# The dynamics of the internationalisation process – Interpretation of empirical evidence

Per-Anders Havnes

The research on internationalisation of small and medium-sized firms has so far mostly been based on cross sectional data. This has precluded studies of the dynamics of the ensuing dynamics. This paper reports on two longitudinal studies, one with quantitative survey data and one with qualitative case data. Distinctly different modes of development have been found. Almost one half of the exporters had stable incremental growth of their export rates. An equally large group of exporters exhibited strongly fluctuating and even intermittent development patterns of their export rates. These differences had no apparent influence on their performance judged by the growth in the total sales of the firms.

The different patterns of development appear to reflect different approaches to adaptation. The stable and incrementally growing pattern seems to be associated with a strategic planning approach. The irregular development pattern seems to be associated with an entrepreneurial approach.

Explanations for these differences could not be found in generic properties, such as size or industry sector. Nor had environmental factors such as decided by nationality any significant influence. However, the case studies suggested that current market situation and perceived market future gave were decisive stimulating factors. Furthermore, structural elements related to products and managerial specialisation were found to play vital roles.

## Introduction

### *Background*

This paper reflects research over more than one decade. It has been a continuous learning process for the author. One important consequence is that the phenomena, which are discussed here, were not part of the initial research model of the first phases of the research. Examination of the data suggested that the internationalisation process had dynamic characteristics, which were not consistent with current theories and textbooks. The richness of the data allowed analyses and detailed mapping of categories and characteristic properties. However, further and more detailed research was required to confirm our initial assumptions on the mechanisms that lead to different developments of internationalisation in apparently similar firms. Thus, the paper builds on and consolidates insight gained in two independent research projects.

### *Change processes*

Change processes are generic to all firms. Already Schumpeter (1961) at the beginning of the last century and Penrose (1980), about half a century later, pointed out that these processes are not automatic or pre-programmed responses to factors in the environment of the firm. On the contrary, the acumen, volition and capability of persons, individually or in consort, drive these processes. Development processes pertain to all aspects of business activities. In theory it would be desirable to study the development of the firm as the aggregate of all subordinate processes. In reality this is a gargantuan and virtually impossible undertaking due large number of interacting processes and variables. The complexity would also make it very difficult to distinguish between phenomena, which are specific to a firm or a context, and which are of a general nature.

All business change processes share some general characteristics with all processes. Firstly, processes take time. There is always an incubation period between causes and effects. The length of this period is generally unknown and its length will most often be contextually dependent. Secondly, change processes require input of energy prior to generating any value through the initiated changes. Therefore resources must be allocated to the change process from external sources. Thirdly, the direction of change for one category of process is not *a priori* defined. Fourthly, the process itself cannot be observed. What can be observed are the inputs and the outcomes of the change processes, and these must be observed at specific points in time.

### *The relevance of internationalisation*

With the current strong political and economic trends towards globalisation, all firms are facing the effects of increased international competition. However, in parallel opportunities are opened on international venues even for micro firms. Internationalisation is therefore an issue that is becoming relevant to the majority of firms, without respect to their market orientation, industry sector or size. As a consequence internationalisation is also becoming an increasing important policy issue and a topic for support services, particularly for SMEs.

This paper will focus on the internationalisation process, which we will consider to be the process that changes the extent of cross border activities or commitments of the firm (cf. Welch, Loustarinen 1985, Ahokangas 1998, Havnes 1998). This definition encompasses upstream as well as downstream activities and commitments. Furthermore, it is not restricted to the flow of physical goods, but also includes flow of information, exchange of technology and know-how, business commitments, etc. Importantly and in line with the general discussion of change processes, a change may mean extension as well as contraction of cross-border activities and commitments.

## Theoretical background

### *Incremental change models*

The models for describing and analysing development of small and medium sized enterprises (SMEs) are dominated by what can be termed "the incremental change paradigm" (Havnes 1998). In these models the change mechanism is depicted as a series of incremental changes, and the accumulated effects of these are observed as the development of the enterprise. The incremental change paradigm is central to such different models as life cycle models (Van de Ven, Poole 1995), the Uppsala model of the internationalisation process of the firm (Johanson, Vahlne 1990, Andersen 1993), and stages models[1] (e.g. Johanson, Wiedersheim-Paul 1975, Dichtel et al. 1984, Miesenbock 1988, Leonidou 1995, Westhead 1995, Gankema et al. 1996).

