

The Internationalization Process of the Firm

– Searching for New Patterns and Explanations



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- Searching for New Patterns and
Explanations

Kjell A. Nordström

To Be . . .

Allting är orsakslöst . . .
När det inträffar att man inser detta,
får man kväljningar och allting börjar
gunga . . .

Jean-Paul Sartre

Preface

This thesis is a part of a research program initiated in 1985 by the Institute of International Business (IIB) at the Stockholm School of Economics on the internationalization process of Swedish manufacturing firms. The program, and the specific project reported here, have received financial assistance from Humanistisk-Samhällsvetenskapliga Forskningsrådet and Jan Wallanders Stiftelse. Their support is gratefully acknowledged.

This volume and the research behind it would not have been possible without the kind co-operation of a number of Swedish international manufacturing firms. Special thanks are due to Inter Innovation and Datatronic for their openness and generosity in allowing in-depth studies of their foreign operations.

Stockholm,
November, 1990

Jan-Erik Vahlne
Director
Institute of International Business

Acknowledgments

Writing a dissertation, or working on a large research project, is – as I see it – a way of living. In effect, finalizing this research project also means finalizing a phase of my life. Like any other way of living, "research-life" has its advantages and disadvantages – although from my perspective the former have far outweighed the latter.

First and foremost, I would like to render special thanks to a few persons who have made these years so fruitful and memorable, and who ultimately have made this dissertation possible. Professor Jan-Erik Vahlne – the man who recruited me and later taught me the greatness and possibilities of "research-life" – has been an invaluable source of continuous inspiration both in life in general and in my research in particular. Professor Vahlne, as well as Professor Gunnar Hedlund and Docent Lars Håkanson, persisted in supporting me throughout this project in spite of my sometimes obstinate way of handling their constructive criticism. I am immensely grateful to this colourful team which together with professor Lars-Gunnar Mattsson also served as my excellent thesis committee.

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Altogether, a large number of persons have made this dissertation possible. They have done their very best to improve it in every conceivable aspect. I alone, am responsible for whatever fallacies or insufficiencies that may remain.

Stockholm,
November, 1990

A handwritten signature in black ink, appearing to read 'Kjell A. Nordström', with a stylized, flowing script.

Kjell A. Nordström

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1 Introduction

The international dimension has become one of the most important aspects of management today. Although trade between nations has been a fact for several hundred years and multinational corporations (MNCs) have been an important feature of the business community since before the turn of the century, interest in international business has probably never been greater than now.

The Western countries are today inextricably tied to each other through international trade, MNCs and international competition. Competing internationally, or with international firms on one's home market is a necessity. In a small open economy like Sweden, international competition, on the home market as well as abroad, is at the forefront of the agenda for governments, industry leaders and trade unions.

Domestic and foreign spheres are no longer separate. Old ways of competing internationally have become obsolete. New concepts and players have entered the scene. A growing similarity between countries, fluid capital markets, falling tariff barriers, technological development and new global competitors have triggered these dramatic shifts in the international arena and have renewed interest in international business.

The international dimension has always been of importance to Sweden and to Swedish companies. Many Swedish firms have exploited their know-how abroad since the turn of the century. Gradually, in some cases over more than a hundred years, companies like Sandvik, Ericsson, Alfa-Laval and AGA have expanded their operations outside Sweden. We know a great deal about how the internationalization of these companies started and how it developed later. We have learnt much from the efforts of these pioneers to build an international network of distribution and production.

However, we also know that the environment, the problems and the competition which today face *de novo* entrants in the international arena are different from those experienced by our pioneers at the start of the century. It seems relevant to raise the question whether tradi-

tional models of internationalization – developed from the experience of the pioneers – are applicable to the internationalization processes of today.

The present study addresses the question to what extent traditional models of internationalization apply today. Furthermore, the study seeks to identify what new forces and factors today determine the internationalization process.

