The Impact of Human and Social Capital on New Venture Internationalization

ABSTRACT

This research seeks to address how differences in human and social capital influence on the internationalization pattern of new technology-based ventures. Based on survey data from 93 ventures and 82 in-depth interviews in the Danish IT/communication and biotech/medico industries, the findings indicate differences between two industries with regard to the human and social capital composition. International working experience is more pronounced among biotech/medico entrepreneurs. Entrepreneurs who have studied or worked abroad are more likely to have early international activity. The study repudiates the ‘born global’ hypothesis in favour of an accelerated Uppsala-model.

INTRODUCTION

Internationalization of new technology-based enterprises is an important issue since international activity requires resources that newly founded firms may find it difficult to locate and acquire. This notwithstanding, research undertaken throughout the nineties has consistently shown that such enterprises commence international activities increasingly early in their existence. It has also been found that the pattern of internationalization in new technology-based companies differs from that of “conventional” companies concerning choice of markets and entry modes (Bell, 1995; Boter & Holmquist, 1996; Madsen and Servais, 1997), which tend to become international in a slow and incremental manner (Johanson & Vahlne, 1977, 1990). New technology-based firms, on their part, seem more often to be “born global”, starting to act and trade in foreign markets soon after their establishment (Madsen, Rasmussen & Servais, 1999). Such internationalization behaviour contradicts the resource constraint assumption. Therefore it seems that new-technology based firms possess some characteristics that help overcome resource constraints. This article has a dual purpose. First, it elucidates the human and social capital involved in new technology-based venture internationalization. Second, it investigates the substance of the claim the internationalization pattern of these ventures differs significantly from the traditional model.
Technology-based firms are defined as ventures whose products or services are to some extent dependent on the application of scientific and/or technological knowledge (Allen, 1992). Such businesses can apply novel and advanced technology to invent new products or services as well as employ existing technology in innovative ways. According to Preece et al (1998) technology-based start-ups are faced with certain pressures for internationalization because they are by a) operating in narrow market niches; b) requiring high investments in research and development and c) performing in highly competitive markets based on the speed of product obsolescence, factors that push newly established technology-based ventures towards fast internationalization (Preece et al 1998; Keeble et al 1998).

The above pressures point to the reasons why new technology-based ventures necessarily have an international or global perspective from the start. Such ventures also face a number of barriers. Apart from the obvious resource constraints, previous research has primarily focused on how managerial perception acts as a barrier among others using the psychic distance concept (Johanson & Vahlne, 1977), which is concerned with how managerial risk perception leads them to a choice of markets perceived as similar to the home market as well as an internationalization route, which is perceived as “safe”. Changes in managers’ human and social capital make-up may constitute a significant means for overcoming resource constraints hence enabling the born global effect. In investigating the human and social capital profile of technology-based firms this study therefore goes beyond the simple measure of exporting which has previously been used in studies investigating the internationalization of small firms.

The paper is structured as follows: the following section will give a brief introduction to two internationalization frameworks. The next section elucidates how human and social capital may be interpreted and their contribution to these models, followed by a methodology section. The results from the survey will then be presented and discussed and finally the implications for researchers and practitioners will be addressed.

INTERNATIONALIZATION RESEARCH

Internationalization process literature has been reviewed repeatedly over the past decades (Andersen 1993; Barkema et al 1996). A comprehensive review is, however, outside the scope of this article, and it will therefore focus on the two models that are relevant for its focus: The Uppsala model (Johanson & Wiedersheim-Paul 1975; Johanson & Vahlne 1977) and the “born globals” (BG) model (McDougal et al 1994; Oviatt and
McDougall 1994, Madsen and Servais, 1997; Preece et al 1999). Looking back, there is little doubt that no other interpretive framework has had the same predominance and impact on research on internationalization processes as the Uppsala-model, even outside Scandinavia. However, critics have increasingly started to doubt the explanatory power of the Uppsala-model, since recent observations testify to new ventures becoming international at a much faster rate and have a more global outlook than proposed by the Uppsala-model.