1 Stages models of internationalisation are invariably presented by the researchers as models of dynamic behaviour of enterprises. The enterprises are assumed to progress sequentially through a predefined set of

Typical for the incremental change models is that the enterprises are assumed to

- Evolve from a low to a high degree or measure of activity, resources or commitment
- In small or large steps
- Which are all assumed to be unidirectional.

In this respect these models are normative. When incremental growth is assumed to be the normal pattern of change, decreasing number of employees, decreasing sale or decreasing exports are, by definition, not normal and are frequently taken as indicators of malfunctioning or failure.

The Uppsala model of the internationalisation process (Johanson, Vahlne 1990), is very illustrative of the implicit assumptions of incremental and continuous growth. The model pictures internationalisation in the context of interaction between state aspects and change aspects. The state aspects are constituted of market knowledge and current commitments, the change aspects of commitment decisions and current activities, see figure 1.

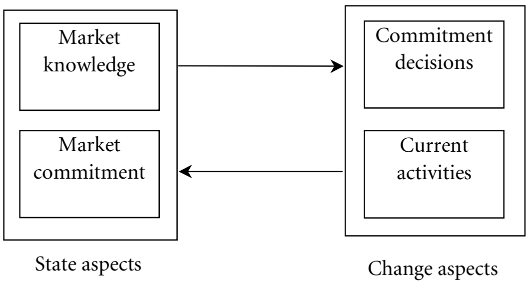


*Figure 1: The Uppsala model of the internationalisation process of the firm (Johanson and Vahlne 1990: p.12)*

The market knowledge is presumed to be the basis for commitment decisions, which in turn lead to changes in current activities. These activities increase market commitment, and also provide opportunity to gain experience and tacit knowledge – which completes the circle. The model is meaningless without the assumed positive correlation between knowledge of internationalisation and propensity to change the activity levels in the direction of (more) internationalisation; and positive correlation between activity level and acquired knowledge. The mechanisms of the model are therefore depicting continuous incremental changes in the direction of more commitment to internationalisation.

*Why challenge the incremental change paradigm?*

In real life one often finds enterprises that do not follow incremental change patterns. Enterprises may export one year, not export the second and come back to exporting the

stages. The rationale for the delimitation between categories is generally not discussed, and the presumed mechanisms governing the progress are generally not disclosed. Finally, the empirical test procedures for stages models of internationalisation usually go no further than categorising enterprises by means of a ordinal scale of increasing internationalisation or commitment to exporting.

third year. Likewise, total turnover or employment may fluctuate – independently or in consort. To some enterprises such fluctuations or irregularities are normal patters of temporal change in activities. To other enterprises or at other times (under other conditions) stability, incremental growth or even (temporary) decline may be normal patterns of change.

A research model that is based upon incremental development may not recognise that there are different patterns of temporal change, and thus loose sight of or neglect information pertaining to other change patterns.

In a review of 39 articles (Havnes 1998) six attempted to analyse dynamic properties of the internationalisation process, invariably by testing a version of a stages model. However, only one study (Christensen, Jacobsen 1996) used genuine longitudinal data in combination with time-series analytical techniques. The remaining five used cross sectional data.

In the field of internationalisation studies the incremental change models survive and continue to dominate not because of empirical support, but possibly due to their conceptual simplicity and appealing logic. It is therefore pertinent to investigate the matter of dynamics of enterprise development and challenge the dominating position of incremental change models.

*Entrepreneurial change paradigm*

An alternative to the incremental change paradigm can be found in the entrepreneurial paradigm (i.a. discussed by Wiklund 1998, Havnes 1998, Havnes, Hauge 2002). The first phase of change models based on the entrepreneurial paradigm is to identify opportunities arising from new combinations or resources in response to external demand. The initial stimulus may be internal to the firm, i.e. more efficient use of its resources, or external, i.e. a demand that is new or not attended to before. The second phase of the entrepreneurial change models will be to reorganise resources to exploit the new opportunity.