1:1 Background and Purpose

A researcher's work is in many respects affected by coincidence. During 1984, a research project was launched with the aim of studying strategic implications of channel selection when entering foreign markets (Vahlne and Nordström, 1984). The ambition was to develop a model that could facilitate the choice of channel. The choice of topic was determined by the opportunity to work closely with a division of Pharmacia, a Swedish pharmaceutical company. At that time, the management at Pharmacia had decided to enter a new product market involving equipment for bloodbanks. The objective was to make Pharmacia one of the leading suppliers of equipment to this market.

Choice of market channel was one of the problems that the Pharmacia management had to tackle. As a part of the problem-solving process, it was decided to discuss the channel problem, develop a model valid for industrial markets and use Pharmacia's situation as an example of how the model works in practice.

In the work with Pharmacia, it soon became obvious that the worldwide bloodbanking industry was fairly concentrated; at that time it was dominated by a U.S. company, Baxter Travenol Laboratories, with a 40–70% market share on most Western markets. It became clear that the industry leader, with its strong market position, would not allow Pharmacia to build a beachhead in any one of the major Western markets. Baxter jealously watched every movement in its markets and was known for striking back forcefully wherever its position was threatened.

Pharmacia, given its objective of establishing itself as a leading supplier in the bloodbanking industry, was left with two principal

options. On the one hand, the company could launch its products and establish distribution channels more or less simultaneously on several major markets, i.e. strike head-on at Baxter Travenol Laboratories. This very costly and risky alternative would undermine Baxter's ability to defend itself by means of cross-subsidization (Hamel and Prahalad, 1985) and thereby also its capacity to generate funds for a counter-attack. On the other hand, Pharmacia could choose to enter marginal markets or regions of limited value to Baxter. By building positions in these markets, it could gradually move towards a more global coverage. This would imply entering fairly distant markets, geographically as well as culturally, at an early stage of the internationalization process.

The fact that many established or mature firms seem to be dominated by one or a few highly internationalized leaders, suggested that the problems faced by Pharmacia were probably not unique. Several *de novo* entrants in the international arena could be expected to face similar situations – a new product or process, a small home market, no international distribution or service network and huge industry leaders dominating most Western industrialized markets.

At this time, there had also been a discussion in the academic world as well as in the business community of whether the internationalization process of Swedish manufacturing firms had gone through a metamorphosis. The traditional growth pattern had been a slow process, beginning with local representatives in culturally close markets such as Denmark, Norway and West Germany. If these initial steps abroad had proven successful, involvement would have gradually deepened while more distant markets were penetrated. During the 70's and 80's, a number of more recent internationalizations had, at least at a first glance, little in common with this traditional pattern.

Casual observations indicated that companies seemed to leapfrog stages in the traditional pattern. In spite of very limited experience in doing business abroad, firms established themselves in markets outside Europe. They also seemed to be inclined to internationalize through acquisitions and cooperative ventures, rather than greenfield investments and wholly owned subsidiaries. Furthermore, firms seemed to establish sales as well as production subsidiaries at an early stage of the internationalization process, sometimes immediately through an acquisition. The pace of the internationalization process

seemed to have changed from the traditional gradual process towards a more rapid and direct one.

The picture was, however, not clear. The spectacular internationalization processes reported in the business press did not seem to be the rule. Many firms still seemed to behave in accordance with the traditional pattern, i.e. initially entering culturally close markets and then gradually increasing their commitment on each market as well as their foreign operations as a whole (cf Johanson & Mattsson, 1984).

What kind of forces then give rise to these more rapid internationalization processes? Why were all firms not affected by these forces? The work with Pharmacia and later theoretical assessments of the impact of international/non-international competition on company strategies for expanding abroad (Johanson and Mattson, 1984; Nordström and Vahlne, 1985), indicated that the degree and type of international competition might be one strong explanatory factor behind the new patterns in the internationalization process.

These new patterns tended to be particularly frequent in industries of highly internationalized or "global" competition. However, the theoretical and empirical underpinnings of these observations had to be further strengthened and broadened before any firm conclusions could be drawn about new patterns in the internationalization process of Swedish companies.