The U-model of internationalization assumes an interplay between gradual acquisition of knowledge and commitment of resources to international operations. Knowledge is primarily built through experience related to specific markets and is gradually embedded in the activities and capabilities of the firm. The key explanatory variable knowledge is by nature linked to the decision-maker, his/her perceptions and actions. The model also operates with the psychic distance concept. Psychic distance is concerned with managerial perception of how close another country is in linguistic, institutional, political and cultural terms (Benito and Gripsrud, 1992). Choice of market then depends on a mix of perceived psychic distance and experiential knowledge. Increased experiential knowledge in turn leads to greater commitment. Research testing the U-model has, however, shown that some firms may leapfrog stages and apply general knowledge gained in one market to other markets (Clark et al, 1997). Clark et al (1997) therefore propose that knowledge about internationalization can be divided into general and specific knowledge. General knowledge can be used indiscriminately across several markets, whereas specific knowledge is gained through experience applicable in a particular market. The pattern of internationalization that reflects this will show an increasing tendency towards simultaneous entry as well as skipping stages.

A number of recent studies have explored the born global (BG) phenomenon (Madsen and Servais, 1997). Although they have various names for these ventures, such as international new ventures (McDougall et al 1994), instant internationals (Preece et al 1999), global start-ups (Oviatt & McDougall, 1994; 1995 and 1997), they still investigate the same phenomenon. The BG model challenges the U-model on various points, e.g. BGs perceive the whole world as their market, have international activities from venture foundation and choose the most attractive markets regardless of psychic distance. However, BGs face the resource restrictions mentioned in the introduction, and necessarily rely on hybrid structures such as close personal relationships and joint ventures in their internationalization (Moen & Servais, 2002). They also choose different routes to
internationalization based on the contacts and knowledge acquired prior to the initiated new business (Christensen & Jacobsen, 1996), thus the human and social capital such as personal networks and international contacts as well as experience obtained through education and previous occupations seem to underlie the development of BGs.

Internationalization can thus be seen as a function of knowledge about foreign markets and lack of knowledge can be remedied either through education, experience, or networking, but according to Moen & Servais (2002) most studies of BGs focus on whether these ventures are exporters or non-exporters, assessing whether a venture is born global by measuring its exports after three years. If the venture exports more than 25% of its production it is defined as a BG (Cavusgil and Knight 1997). By focusing on export share, studies may a) overlook the factors that underlie the global focus, b) fail to investigate the choice of operational form and c) neglect the further development pattern of the ventures.

There is an ongoing discussion of whether the born global phenomenon is new, or whether what is being witnessed is merely a speeding up of the internationalization process as described in the U-model facilitated by a different make-up in human and social capital, e.g. more international experience and more networking achieved prior to venture formation.

HUMAN AND SOCIAL CAPITAL

Human capital is created by changes in persons that bring about skills and capabilities, which enable them to act in new ways (Coleman, 1988). Such changes may be brought about through education or experience and may have a bearing on the entrepreneurs’ attitude to internationalization. Human capital is influenced by social capital because the learning and experience that influence change in human capital may be facilitated through interaction with other persons in a network.

Human capital is often divided into general and specific capital (Becker 1975). In relation to internationalization, indicators of general human capital are level of education and managerial experience from positions that give familiarity with international business practices and transactions (Chandler and Jansen 1992; Fletcher 2001). Indicators of specific human capital include foreign language proficiency and whether the entrepreneur has travelled, worked or studied abroad previously (Leonidou et al 1998; Manolova et al 2002). Embedded cultural experiences may have a positive influence on the entrepreneur’s attitude to internationalization, i.e. the existence of BGs may be linked to founders being more
receptive to internationalization due to competencies they have developed from earlier activities, i.e. as students of international business, or participation in exchange agreements.

Social capital is perceived as the sum of resources that a person can access through a network of relationships. Of particular importance in this connection is how individual relationships can be leveraged for information, knowledge and learning. Social capital is often split into firm internal and external social capital. However, with regard to internationalization external relationships between the founder and persons/firms abroad are the most relevant. Such capital may help increase the supply of foreign market knowledge by generating access to information, and make it easier for entrepreneurs to overcome resource barriers in internationalizing the new venture (Eisenhardt & Schoonhoven, 1996). McDougal, Shane & Oviatt (1994) argued that social capital in the shape of personal contacts to individuals in foreign markets could be used for a number of purposes, e.g. identify new opportunities, obtain business advice and generally open doors and reduce the need for market specific knowledge. Social networks in general are seen as critical to business success for firm formation as well as for survival and growth (Birley 1985), since initial contacts from personal networks evolve into professional, business-focused networks (Falemo, 1989). Christensen (1991) found that contacts developed for other purposes may become instrumental in initiating international activity (Christensen, 1991).

