise codes is also explained by enterprises'

size: a common rule, explicitly edited inside a community, results from an agreement which is difficult to obtain, when the negotiating partners are numerous. These agreements are more often the results of oligopolies, structured around a big entity, which is also at the initiative of the agreement.

Still, there are several reasons not to conclude that microfirms are less able to have deontological moral approaches than others. First, formal inter-organisational rules are generally axed on some limited aspects of decision takings. In fact, the setting of common rules often responds more to economic than to moral concerns: the purpose is to organise competition by defining (and condemn) “non ethical behaviour”, considered as disloyal. The text content is highly dictated by material criteria of feasibility: composing elements are few (to be managed and known); their respect has to be easily verified (to avoid contrary behaviour); their economic output has to be effective (as no institution can impose the rules’ respect, the sanctions have to pass through the market). This is the reason why these codes are generally related only to the relations with clients (they arbitrate and judge), which are more sensible to damages caused to themselves, than to harm done to other enterprise’s partners. Thus, limited to some particular management aspects, these codes can serve as global decision evaluation tools. Furthermore, as their purpose is to permit the harmonisation of practices, they are more in the order of licitness as of moral legitimacy. The considered problems are not only limited to some precise business domains, but they are also not considered de facto in moral terms. Thus, additional to the internal absence of codes in microfirms, the missing of inter-organisational deontological charts may us still not conduce to conclude that these enterprises are not adapted to deontological approaches of ethics. *It remains a paradox, that despite of the internal and external absence of ethical codes, microfirm managers manifest a preference for deontological approaches.*

A minority of managers (32%) affirm to evaluate the consequences of their decisions on others, while most respond (56%) to act like others do (essentially colleagues): microfirm ethics appear essentially to be “imitation ethics”. Two types of explanations may be considered.

First, we may read in this attitude the manager’s desire to avoid the risks of errors during decision taking, by using pre-established rules. Despite low formalisation of management decisions in microfirms, there would be a demand for particular formalisation of ethical questions. However, this may answer to two types of concerns. Of course, the preoccupation may be moral: actors may want to avoid moral risks of their decisions. We can then be surprised that only few (little more than 5%) use these general ethical principles, they apply privately, at work. If these rules dictate their behaviour outside the enterprise, how does it come, they don’t guide professional decisions, as a specific professional code is missing? In other words, why do they line up their behaviour on other people’s practices, and why do they not integrate the imperatives of their own moral conscience? It is possible, that the

choice of imitating colleagues responds more to economical than to moral concerns. Two logics may then be considered. First, it may be considered as a reactive behaviour of the entrepreneur, trying to limit economic risks. As in general ethical practices are costly (at least at the beginning), imitation may be a possibility to line up with competitors, in order to support analogue costs. Just as the absence of their real actual costs may conduct the microfirm managers to choose tariffs according to competitors, the absence of manager's ethical determination, may also lead him to reproduce behaviour usual in his profession. Second, the imitation may also be considered as a proactive attitude not consisting of limiting economical risks, but of trying to use ethics for economic performance. To adopt the same attitude as the general conception of well-acting is, may traduce the will to be accepted by the community and thus, being able to take advantage of it. Now, our survey shows that *ethics are largely considered as management tools* (60%), as they help to improve enterprise's image. Moreover, economic concerns are considered, in same proportions, to have priority over moral concerns. Thus, only 22,4% of managers see in ethics rules that constrain their actions.

However, the use of ethics as instruments to improve economic performance seems to traduce *the hierarchy of stakeholder's interests, classified by the majority as following: clients, employees, suppliers, local community, State*. This hierarchy might find its justification in the instrumental conception of ethics: if ethics are more considered as a management tool than a constraint, to watch out for certain partners more than for others may be a possibility to develop enterprise's performance. The preference of clients over employees can illustrate this idea: fewer employee's efficiency seems to be less harmful to enterprise than buyer's dissatisfaction, directly related to turnover. Concerning local community and the state, it is highly probable, that in French context, enterprises expect low positive repercussions: they are more considered as legislators creating constraints for enterprise's activities than as facilitators for their functioning (i.e. by infrastructure building). Besides, the disinterest (or adversity) manifested towards the community is negatively related to the degree of power decentralisation, representing it.

However, the results of our survey regarding the link between ethics, on the one hand, and nature and degree of embeddedness, on the other hand, seem to strengthen our previous explanations and, thus, describe the probable effects of embeddedness on managers.

At a global level, *the two propositions tested in this research seem to be validated*, as significant statistical relations were shown between embeddedness variables and ethical variables.

*At the level of geographical proximity, it seems to have no effect on manager's ethics* (no significant relation was shown).