The established model for the internationalization process of Swedish manufacturing firms, proposed by Hörnell, Vahlne and Wiedersheim-Paul (1973), Johanson and Wiedersheim-Paul (1974) and Johanson and Vahlne (1977), views the process as one of organizational learning and focuses on "experience" as the sole explanatory factor. Neither environmental factors, such as those relating to competition, nor any company characteristics other than "experience" were considered in the model. Still, this single-variable model was proven to have good explanatory power. Historically, the growth pattern of Swedish multinational corporations has generally been well in line with this model.

Obviously, other factors also affected the internationalization process as they have before. However, the explanatory factors that are the most powerful could be expected to vary over time, as well as over stages in the firm's internationalization process (cf Johanson & Mattsson, 1984). The established model could be defended as a gener-

ally good device for explaining and describing the process for firms that expanded abroad during a particular time period and at a certain stage in their internationalization. For other periods in time, and other stages in the process, the relative importance of various explanatory variables could be expected to differ. This might be due partially to changes in the competitive environment at home and abroad (Nordström and Vahlne, 1985), but probably also to other internal as well as external changes. In order *to identify the relevant variables or groups of variables that should be added to the traditional model in order to better explain contemporary internationalization processes*, a broad theoretical and empirical approach is needed.

Against this background, the purpose and ambition of the present study is threefold:

- Firstly*, to theoretically address the question of *what forces and factors have changed* the process of internationalization from that predicted by traditional models.
- Secondly*, to develop hypotheses concerning any *new patterns* in the process of internationalization by Swedish manufacturing firms and to generate hypotheses about the key explanatory factors behind these patterns, in addition to those identified by previous schools of thought.
- Thirdly*, to *test* as many as possible of these hypotheses on a large empirical material.

1:2 The Approach and Scope of the Study

The research object in this study is the process, or evolution, through which Swedish manufacturing companies have reached their present international positions, and of course the process that firms entering international markets today are likely to go through. For the purposes of the study, present international positions and networks are only interesting as the outcomes of this evolutionary process. More specifically, we are interested in describing the process of increased foreign involvement in three measurable dimensions – the sequence of foreign markets entered, the establishment process within a market and the establishment mode of subsidiaries. Since these particular

dimensions have wholly or partly been the focus of earlier research (cf Vahlne and Wiedersheim-Paul, 1973; Johanson and Wiedersheim-Paul, 1974; Johanson and Vahlne, 1977, etc), certain comparisons over time can be made.

Basically this research project follows the established positivist tradition in science of firstly generating hypotheses and secondly testing these hypotheses empirically. Existing theories and knowledge provide a framework for casual observations of interesting phenomena, and thus permit the formulation of interesting and unambiguous hypotheses. In a second step these hypotheses are tested on a larger body of material under circumstances as strictly controlled as possible.

Consequently, the first part of this study focuses on hypothesis generation. A theoretical framework is presented, and two recent and fairly spectacular processes of internationalization by Swedish firms are analyzed. The emphasis is on the internationalization process of a single firm in light of events within as well as outside the company. The objective is to understand which factors lead to establishment in a certain market, at a specific point in time, using a specific mode of entry.

The internationalization process is primarily viewed as a form of growth. How, where and when this growth is realized, however, is affected by numerous factors ranging from the size of the home market and firm-specific advantages to competitive considerations and trade barriers. The aim has been to collect historical data about every stage or step in each company's internationalization process so as to increase our understanding of these determinants.

The frame of reference of the study has been influenced by the industrial organization school of thought. Accordingly, to understand the strategic behavior of a firm, it is essential to relate that behaviour to the environment. Although "environment" is a very broad concept, encompassing everything from social to economic forces, its central aspect, and the one emphasized in the industrial organization tradition, is the immediate environment constituting the firm's industry.

Although the industry sets the general rules of the game, incumbent firms will interpret and be affected by these rules in different ways depending on their firm-specific experience, size, corporate culture,

set of advantages, etc. Therefore, the empirical analysis will also take into account intra-firm factors relevant for understanding the process of internationalization.