Studying mechanisms of the internationalisation process requires that we have in-depth information at the level of individual firms or persons where the element of volition is represented. The volition may, on the one hand, be explicitly expressed in clear, precise and deliberate strategies (Minzberg 1994 & 1998, Bhide 1994, Teece et al. 1999). The volition may, on the other hand, be implicitly represented in the objectives, motives and attitudes of the leading persons in the firm like we find in entrepreneurial models (Johnson 1990, Wiklund 1998), or embedded in the firm by its operational procedures and information systems. In either case, the volition, objectives or strategies induce a bias in the decision stages of the development process that influences the direction of the development (Sharma, Chrisman 1999).

All resources of a firm have multiple characteristics and each resource represents a bundle of possible services (Penrose 1980, p.67). Each resource may therefore be used for a number of alternative purposes. Since full utilisation of all resources at all times is possible only at extremely large scales of operation (ibid, p.70), the bundles of possible services represent an organisational slack, which again can partly explain the flexibility of SMEs. Successful firms frequently supplement their endogenous resources with resources and information supplied through their external networks (Andersen, Kheam 1998, Welch 1992, Tikkanen 1997). We hold that the alternative use of resources and active networking are important features of entrepreneurial development processes.

The most interesting dynamic property of entrepreneurial change processes is that they will frequently produce changes that to an outside observer may appear to be discontinuities in the direction of development.

In some respects there is a parallel between the incremental and discontinuous innovations on the one hand, and the incremental and entrepreneurial change paradigms on the other hand. The main difference is that the main focus of innovation models is the change as such, while the last two tend to focus on the business activity as the real outcome of the change process.

*Research questions*

These theoretic deliberations point to interesting problems at two levels of aggregation. First of all we need to establish empirically if there are different categories of change patterns or dynamic properties of internationalisation processes. Secondly, we need to explain what may have induced such possible distinguishable dynamic patterns.

This investigation of internationalisation as a development process will therefore be directed by two research questions:

1. What characteristic development patterns can be discerned for internationalisation of SMEs?
2. What are the factors that influence possible different development patterns?

*Research model*

Although internationalisation potentially may pertain to any or all facets of business activities, the most common measure for the degree of international commitment and activity in previous research has been exporting or the export rate (Miesenbock 1988, Moen 1999). The latter is the quotient of the value of export sales to total sales. The most obvious reason for this is the combination of accessibility of data, its precision, and that the measure is unambiguous.

Although this seems to be a very simplistic measure for a complex phenomenon, there are valid reasons behind such choice. Exporting requires that the firm is able to learn to trade in new business environments. New information and marketing channels must be established. In many cases products must be adapted to new specifications. Increasing rates of exporting will therefore expand the proportion of the firm's activities that needs to be adapted to the requirements of the international environment.

Our performance measure will hence be the export rate in each observation interval plus the dynamic pattern created by the export rates in subsequent observation intervals.

The deliberations above points to the combination of market opportunities and resources as stimulus for changing the rate of exporting. Resources that can be accessed internally and externally is also a prerequisite for sustaining the internationalisation process until sufficient revenue is produced. Finally the manager has to make a choice between the multiple possible combinations of resource and market opportunities.

This choice represents the volition and may, or may not, be consistent with existing strategic plans.

This research model is depicted in figure 2.