*Social proximity seems to influence the importance of ethics in management decisions:* when the manager has lot of friends within his colleagues, he esteems not necessary to sacrifice personal values to economic constraints. The existence of friendship between managers might modify his perception of management decisions: socially satisfied, he may reduce the search for other types of satisfactions (i.e. economic). The more social proximity is important, the more the entrepreneur is favourable to price agreements, hostile to aggressive price politics and competitor's clients-data-buying. Thus, *the degree of social proximity seems to explain empathy not only towards managers in general, but also towards competitors.*

*Inter-organisational proximity seems to influence the importance of ethics in management decisions:* other manager's company seems to induce the development of ethics as management tools, as if managers, during their meetings, legitimate the priority of economic values over ethical principles. Thus, if price agreements are considered to be good by managers highly frequenting other managers (there is no significant relation for those less frequenting), this relation is probably due to the effect of discussions on negative effects of competitive aggressiveness on firm performance. At the same time, buying competitor's client-data is condemned, when inter-organisational proximity is high, and accepted when it is weak. It seems that *the degree of inter-organisational proximity influences positively the consideration of peers' interests in management decision takings.*

As well as social proximity, *cognitive proximity seems to influence the place of ethics in management decisions:* when the manager doesn't share important information with his colleagues, then economic objectives are considered to be more important than personal values. Consequently, the managers not sharing information are willing to give false indications to their competitors. On the other hand, those sharing information, denounce client prospecting and data procurement of competitors. The more information is shared, the more they consent to price agreements, and the less to aggressive price politics. The less information is shared, the more managers feel responsible for their errors in front of their employees. *The degree of cognitive proximity influences positively the considering of stakeholder interests.*

*Institutional proximity also seems to influence ethical judgement:* when the manager rarely meets professional or public institutions, then, he bases his judgement on general principles and not on imitation; when this company is neither rare nor frequent, he tends to imitation; and when his meetings with institutions are often, then his logic of action is not clearly specified. Hence, meeting institutions probably permits to improve knowledge about other manager's action logics; if these meetings are rare, then manager seem to imitate what they think to be management practices (of his colleagues mainly); on the other hand, if these meetings are frequent, then manager seem to become aware of management practice heterogeneity, while institutions, basing their legitimacy on the defence of collective interests, may transmit a less instrumental conception of ethics. When relations with

institutions are weak, then managers are against profiting from personal relations to gain public markets, and estimate that enterprises have to assume their responsibility of pollution. Moreover, when relations with institutions are weak or strong, managers estimate to be able to treat employees equally and to assume charity actions; when these relations are neither rare nor frequent, then the results do not show any statistic significance. *The degree of institutional proximity seems to influence the importance of collective interest in microfirm manager's ethical representation.*

## 5. Conclusion

Thus, perceived community membership, frequency of professional relationships with peers, frequency of relationships with professional institutions, overlapping of professional and personal relationships seem to explain manager ethics. Forms of ethics seem to be explained as much by embeddedness nature, as by embeddedness intensity. These results suggest that "communities of ethics" may appear. In this perspective, ethics are not only linked to personal characteristics, but also to manager's social networks.

Nevertheless, this research presents some methodological limitations. The first limit concerns the sample size: only 125 enterprises were analysed. Consequently, the application of statistical tests (particularly  $\chi^2$ ) has some times conducted to a reduction of modalities, what reduced results nuances. Increasing the sample would permit to exceed this limit.

Moreover, any bivariate analysis was done on the variable E1 (stakeholder hierarchy). It would be necessary to stratify the sample according to stakeholder classification, but, as the general sample was limited, we were not able to do so. Increasing the sample would here also permit to exceed this limit.

Last, only univariate and bivariate analyses were undertaken in this research. A multidimensional analysis would help us to identify enterprise clusters. But still, the nature of ethics, objectively not measurable, makes this operation contestable.

## 6. References

- Astley W.G., Fombrun C. (1983), "Collective Strategy: Social Ecology of Organizational Environments", *Academy of Management Review*, Vol. 8 (4), pp. 576-587.
- Courrent, J.-M. (1998), *Ethique de gestion : essai de description par les attitudes des dirigeants de petites entreprises*, thèse de doctorat, Université Montpellier-1.
- Courrent, J.-M. (2003), « Éthique et petite entreprise », *Revue Française de Gestion*, 144, mai-juin, 139-152.
- Courrent, J.-M. ; Torrès, O. (2005), « A Proxemic Approach to Small Business: the Case of Business Ethics », *International Council for Small Business (ICSB) Conference*, Washington, June 15-18.