In the second part of this study, the hypotheses generated will be tested on a larger body of empirical material. In a joint project involving The Industrial Institute for Economic and Social Research (Industriens Utredningsinstitut) and the author, a major study of all Swedish manufacturing companies with more than 50 employees and at least one foreign subsidiary has been undertaken. Data has been collected about the firms and certain key dimensions of their respective industries, in order to permit testing of as many as possible of the hypotheses developed.

1:3 The Intended Contribution of this Study and Its Relationship to Earlier Studies

The ambition of this study is to contribute to our knowledge about the firm's internationalization process in general – and that of Swedish companies in particular – through updating the established model of this process in Swedish enterprises (cf Vahlne and Wiedersheim-Paul, 1973; Johanson and Wiedersheim-Paul, 1974; Johanson and Vahlne, 1977 etc.). It will be shown, theoretically as well as empirically, that the experience/knowledge-based model – often referred to as the "Uppsala model" – developed by Vahlne, Wiedersheim-Paul, Hörnell and Johanson (op cit) in the 70's, for various reasons may have lost some of its explanatory power as well as descriptive validity. Although the model has become one of the most widely adopted concepts in the field (Reid and Rosson, 1987), it can be asserted that today it needs to be complemented and revised.

The main argument in this study is that it is *necessary to add further dimensions – particularly the influence of industry structure* – to the explanatory base (i.e. knowledge and experience of doing business abroad) of the "Uppsala-model", in order to provide satisfactory explanations of patterns in the contemporary internationalization process of Swedish firms. Although a set of factors and processes within the firm (cf Björkman, 1989, for an excellent overview) play a part in shaping the internationalization process, the more structural driving forces and explanations of patterns in the process must be

determined in relation to the opportunities provided by the environment – particularly the industry structure.

It will be shown that the "Uppsala-model" in its original form is particularly powerful under certain industry conditions (Nordström and Vahlne, 1985). However, over time these particular conditions have been eroded by fundamental environmental changes. And in effect, further explanatory variables are needed in order to understand more fully today's internationalization processes.

The study draws initially on those parts of existing theory which historically have seemed to provide the best explanation of the internationalization process of firms. The emphasis is on the knowledge-based models that during the 70's and 80's have been the most widely adopted for this purpose.

The explanatory power of these theories is in this first step critically discussed in light of their underlying assumptions so as to determine the contemporary applicability and relevance of the established models.

A second step towards a new perspective involves established models based on a behaviouristic approach, complemented with theories emanating from the area of industrial organization. The emphasis in this case is on ideas stemming largely from contributions by researchers like Bain (1956) and Porter (1980, 1981). The latter joined industrial-organization theory with that of the strategic behavior of firms, emphasizing the significance of industry-specific factors. The essence of these theories is that firms must be related to their relevant environment, i.e. the industry, if their strategies and behavior are to be understood.

The influence of environmental factors – such as those related to certain dimensions of industry structure – on the extent, form and patterns of international investments was admittedly touched upon by several writers in the area of Foreign Direct Investment theory as early as the 60's (cf Knickerbocker, 1969; Vernon, 1966). Although these theorists were primarily interested in issues other than the internationalization process of the firm, several of these works provide support as well as inspiration for the new perspective proposed in this study. The journey towards this new perspective will consequently begin with some highlights of what can be learnt from FDI-theory.

1:4 Structure of the Study

A theoretical backdrop to a more specific hypothesis formulation is provided in chapter 2. Here, the major theories of MNCs and foreign direct investments (FDIs) are first presented and discussed. It will be shown that many questions regarding the development process prior to the multinational stage remain unanswered, but that some of these works provide valuable input for identifying the factors that might be of importance for understanding the process of internationalization.