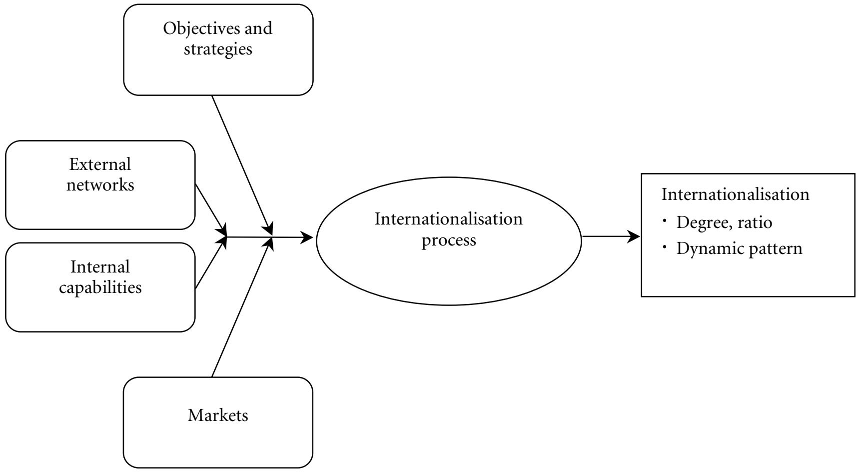


*Figure 2: Research model based on theoretical deliberations*

*Combination of two types of data*

The two research questions call for two types of data. The first question necessitates survey type data from a large number of firms. The second question calls for in-depth information, which is typically acquired through case studies. Common to both questions is that they address development processes. Due to the time lag between cause and effect and the problem of assessing the length of this, the observations of the process should be made at several points in time. Thus, longitudinal data are required for both questions.

Our research objectives are met by combining the results from two different projects, which are briefly described below.

## Interstratos project

The purpose of the Interstratos project was to study the internationalisation strategies for internationalisation of small and medium-sized European manufacturing enterprises (Haahti 1995, Havnes 1998). The data collection was done by yearly postal surveys over the years 1991–1995, and is the richest available data set on this topic. It was conducted by an international project group[2] from eight European countries. The sam-

2 There have been some alterations in the composition of the Interstratos group since it was founded in 1991. The present composition of the Interstratos group is: Austria: J. Hanns Pichler, Peter Voithofer; Belgium: Rik Donckels, Ria Aerts; Finland: Antti J. Haahti (Chairman), Petri Ahokangas; The Netherlands: Yvonne Prince; Norway: Per-Anders Havnes, Arild Sæther; Sweden: Carin Homquist, Håkan Boter; Switzerland: Hans Jobst Pleitner, Margrit Habersaat. In addition, a number of associated researchers have made valuable contributions by using the Interstratos data set in their research.

ple was drawn from five industry sectors at three digits NACE level, and stratified in five size categories from one to 499 employees. The same questionnaire was used in all countries. The data set represents more than 20000 observations of firms. 1700 of the firms have responded four or five times and represent a true panel where the changes in each firm are identifiable. The panel data represent seven European countries.

The Interstratos data set will provide data on export rates and generic data on the firms, such as their size, industry sector and nationality.

## Maritime supplier project

This project[3] was conducted as a case study over 15 months of two small Norwegian firms. Three interview sessions were held in each firm with six months intervals. The informants were all part of the management teams in the two firms. The interviews were supplemented by quantitative data on sales, exporting and employment. The first observation included three months retrospective quantitative data. Both firms were suppliers to local shipping companies in combination with supplies to the petroleum industry, and both were between 15 and 20 years old.

*Firm A* was a family firm with 19 employees. They provided design and manufacture of pre-manufactured accommodations for new building and retrofits of ships and offshore oil platforms. Their main markets had been domestic. Just previous to the observation period, domestic markets had dwindled. Their exports had started by installations for a domestic customer at a building yard in Asia. Later this lead to a large contract for an Asian customer. Thus the export rate of firm A was high at the outset of the observations. In the final part of the observations, domestic markets picked up. Firm A then chose to return home and their exporting dropped dramatically.

Individual contracts were large in comparison with the total capacity of the firm. This necessitated co-operation in the value chain with other firms. It also led to intermittent periods of focus on manufacturing and sales.

*Firm B* had started out as a partnership with the founders active in the firm. Following long periods of external industrial owners, the firm was bought back by the employees at the final part of the observations. They had 32 employees. Their main products were instrumentation for monitoring and control of machinery and working environment. All products were designed and assembled from standard components. Their three separate markets were municipalities, land-based process industry plus shipping and offshore.

The motive for exporting was that the domestic markets were perceived to be too small for their growth ambitions. The export rate of Firm B started low and had a slow and steady growth during the observations. However, it was stated that the domestic markets had picked up very much and left no capacity to attend to export markets as much as intended.

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3 Supported by a grant form Skipskredittforeningens fond for maritim forskning på Sørlandet. Elisabet Hauge, Agder Research, made significant contributions to the project.

Firm B had at any time several parallel contracts at various stages of completion. There was also a designated marketing manager.