- Fombrun C., Astley W. G. (1983), "Beyond Corporative Strategy", *Journal of Business Strategy*, Vol. 3 (4), pp. 47-54.
- Freeman, R. Edward (1984), *Strategic Management : A stakeholder Approach*, Pitman, Boston.
- Freeman, R. Edward (1991), *Business Ethics: The State of the Art*, Oxford University Press, New-York.
- Goodpaster, K.E. (1991), « Business Ethics and Stakeholder Analysis », *Business Ethics Quarterly*, (1), january.
- Gueguen G. (2001), *Environnement et management stratégique des PME: le cas du secteur Internet*, Thèse de Doctorat, Université de Montpellier, France.
- Gundolf K., Jaouen A. (2005), "Patterns and Coordination of Collective Action in Small and Very Small Business : The Case of a Tourist Village in the Pyrenees », *International Journal of Entrepreneurship and Small Business*, Vol. 2 (4), pp. 392-403.
- Hoang H., Antoncic B. (2003), "Network-based research in entrepreneurship : a critical review", *Journal of Business Venturing*, Vol. 18 (2), pp. 165-187.
- Jaouen A. (2005), *Les alliances stratégiques entre très petites entreprises : un cadre d'analyse*, Thèse de doctorat, Université de Montpellier, France.
- Johannisson B., Alexanderson O., Nowicki K., Senneseth K. (1994), "Beyond anarchy and organization : entrepreneurs in contextual networks", *Entrepreneurship and Regional Development*, Vol. 6, pp. 329-356.
- Julien P.-A. (1990), « Vers une typologie multicritère de la PME », *Revue Internationale PME*, Vol. 3 (3-4), pp. 411-425.
- Julien P.-A. (2003), « Entrepreneuriat Endogène et Milieu », *Les Cahiers de l'ERFI*, Vol.10 n°2-3.
- Kant I. (1788), *Kritik der praktischen Vernunft*, Taschenbuch, Berlin.
- Longenecker J. G., McKinney J. A., Moore C. W., (1989,a) "Ethics in Small Business", *Journal of Small Business Management*, 27 (1), january , 27-31.
- Longenecker J. G., McKinney J. A., Moore C. W. (1989,b),, "Do Smaller Firms Have Higher Ethics?" *Business & Society Review*, n°71, fall 19-21.
- Longenecker J. G., McKinney J. A., Moore C. W.(1994),, "Ethical Perceptions and Ethical Environment in Small Business", *ICSB*, Strasbourg, june 27-29,, 153-158.
- Mahé de Boislandelle H. (1996), L'effet de grossissement chez les dirigeants de PME : ses incidences sur le plan du management des hommes et de la GRH, *3ième CIFEPME*, Trois Rivières, Québec, Canada.
- Marchesnay M. (1993), *Management stratégique*, Eyrolles, Paris.
- Misrahi R. (1997), *Qu'est-ce que l'éthique*, Armand Colin, Paris.
- Moessinger P. (1996), *La psychologie morale*, PUF, Paris.
- Moles A., Rohmer E. (1978), *Psychologie de l'espace*, Casterman, Paris.
- Pfeffer J., Salancik G. (1978), *The External Control of Organizations*, Harper and Row, NY.

- Reindenbach R.E., Robin D.P. (1991), "A conceptual model of corporate moral development", *Journal of Business Ethics*, 13(10), p. 273-284.
- Skipper R., Hyman M.R. (1993), « On measuring ethical judgements », *Journal of Business Ethics*, 12(7), p. 535-545.
- Torrès O. (2004), *Essai de théorisation de la gestion des PME : de la mondialisation à la proxémie*, HDR, Université de Caen, Basse-Normandie.
- Yami S. (1999), *Représentations managériales et processus stratégique : le cas de la filière industrielle du lin dans le Nord de la France*, Thèse de doctorat, Lille, France.

## Appendix

### Scenarios on business ethics

<i>Variables</i>	<i>Questions</i>
S1	It is normal to give false information to a competitor, in order to maintain competitive advantage
S2	For microfirms, having difficulties to survive during crises, it is legitimated that some sales in cash are not registered as accountings.
S3	Price agreements between competitors are sometimes a good thing to do.
S4	You can forgive a trader which “forgot” to return money, when the amount is not important.
S5	It is logical to use its relations with elected persons to obtain public markets.
S6	It is normal to borrow and to copy software useful for the enterprise.
S7	According to the market logic, it is normal to slash prices to create its own market.
S8	It is normal to prospect competitor’s clients.
S9	In urgency cases, it is possible to hire occasionally an illegal employee.
S10	You may get round a wrong law.
S11	It is possible to forgive a mechanic to change a non used spark plug, as the damage is limited.
S12	Enterprises creating wealth, does not to matter about its pollution. It is the role of the community to clean up.
S13	It is not possible to treat employees equally.
S14	The microfirm has the duty to create employments.
S15	It is correct to buy clients data of a competitor via your salespersons.
S16	At equal qualification, it is legitimate to hire men, because they are more available.
S17	You are morally responsible towards your employees if you made a wrong decision.
S18	It is normal to get personal life information of a person before hiring him.
S19	It is not grave if a trader sells a product with a exceeded “use by date”.
S20	It is the role of the enterprise to give donations for charity associations.