Traditional models of the internationalization process are presented and critically discussed in light of their underlying assumptions. The argument here is that major environmental changes subsequent to the formulation of these models have affected their explanatory power. Chapter 2 concludes with some thoughts about why the perspective should be widened to include both industry and firm characteristics, if we are to formulate firm and testable hypotheses about the critical determinants of the internationalization process. Chapter 3 presents two case studies in which the internationalization processes of two Swedish manufacturing firms, Inter Innovation and Datatronic, are examined. The firms and their internationalization are briefly described in relation to critical determinants in the environment as well as within the firms. Chapter 3 also includes comments and analyses of the case illustrations.

Chapter 4 summarizes the main arguments and findings from the theoretical discussion in chapter 2 and the empirical material in chapter 3. The chapter concludes with a model and a set of hypotheses on possible critical determinants of patterns in a firm's internationalization process.

The great majority of these hypotheses are tested on a larger body of empirical material. Chapter 5 presents an overview of the survey that provided the necessary data for these tests. The population studied, the data-gathering method and the operationalization of the variables in the model are presented in detail and commented on. After the background provided in chapter 5, the actual analyses of the data are conducted in chapter 6.

The study as a whole is summarized and concluded in chapter 7. This chapter also proposes some future avenues of research in the area of the internationalization process of the firm.

2 The Theoretical Framework – Putting the Internationalization Process of the Firm Into Perspective

2:1 The Multinational Corporation and Foreign Direct Investment (FDI)

Neoclassical trade theory failed to explain the existence of MNCs (cf Lundgren, 1975). Explanations solely in terms of differences in rates of return between countries could explain portfolio investments, but not the movement of capital across borders along with ownership control, i.e. foreign direct investments (FDI). It was not until Hymer (1960) presented his work on foreign direct investments and multinational enterprises that a satisfying explanation was at hand.

Hymer relaxed the basic assumptions of neoclassical theory and showed that FDI, and hence the existence of MNCs, could be explained by the theory of industrial organization. Markets were no longer assumed to be perfect and information was no longer assumed to flow freely and at no cost.

Hymer postulated that compared to foreign firms local firms in any country must possess superior information about economic and other matters within the country. Given the superior information of indigenous firms, it was deduced that foreign firms operating within a country must have some advantage to compensate for this "information handicap".

"Firms are by no means equal in their ability to operate in an industry. Certain firms have considerable advantages in particular activities. The possession of these advantages may cause them to have extensive international operations of one type or another. The firm will in some cases license its advantages to a local firm; in other cases it will itself operate the foreign enterprise"

(Hymer, 1960, p. 44).

Along the lines expressed by Hymer, Kindleberger (1969) provides a second major contribution. He puts Hymer's work into a new perspective, approaching the question of FDI from the standpoint of neoclassical economics. Kindleberger asserts that in a world of perfect competition FDI could not exist and international trade is the only possible form of foreign involvement. It could then be deduced that departures from perfect competition were the underlying rationale for FDI. Hymer underlined one of these deviations when he postulated that local firms had better information about the economic environment in their country than did foreign competitors. Kindleberger suggested that four different types of imperfections could explain the existence of FDI: namely, imperfections in goods markets, imperfections in factor markets, scale economies and government-imposed disruptions.

However, the possession of ownership-specific advantages or firm-specific advantages could not alone explain why firms engage in foreign production. They could exploit such advantages by, for example, licensing to a foreign producer or through exports. Why did firms locate sales or manufacturing subsidiaries abroad? Firm-specific advantages are a necessary but not sufficient condition for FDI.

Several theories emerged, approaching this problem from different angles. One of these was the theory of internalization, with its roots as far back as in the work of Coase (1937). Imperfect markets, which made it costly to undertake certain types of transactions, were also the basis of this theory. One effect of these imperfections may be that companies reject the market and organize and control transactions within the firm itself. The seminal work in this line of thought is Buckley's & Casson's (1976). They claim that imperfections in markets related to knowledge, such as process technology, patents and human capital, force the profit-maximizing firm to internalize certain activities. Government regulations like tariff barriers and taxation are often examples of rationales for internalization. For example through transfer pricing, which is organized and controlled in-house, the firm can minimize tax payments. According to Buckley and Casson, MNCs are created when the internalization process crosses national boundaries. Buckley and Casson based their work on Williamson's (1975) argument and extended it to MNCs – the same factors that explained the emergence of national firms were responsible for the rise of multinational organizations.