## Analyses

### *Typology of change patterns*

A total of 988 firms in the panel data set had reported their export and total sales four or five times. Each of these firms could be assigned to one of four categories of change patterns. The criterion for categorisation was the combination of changes in their export rates in the four yearly intervals of the observation period. (1) The *non-exporters* had no export activity in any period. (2) The *increasing and stable* category held the firms that either exhibited continuous growth or had a stable export rate in all intervals. (3) The *irregular* category consisted of firms with export rates that fluctuated more than 10% from one year to another. Some of these firms also had intermittent exporting characterised by start and stop. (4) The final category held the firms whose export rates *declined* consistently throughout the observations.

The distribution of firms in these categories is set out in table 1.

| | n | % |
|---|---|---|
| Non-exporter | 430 | 44 |
| Increasing and stable exporter | 254 | 26 |
| Irregular exporter | 258 | 26 |
| Declining exporter | 46 | 5 |
| *Total* | 988 | 100 |

*Table 1: Change patterns of export rates. Number and percent of firms, Source: Interstratos*

The stratification of the Interstratos sample gives an over-representation of the large firms. This inflates the proportion of exporters since large firms have higher propensity to export small firms.[4] The percentage of exporters is therefore not essential in table 1. The interesting feature is that the two categories 'increasing and stable' and 'irregular' hold almost identical number of firms.

The increasing and stable category depicts a change pattern, which can be explained by a strategic planning approach to development. The firms can be perceived as planning the future direction of development and consistently working towards that by adapting resources and procedures accordingly.

The irregular change pattern depicts a behaviour that is irrational within a strategic planning paradigm. The volatility of exporting would be interpreted as a failure to proceed in a systematic and planned development. Each change of market would represent additional costs and loss of efficiency. An investigation of the growth in total sales indicated that there was no significant different in the average growth among the

4 A survey in 2001 found 20% of European SMEs to be exporters. The percentage varied from 19% for micro firms (0–9 employees), to 32% for small firms (10–49 employees) and 46% for medium-sized firms (50–249 employees) (European Commission 2002).

firms in these categories, including non-exporters. The only difference could be found when the irregular category was split into 'irregular' and 'intermittent' exporters. The intermittent exporters, the firms that started and stopped exporting activities, had twice the growth rate in total sales as the other sub categories (Havnes 1998).

These results were controlled for possible effects of firm size, industry sector and nationality. Although the higher percentage of irregular exporters increased with decreasing size of the firm, the irregular exporters were significantly represented also among the largest firms in the sample. Likewise, control for the effect of nationality and industry sectors showed variation, but no significant difference (*ibid*). The only possible explanation is that the irregular change pattern of internationalisation cannot be taken as a special approach that can be attributed to a small, limited and special category of firms.

The export performance of the firms in categories was also investigated by two other measures: (a) the average export rates of each of the above categories of change patterns, and (b) the growth in market extension, i.e. an index capturing the number of export markets and their distance. These measures exclude the non-exporters. Among the other change patterns the increasing and stable categories clearly scored highest on both performance measures. The sub-category 'stable exporters' in both cases had yearly results that were almost twice the average for all firms.

Hence, it seems clear that the irregular development pattern of internationalisation is not an indication of a failure mode in the total performance of the firm. This adaptation strategy is equally successful as a conventional strategic planning approach with slow and consistent development when it comes to growth in total sales. However, if the objective of the firm is to develop its exporting, the stable and incrementally growth pattern has the best potential to produce success.

The survey data of the Interstratos project is not sufficiently detailed to provide explanations for the differences that were found in the development patterns of export rates. The maritime supplier project was designed to give the necessary insight in the change mechanisms and the rationales behind these.

In the light of the results from the Interstratos project, reported above, the observed development of export rates and total sales in the two case firms is quite interesting (Havnes, Hauge 2002). The number of observations is lower than for the Interstratos data set, but figure 3 depicts two clearly different development patterns of their export rates. Firm A has is a clearly declining exporter according to the earlier categories, while the change pattern of Firm B belongs to the 'increasing and stable' category. It is not possible to ascertain from three observations if Firm A would return to export markets at a later stage, and thus belong to the irregular category.

The development of total sales gives a very different picture. Using their sales in the initial period as a reference value, we found that the two firms had strikingly similar growth patterns in their total sales as depicted by figure 4. It is quite clear by the examples of these two firms, that export sales alone cannot explain their growth in total sales.