To sum up, social capital is embedded in relationships. It influences knowledge about foreign markets and may provide access to these. The born global phenomenon may thus have come about through the establishment of personal or business-related contacts abroad and may ease expansion into foreign markets, due to easier access to information gained through social ties. Such ties may provide access to strategic information about e.g. customers and suppliers. However, extant theory still disagrees about the predominance of the born global phenomenon and whether the U-model is rapidly becoming obsolete.

Based on the discussion above two research questions can be drawn up:

RQ1: how is human and social capital involved in new-technology-based venture internationalization? and;

RQ2: does the internationalization pattern of these ventures differ significantly from the Uppsala-model?

Human capital is operationalized as length of education, international study or work experience as well as foreign language proficiency. Social capital is measured by the existence of international contacts, their type and purpose. These are then linked to
internationalization in terms of speed and sequence of market entry as well as entry mode chosen.

METHODOLOGY AND RESEARCH DESIGN

This paper reports a study of technology-based start-up firms established recently in Denmark. A triangulation of data sources was applied in order to collect general as well as more in-depth information. The general information was collected by means of an Internet-based questionnaire and the in-depth information by conducting extensive semi-structured interviews with founders of new technology-based ventures. The interviews were used to explore the underlying reasons for some of the observations in the quantitative study. Further, information was obtained through secondary sources such as annual reports and newspaper articles.

Sampling was carried out from a database constructed by the research group since The Danish Statistics Bureau does not compile a database on new technology-based ventures. Participant firms were selected on the basis of business sector and age of firm. Two technology-based sectors were included: IT/communication and biotech/medico since these have the potential for fast international growth. Only early stage ventures were targeted, thus all of the firms were established after 1996.

The quantitative part of the study included over 200 variables. The questions were generally formulated as closed questions using a 5-point Likert scale or open-ended questions to be answered on a scale or by stating a value. The information reported in this article was collected in summer 2002. A total of 155 questionnaires were sent out, of these 102 were returned, representing 93 ventures. Divided on sector this is 47 biotech/medico and 46 IT/communication. As the number of participating ventures is almost the same for the two sectors, the results reflect both absolute and relative numbers. 68 ventures had a finished product. 43 have international activities in general and 34 sell products abroad. The analyses were carried out using the standard packages SPSS and SAS.

In consequence of the relatively low number of respondents certain reservations apply to the results. However, there is reason to believe that the number of firms contacted is very close to the population total at least for biotech/medico ventures. In 2000 The European Federation of Pharmaceutical Industries and Associations registered a total population of 161 Danish pharmaceutical companies of which the biotech/medico ventures only constitute a smaller part. For the whole of the European Union, new biotech entities established in the period 1996-2000 amounted to a total of 94 and in the USA 83. The
sample here includes 46 Danish biotech/medico ventures established in 1996-2001. Unfortunately, no comparable data exists for IT/communication ventures.

For the qualitative part of the study 100 firms were sampled. Of these 24 ventures were selected for interviewing following the same criteria as for the quantitative part. Informants for the qualitative study were chosen on the basis of one criterion only: that they are/were members of the founding team. The sample included both ventures with solo and multiple founders and founders, who had left the firm, were also interviewed. Using a semi-structured interview-guide, all founders in the selected ventures were interviewed individually followed by a group interview when possible. In total 82 interviews were conducted, lasting between 1.5 and two hours each. All interviews involved the presence of two researchers and the interviews were taped and analyzed using the Sphinx text analysis software. However, the sheer mass of interview data made it impossible to carry out cross-case analysis using this software.

RESULTS AND DISCUSSION

Two aspects of human capital are presented in the following. First, the general educational profile in terms of what type of qualifications the entrepreneurs hold and second, the specific educational profile in terms of having studied abroad and language capacity. This will be followed by the results with regard to general work experience and specific international work experience. These are based on number of respondents. Then the results concerning internationalization patterns are presented. These are based on the number of ventures.

Experience and Education

Figure 1 shows that the number of biotech/medico entrepreneurs holding a PhD or an MBA is considerable with 58.7% of the respondents, compared to only 10.6% of IT/communication entrepreneurs. The secondary data reveals that most of the biotech/medico ventures are university spin-offs and are located on or close to the university campus in a science park. The high number of PhDs may thus reflect a larger research component in biotech/medico ventures than in IT/communication ventures.