Several theorists (cf Dunning, 1979; Rugman, 1980; Teece, 1981) have expanded on those ideas. The appropriability theory, best represented in the work of Magee (1976), has a number of similarities to the internalization theory, although its theoretical foundations are in the industrial-organization approach to FDI and the neoclassical ideas on private appropriability of returns from investments in information. The essence of this theory is that the advantages of MNCs derive from their ability to appropriate investments in know-how. The MNCs' ability to internalize know-how is the most important factor in facilitating appropriability.

The theory of internalization/appropriability added some further insights to the works of Hymer-Kindleberger. It was not the possession of an unique advantage per se that gave a firm its advantage. It was the fact that it internalized that asset rather than sold it, for example in the form of a license, that sustained the unique advantage.

The theory of internalization added to our understanding of MNCs and FDI and could explain the preference for FDI over licensing. However, questions remained. Neither the Hymer-Kindleberger line of thinking nor the theory of internalization could explain why firms did not exploit their advantages through exporting to foreign countries rather than through FDI. Why should firms take the risk and trouble of organising operations abroad?

The diversification theory (Lessard, 1979) approaches this problem from the standpoint of imperfections in financial markets. Lessard asserts that imperfections in financial markets create incentives for MNCs to internationalize. The essence of this theory is that MNCs can gain advantages derived from equity-market arbitrage, i.e. risk reduction through international diversification. Apart from the fact that it has been difficult to underpin this theory empirically, i.e. to demonstrate that MNCs' shares are good substitutes for international portfolio investments, it has never been shown why this advantage of equity-market arbitrage is unique to MNCs.

It should be clear by now that FDI is the result of several factors. No *single* theory has been able to encompass all the explanations proposed. Several authors (e.g. Baumann, 1975; Dunning, 1977) recognized the need for an eclectic approach encompassing a number of theories, all of which have something to contribute. Subsequently,

Dunning (1979) presented an eclectic theory of the MNE. Calvet (1981) explains the eclectic approach:

“... an eclectic approach implies that location theory, industrial organization theory and property rights theory all add something to an explanation of why firms decide to transact with foreign countries. To these must be added a hierarchies vs. markets theory, to account for the choice of mode of transacting”.

(Calvet, 1981, p. 55)

The eclectic approach introduces locational factors relating to the host country to fully explain why a firm would take the trouble and accept the risk of organizing operations abroad. Under imperfect market conditions, firms have an incentive to internationalize certain activities. Ownership-specific advantages enable them to compete with local firms in foreign countries. The preference for direct investments over licensing and export is explained by the internalization/appropriability approach and location-specific advantages.

These works and theories all have something in common: they take the multinational stage for granted and assume perfect rationality, leaving many questions unanswered regarding the development process by which companies become multinational.

Another line of thought focusing on explaining the FDI flows (rather than the institution making the investment) identified some aspects of this process.

2:2 Direction of FDI Flows

According to neoclassical theory, capital would flow from regions with lower rates of return, i.e. where capital is abundant, to regions with higher rates of return, i.e. where capital is scarce, until there was an equalization of the price of capital between regions. However, explanations of the direction and patterns of direct investment solely in terms of differences in rates of return were inconsistent with empirical evidence. Statistics showed direct investments simultaneously flowing both in and out of the same countries.

In the case of the industrialized countries, simultaneous flows were the rule rather than the exception. Some researchers turned to the work of Burenstam Linder (1961), which stressed the implication of differences and similarities between countries for international trade. According to Burenstam Linder:

"Potential trade in manufactures is most intensive among countries with similar demand structures, i.e. countries with about the same per capita income levels."

(Burenstam Linder, 1961, p. 107)

This theory explained some aspects of international trade well. But, as the theories of the MNC have shown, direct investments are not a direct substitute for trade. A further explanation was needed.