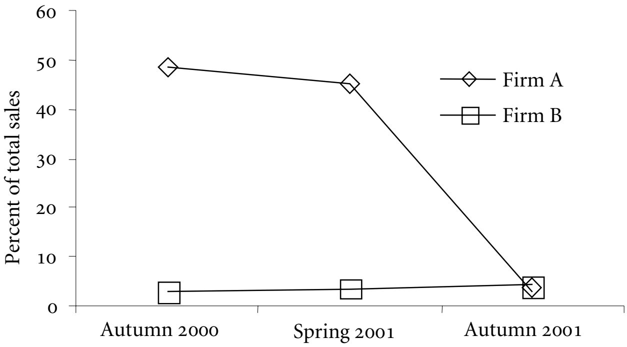


*Figure 3: Development patterns of export rates, two maritime suppliers*

Significantly, the development patterns of the two case firms are consistent with the patterns established by the analyses of the large data set of the Interstratos project.

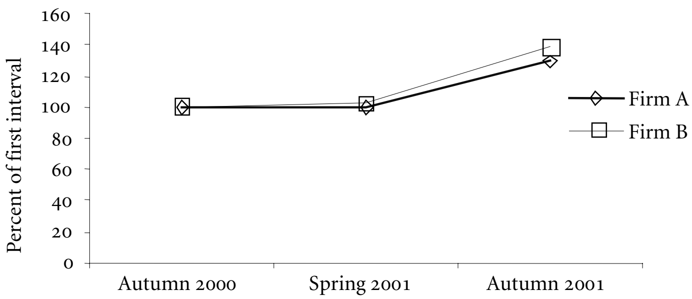


*Figure 4: Development pattern of total sales, maritime suppliers*

*Explanatory factors*

The insight acquired in two case studies can only provide suggestions for explanations, which needs to be verified by further research. However, the responses to our questions as well as unsolicited comments, were nearly 'real time' accounts of the actual decision inputs. This information has only to a small extent been corrupted by time. Neither had its detail been diluted by statistical manipulations. While, on the one hand, caution should be made due to the limited number of cases. On the other hand, boldness is required to take advantage of the rich detail of observation.

In light of these reflections, we propose a few factors, which potentially may be part of the explanation for the different development patterns

*Market influence*

The assessment of markets and the philosophy for adapting to market development were clearly different in the two firms. Firm B assessed domestic markets to be to small to sustain their growth strategy. Their international engagement was therefore based on a strategic plan. Their shipping products supplied to Norwegian ship owners were already exposed to international competition. It was a rather small step to use their reputable domestic clients as references and open deliveries through foreign shipyards and directly to foreign ship owners. However, during the observation period, the domestic markets picked up so much, that they did not have sufficient resources to follow up their ambitions for growth in their exporting.

The situation for Firm A was quite different. They had experienced that their domestic markets dwindled immediately preceding our observations. This had been compensated by deliveries to a domestic customer at an Asian building yard. With this experience combined with advice and references from the Norwegian client, Firm A was awarded a large contract for an Asian customer. After our observations started, the domestic markets picked up again. Firm A used this opportunity to return home to perceived lower marketing costs and lower market risk. Thus, the exporting was a clear survival strategy for Firm A.

Common to both firms is that irrespective of presence or not presence of strategic plans; the actual market development was the deciding stimulus for their engagements in export markets.

*Product structures*

Firm A had only a few products and their individual contracts were generally very large compared to their total capacity. This meant that only a few orders were simultaneously in production different stages of completion. Completion of each contract could take several months and often required special financing. The intermittent attention to marketing and sales also allowed large fluctuations in the market between each period with high focus on sales.

Firm B had several products and product lines. The individual order was typically small compared to the total capacity of the firm. Several orders were at any time at different stages of completion. There was a steady cash flow from recent deliveries, which was sufficient to finance the orders in production. The high number of orders at any time necessitated continuous attention to marketing and sales. Therefore Firm B to a large extent could make small and gradual adjustments to market development.

*Management structures*

Due to the intermittent functional requirements in the value process of Firm A, the technical manager at different times filled the roles of designer, manufacturing manager and sales manager. This gave little opportunity for functional specialisation and for developing systematic planning and control instruments. The small size of the firm also contributed to a low degree of managerial specialisation.