In total 36.5% of the entrepreneurs have worked and 25.8% have studied abroad. However, when split on sector, the number of entrepreneurs, who have studied abroad, is similar for the two sectors (24% IT/communication and 28% biotech/medico), but 44.7% of the entrepreneurs in the biotech/medico sector have previous experience from working
abroad compared to 28% of IT/communication entrepreneurs (see figure 2). This may be connected to the educational profile (see figure 1), which indicates that biotech entrepreneurs are much more likely to hold a Ph.D. and be embedded in a research environment, where exchange of visiting researchers with foreign institutions is very common. The interviews reveal that this is indeed the case. In the ventures selling products abroad two thirds of the entrepreneurs have either studied and/or worked abroad compared to one third, who do not possess any such experience.

Language is neither a barrier for technology-based entrepreneurs. 78.4% speak a foreign language fluently (English, German, French or Spanish). 98.4% of all entrepreneurs report that they are proficient English speakers, 30.4% have a reasonable command of German and 7.9% have some knowledge of French. Thus, internationalization is not hindered by lack of foreign language proficiency.

In order to obtain a picture of the type of general work experience that the entrepreneurs possess, the respondents were asked to state the number of years experience in a number of areas such as sales and marketing, accounting, financial controlling, human resource and entrepreneurial experience. The results were then grouped into four categories: no experience, 1-5 years, 6-10 years and above 10 years. Very few indicated that they had above 10 years of experience in any area. Only 6% IT/com and biotech/medico respectively said that they had more than 10 years experience in the area of technology and innovation management. Two areas stood out in the 6-10 year category: 10.6% of the IT/com entrepreneurs had this amount of experience in entrepreneurship: i.e. establishing new ventures, indicating that some may be serial entrepreneurs. In technology and innovation management 10.6% IT/com and 13% of the biotech/medico entrepreneurs respectively indicate between six and ten years experience. In the one to five year category, the numbers increase. In sales and marketing 27.6% IT/com and 15.2% biotech/medico indicate experience. The same pattern can be found in accounting (21% and 19.5% respectively), human resource management (23.5% and 10.8%), technology and innovation (29.7% and 19.5%) and entrepreneurship experience (29.7% and 23.9%). Thus, apart from technology and management IT/communication entrepreneurs consistently have more managerial experience than biotech/medico. However, few entrepreneurs possess any experience at all in the areas of production management, transport, distribution and logistics management, and financial controlling, areas which are all important when considering internationalization. The interviews reveal that lack of experience in these areas seems to be
made up for by employing managerial staff with these capabilities. Thus, inexperience in the areas concerned should not represent a barrier to venture internationalization.

**International contacts**

Social capital does not seem to be singularly dependent on whether the entrepreneur has worked or studied abroad, but is much more likely to result from a broader contact network. In total, 86.3% of the respondents state that they have international contacts. Split on sector, 72.3% of the IT-entrepreneurs indicate an international contact network, whereas 97.8% of the entrepreneurs in biotech ventures give an affirmative reply. Those respondents that gave an affirmative reply were then asked to indicate the existence of international social capital on thirteen different types of contact, see figure 3. When the social capital is seen in relation to human capital, 77.8% of the entrepreneurs, who indicate that they have international contacts, have either studied or worked abroad. Most of the interviewed entrepreneurs confirmed the importance of an international contact network. However, IT-entrepreneurs reported that they primarily built international relationships after venture foundation, whereas biotech/medico entrepreneurs reported that they were active both pre- and post venture formation.

Contacts may be forged either before or after establishing a venture. Figure 3 shows a shift in the type of contacts created before and after establishment. Contacts to family members, friends and acquaintances abroad are generally created before establishment, as well as contacts created through conferences and previous jobs. Travelling has contributed with very few foreign contacts. Contacts created after establishment are primarily focused on investors, although contacts established via the Internet also show an increase. Biotech/medico also forge contacts with advisors and other ventures. The results indicate that biotech/medico entrepreneurs are very active networkers, primarily with regard to the number of contacts created through previous jobs. This may be due to the fact that many biotech/medico entrepreneurs have worked abroad as demonstrated by figure 1. Biotech/medico entrepreneurs also forge contacts at international conferences, both before and after the establishment of the business, though approximately twice as many are created ex ante. Biotech/medico entrepreneurs publish research results in order to build reputation and the interviews show that biotech/medico ventures actually use contacts built through conference participation as intermediaries with regard to selling their products. Thus, they may build a sales network very speedily. Biotech entrepreneurs seem to be more active investment seekers abroad than IT-entrepreneurs. In the case of IT entrepreneurs only very
few indicate conferences as a source of international contacts. With regard to advisors and other ventures IT indicate no contacts at all.