The theory of the product cycle (Vernon, 1966) provided a more thorough understanding of the flow of direct investments. This theory, like Burenstam Linder's, proposes that ease of communication and similar demand structures are of importance for understanding interaction in the form of trade or FDI between nations. Furthermore, the dynamic element of the interaction between *firm-specific* advantages, changing as the product moves through its life cycle, and *location-specific* advantages is taken into account.

The model divides the life of a product into three stages, progressing from the "new product" to the "mature product" and ultimately to the "standardized commodity". The product-cycle theory relates these stages to the locational decision and to the choice between exports and production abroad.

Fundamental to this theory as well as Burenstam Linder's, is the idea that entrepreneurs are inclined to innovate products in accordance with the demand structure of their immediate environment, i.e. their home market. High incomes and high unit labour costs, for example, create incentives to develop new products that are labour-saving or satisfy high-income wants.

In the first stage of a product's life, there is usually uncertainty regarding the ultimate specifications of the product, and feedback from the buyers is valuable. Furthermore, price elasticity of demand is low because of product differentiation. The monopoly advantages of the innovating firm imply less importance for cost differences between

locations. Production is most probably situated in the home country and foreign markets are served through exports.

The second stage is that of a mature and established product. Competitors have entered the scene. Proximity to the home market ceases to be the most important factor in determining where to locate production. The relative production costs of alternative locations now become more significant. If the home market was a high-cost location, production may now be moved abroad.

In the third stage of the product cycle, the product has become a standardized commodity. Priority at this stage is given to low-cost location of production. Market knowledge and information flows are of less importance. Competition is primarily in price. Production may at this stage be transferred to countries, often less developed ones, with low labour costs. The flow of exports is now from the production sites in countries with low labour costs to the innovating-initiating country.

The product-cycle theory provided a framework within which the postwar expansion of U.S. direct investments in Europe and LDCs could be explained. Although Vernon (1966) considered direct investments from the viewpoint of the U.S., the model has been able to explain some European as well as Japanese FDI in manufacturing industries (Hood and Young, 1979). European as well as Japanese manufacturers have in certain industries or areas fulfilled the prerequisite of the model: to be the principal innovators.

Although the process proposed by Vernon might still have some applicability for firms expanding abroad for the first time and for MNCs associated with manufacturing end products (Hood and Young, 1979), its explanatory value has decreased over time. Established MNCs optimize the location of their activities from a global perspective. Location decisions are taken in view of their overall worldwide network of activities rather than the cost structures of one or a few single markets. Vernon (1979) recognized this critique and developed what he called "The Product Cycle in a New International Environment". Here, the oligopolistic behavior and information-gathering capacity of highly internationalized MNCs are recognized. Innovations are still assumed to be developed in accordance with domestic demand structures, but the emphasis on the U.S. as the principal source of new products is reduced.

The first and third stages in this revised version resemble the original one. It is still assumed that there are initially strong economic incentives to locate production in the country where the product was originally developed. Similarly, it is assumed that location is strongly influenced by cost differentials between countries at the third stage. In stage two, however, it is assumed that the location decision is based upon the action-reaction patterns of other competing MNCs.

In its second version, the product-cycle model has close links with the ideas developed by Knickerbocker (1973) and Graham (1974). Knickerbocker observed a "follow-the-leader" type of behavior among U.S. corporations locating activities abroad. Through a series of statistical analyses, he manages to establish that this is an effect of oligopolistic competition within certain industries. In his own words:

"As a general rule, U.S. parent firms, especially the few leaders in each industry, countered one another's investments more actively in industries of high seller concentration than in industries of low seller concentration"

(Knickerbocker, 1973, p. 3)

Graham (1974) conducted a similar type of study of European multinationals investing in the United States. He argues that in oligopolistic industries, European MNCs counter-invade the U.S. market to maintain equilibrium. A "mutual hostage position" is created, enabling the actors to strike back within each other's home market.