The continuous sales activities of Firm B were sufficient to warrant a full-time marketing and sales manager. There were, furthermore, specially dedicated managers for design and for support systems. They also had dedicated personnel for different segments of customers. This functional specialisation of the management was also reflected in more explicit awareness of policy and strategic direction. They also had more elaborate managerial control systems than Firm A.

*Networking*

The external networks were used differently by the two case firms. The main purpose of the networks of Firm A had been to increase their capacity and extend the value chain. In spite of former failures, a new partnership was made during the observation period to increase the capacity for one product line. Firm B, on the other hand, used their networks mostly as channels for marketing intelligence and feedback on product performance. They had a policy of independence from individual suppliers of components.

The former and present clients were used actively as informants on market development and future product requirement by both firms. Their clients also agreed to be references to future clients.

There seemed to be a difference between the network relationships that could be activated at need, and the relationships that were in active use. Thus we could distinguish between a 'current operational network', which was smaller than the 'available network'. It was our impression that both firms 'activated' passive relationships or established new relationships as a consequence of their current operational requirements. Thus, changes to the current operational network appeared to be an effect of, more than the cause of, changes in the primary value creation process of the firm.

## Discussion and conclusion

*Validity*

It is always pertinent to assess validity of research results, and especially so when results from two research projects are aggregated. In the present paper several differences in sampling and method needs to be considered.

The two case firms were not included in the Interstratos panel. However, their nationality, size and industry sectors are consistent with the categories that sample. The time lag between the Interstratos observations and the case studies, do influence important sides of the economic, political and technological frameworks for the internationalisation process. However, there were also considerable changes in these factors in the five-year observation period of the Interstratos project. The observation intervals of the case study were half the length of the intervals of the Interstratos project. Shorter observation intervals will generally inflate the effects of random fluctuations. In these analyses, however, the magnitude of fluctuation was not an issue for the case study.

In sum we therefore hold it probable that there have not been sufficient changes in the external factors to invalidate the comparison. Neither will the differences in research method invalidate such use of the results.

*Theoretical implications*

The most striking result for theory development is that we have empirically confirmed two different approaches to firm development. The one is consistent with the traditional strategic planning paradigm; the other is consistent with the entrepreneurial paradigm. The main observable difference lies in the consistent and gradual pattern or the volatile pattern of change in the observed performance variable, such as export rates. Importantly, the change pattern at a detail level, such as exporting, has no significant on performance on aggregate level, such as total sales. The results from the case study are fully consistent with the results from the panel study.

The current and perceived immediately future market conditions were found to be decisive stimuli for changes in market orientation, such as internationalisation. This factor overrides the effects of strategic plans and possible personal objectives of entrepreneurs. It is one more reminder of the importance of the context for interpreting any business development.

The case study also suggested another factor with important moderating effect on the development of internationalisation. The product and contract structure, i.e. the task structure, could to a large extent explain behavioural differences. The important factor here seemed to be the ratio between the amount of resources required for individual tasks and the total amount of available resources. Few and large tasks are consistent with entrepreneurial management procedures, many and small tasks are consistent with strategic planning procedures.

*Policy relevance*

The ability to reorganise and redirect resources for other purposes contributes strongly to the flexibility of SMEs. This is also widely recognised as important for the competitive strength of SMEs compared with LSEs. So far most of the support services for SMEs, as well as the contents of most training programmes, have been based on a normative interpretation of the strategic planning paradigm. The most important general lesson from this research is that just as many firms find their success by exploiting their flexibility through an entrepreneurial approach. The mechanisms that are typical for the entrepreneurial approach should therefore be included in the support service programmes. There should also be a stronger emphasis on this in all categories of training programmes.

In specific relation to internationalisation, this research also suggests some important issues. First of all the two seemingly similar case firms had very different conditions for their internationalisation. In order to be successful, a support programme for internationalisation must include highly differentiated measures to be able to attend to the real problems of its users.

For some firms external financing of the manufacturing periods for large contracts is required. When this is combined with working for a new and foreign customer, the risk element is often higher than the collateral available to the firm. The only way to overcome this for firms that start up their internationalisation, is to strengthen publicly export guarantee programmes.

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