Another important issue is what entrepreneurs use their international contacts for. There is here a significant difference between sectors regarding what they use their international contacts for. To identify possible differences between IT and biotech ventures with regard to their use of contacts abroad, a profile analysis was carried out. To test for differences in the profiles, the profile analysis is firstly used to test for parallelism, yielding a p-value of .0026. Thus, the hypothesis of parallel profiles can be rejected. In other words, the profile analysis reveals significant different profiles between the two sectors with regard to the purposes for which they use their contacts. In the IT/communication sector contacts are used for finding customers and agents/distributors. Biotech/medico entrepreneurs on the other hand primarily look for cooperative partners. This may be linked to the type of enterprise, i.e. whereas IT/communication enterprises may be quick to produce a product, biotech/medico enterprises are more likely to be founded on a patent and need a lot of research to be carried out before a product can be launched.

**Internationalization pattern**

With regard to internationalization, three different aspects were investigated: First, the speed of internationalization, second, the sequence in which markets are chosen and third, the extent of international involvement in terms of entry mode in the different markets. In other words does the study support the born global hypothesis or can the internationalization pattern be explained in some other way. Only 50% of the ventures have actually got a product to sell (34 out of 68). Nine more ventures have international activities in terms of collaborative alliances. Previous studies have indicated that the industries chosen would be those most likely to feature BGs, so 50% may seem to be a rather low number. Since biotech/medico ventures have long development times, this may influence the results. However, there was no significant difference in the profiles of the two sectors. Of those that have started selling products abroad, table 1 shows that only six ventures have commenced such activity from the year of establishment, but most of the remaining ventures have started within three years of establishment. Five ventures were more than three years old. The last venture indicating international product sales was five years old before entering foreign markets.

However, since only 68 of the established ventures actually have a product to sell, the data indicates that ventures are unlikely to enter foreign markets until they have a
product. Only nine ventures have commenced international activity other than sales. In industries with a lengthy product development and testing such as biotech and medico products this may lead to a time lag of 8-10 years from establishment until the product is actually launched. In the meantime these ventures may enter research and development alliances with ventures abroad.

Respondents were asked in which sequence the internationalization had taken place so far. Table 2 shows the percentage of ventures that have chosen a given market as first, second, third, fourth, fifth and sixth choice. Note that entrepreneurs may have chosen to enter more than one market simultaneously. Therefore, the number of replies does not reflect the number of companies, i.e. 72 responses were given with regard to first market choice, indicating that several ventures have entered more than one market simultaneously. This also indicates the type of strategy chosen by the entrepreneurs in spreading or concentrating their resources. 20.6% of the ventures have chosen a spreading strategy, entering from two to five markets simultaneously. This strategy was primarily in the first step of the internationalization process, although about 7% of these ventures also used simultaneous entry later in the internationalization process. For these latter ventures there may be generalized entry knowledge involved. However, for the former it is more likely to reflect the international contact network built prior to venture establishment.

With regard to the first choice of market, entrepreneurs seem to follow the U-model and venture into geographically neighbouring markets or markets with a perceived low psychic distance. The first market/region they target is either Scandinavia (36.1%) or Germany (20.8%) whereas only 15.3% choose the USA as the first market to enter. The pattern is a little different with regard to the choice of second market. Here Great Britain is the chosen by 23.8% of the ventures with Scandinavia in a close second with 21.4%. Other European Community countries and the USA share the third place, with 16.7% of the ventures choosing these as a second market/region, respectively. However, it is much more likely that the USA and the Far East are targeted much later in the process. The interviews reveal that psychic distance does matter, and that entrepreneurs only target overseas markets if they have previous contacts there or advisors who influence the choice.

In the “other” category respondents were asked to give name of country/region. One venture had entered Latin America first; two had targeted South America as a first and second market respectively. South Africa had also been entered first by one venture as had Israel. Switzerland was entered as the second marked. The interviews reveal that ventures entering an overseas market as a first choice do so due to professional contacts established
through e.g. conference participation or previous jobs. The contacts forged in this manner primarily give rise to strategic alliances or license production (c.f. table 3).

If choice of market is split on the two sectors, Scandinavia and Germany dominate as first choice of market IT/communication ventures, whereas biotech/medico ventures also target Scandinavia but opt for the USA rather than Germany. The interviews show that this choice is influenced by two different factors. Biotech/medico entrepreneurs find their primary market in the USA, not only as an outlet for products, but also for research collaboration. IT-entrepreneurs look to particularly Sweden and Germany for the most recent developments in their field, i.e. they benchmark their development activities against the trends found in these markets. Thus, markets that constitute strategic windows influence the choice for IT-entrepreneurs.

As shown in table 3, for those that do go abroad the geographic spread and choice of entry mode is quite diversified. Respondents were asked to tick all applicable alternatives, thus the same venture may be present in more than one country/region and in more than one form. Although most companies in both industries stick to traditional exporting, strategic alliances also seem to be a preferred mode of entry for both industries. However, entry modes requiring significant investment such as establishing sales subsidiaries or green field production are hardly utilized. The ventures seem to prefer license production to green field production.

The interviews also underline that for biotech/medico ventures the choice of strategic alliances may be attributed to that most of these ventures have continuing relationships to researchers, either through conferences or previous work abroad, participating in research activities. The choice of license production over green field investment is most probably due to the fact that most products in the biotech/medico sector are patented. IT/communication ventures are more active exporters than bio/medico ventures in most markets. The only market in which there are more biotech/medico exporters than IT/com is in the Far East. Many of the IT/communication products concerned are suited size and weight-wise to transportation over long distances. Establishing production abroad is thus more costly than transporting products.

CONCLUSION
The findings established that human and social capital is involved in new technology-based venture internationalization in a number of ways. International experience from studying and working abroad is considerable among the participating entrepreneurs and the majority
of entrepreneurs also indicate that they have international contacts. The results thus indicate there may be a causal relationship between the human and social capital profile and internationalization. In other words, international experience from studying or working abroad leads to an international contact network, which influences the speed and direction of internationalization. Hence, the study lends support to McDougal et al (1994) that direct personal contacts may be used to open doors in new markets. A number of the ventures target more than one market simultaneously which indicates that in leveraging their social capital the entrepreneurs may be able to outweigh initial resource constraints as proposed by Yli-Renko (1999).

Concerning sector variations, the findings indicate that the two sectors are very different on three points. First, with regard to international experience as a basis for internationalization, biotech/medico entrepreneurs were much more likely to have worked abroad. Secondly, many of the ventures have an international contact network prior to start-up, which they continue to cultivate and extend after venture foundation. However, they use these contacts for widely different purposes. Biotech/medico entrepreneurs look for cooperative partners, which is reflected in their choice of strategic alliances as an internationalization strategy. IT/communication ventures on the other hand use their networks for finding agents and distributors. Finally, in choosing the first two markets to enter, IT/communication entrepreneurs target markets closer to home than biotech/medico ventures. The strategic choice of market and entry mode may thus be industry dependent and influenced by human and social capital.

This paper has argued that although the born global phenomenon does exist in both IT/communication and biotech/medico ventures, it is not predominant. Although 43 ventures have international activities from the outset, fewer than half the ventures have started to sell products abroad within the first three years. Therefore, if export share is used as an indicator of being born global, it is not possible to support the born global hypothesis. On the other hand, there is a difference between international sales and global reach or presence (Preece et al 1998). But even if global reach (presence in The far east, USA and Europe) is used as a measure, the pattern is not convincing. The ventures having international activity/global presence tend to expand to geographically close markets before venturing into markets further away. Thus, in this respect it seems that the U-model is still applicable, only it may have been accelerated. Additionally, most ventures opt for a choice of involvement that does not require foreign direct investment, which naturally reflects the resource restrictions encountered by newly established ventures, but is also in line with the
U-model. This study thus disagrees with studies claiming that the U-model has lost all its explanatory power. However, it does need to be modified. When looking at entry modes there is more variety at an early stage than traditional models allow for. Although traditional exporting is still widely used as a first entry-mode, strategic alliances are becoming a preferred choice and these may be formed for research and development purposes even before there is a product to sell. Finally, there is the resource concentration versus spreading strategy. Most firms adopt a concentration strategy, but it is perhaps surprising that ventures use the spreading strategy as a first choice. This indicates that human and social capital accumulated prior to venture establishment plays a role. The importance of this role needs to be investigated in future research.

The study has demonstrated that human and social capital plays an important role in the internationalization and therefore has an impact on venture growth. In this perspective, venture capitalists may want to include these factors when evaluating the sustainability of new ventures.

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Table 1: *Start of selling products abroad compared to year of establishment (based on 34 ventures)*

<table>
<thead>
<tr>
<th>Year of first international sale</th>
<th>1997</th>
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Table 2: *Sequence of market entry in % (based on 43 ventures) # equals number of replies*

<table>
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Table 3: *Geographic activity spread and entry modes in % of ventures*

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Figure 1: Educational profile

Figure 2: International experience

Figure 3: International contact network in number of respondents