Several empirical studies (for an excellent overview, see Hood and Young, 1979) have been undertaken to test the product-cycle models or certain dimensions thereof. However, we will not discuss these contributions any further here.

In summary, most theories of the MNC take multinationality for granted, and many of them follow line of a static analysis. The theories of the determinants of foreign direct investments bring in dynamic elements. The original version of the product-cycle model analyses dealt with the question of where innovations are most probable and the relationship between the stages of the product cycle and location factors. It was developed against the background of the post-war flow of U.S. FDIs to Europe and LDCs, and it provides an understanding of *why* and *when* FDI is preferred to exports. The second version of

the product-cycle models, as well as the works of Knickerbocker and Graham, introduce the complicating factor of oligopolistic competition. From these studies, it can be concluded that the direction of the flow of FDI is affected by the action-reaction pattern of competitors within an oligopolistic industry.

The theories presented here provide an understanding of the MNC and the pattern of FDI in a macro perspective. However, they can also help to explain the internationalization process of a single firm.

The type of ownership-specific advantage seems to affect how firms serve foreign markets. Market imperfections related to knowledge force the firm to establish its own operations abroad rather than export, license or use local representatives. They could therefore help us to understand a single firm's choice of market channel when going abroad.

The product-cycle theory and the eclectic theory emphasize the importance of location-specific advantages, for example in the form of abundance of skilled labour or low-cost production. These advantages could of course also be relevant to a single firm's choice of market, or changes in patterns over time.

The findings of Knickerbocker (op cit) and Graham (op cit) suggest still another area of interest at the level of understanding and explaining a single firm's process of internationalization: oligopolistic behavior and the action-reaction pattern of competitors within industries can be expected to affect, for example, choice of market and timing of entry.

Nevertheless, we are left with a number of questions regarding the internationalization process. The principal contribution of the theories presented here is in helping to explain the pattern of FDIs in a macro-perspective, even though certain ideas could also be applied at the firm level. For a more in-depth understanding we need another perspective, where the unit of analysis is the firm and the focus is on its increasing involvement in international operations over time.

2:3 The Internationalization Process of the Firm

We will now focus more closely on the firm – more specifically, the development process within the firm prior to the multinational stage.

2:3:1 Traditional Models

A shift in attention towards studying the various steps involved in the process of investing abroad came with the work of Aharoni (1966). This work sought to analyze the way in which U.S. manufacturing firms made their foreign investments, particularly in less developed countries. The foreign-direct-investment decision process was studied in a sample of 38 U.S. firms from a behavioristic perspective. It was found that investments abroad were rarely based on sophisticated and well structured decision-making processes. In most cases opportunistic behavior, coincidence and opportunities were the triggering factors:

Our company is generally not interested in foreign investment

In this case I fought hard to make them decide to do it. I wanted to live in that country. I know many people there; my wife's family lives there ... My wife does not like the United States and I would not mind living in the country. I think it's good for the company too. Why, with all my connections there, I could really do a good job.

(Aharoni, 1966, p. 60)

Aharoni's work paved the way for further studies of the firm's internationalization process. Although Aharoni focused very much on decision-making rather than internationalization, his findings served as a source of inspiration for future research.

During the 1970's, a number of Swedish researchers at the University of Uppsala (Hörnell, Vahlne and Wiedersheim-Paul, 1973; Johanson and Wiedersheim-Paul, 1974; Johanson and Vahlne, 1977) focused their interest on the internationalization process. Studying the internationalization of Swedish manufacturing firms, they developed a model of the firm's choice of market and form of entry when going abroad. Their work was influenced by Aharoni's seminal study but

also by the literature on the theory of the firm (Coase, 1937) and behaviorism à la Cyert and March (1963).

An underlying assumption of their work – that also owes much to Penrose (1963) – was that a firm's internationalization, whether through exports or FDI, is a consequence of its growth (Carlson, 1975). When the home market is saturated and the number of profitable opportunities has decreased to the point where the firm can no longer grow on the home market, a search for new activities begins. Since new alternatives generally seem more uncertain than old, familiar ones, it is assumed that this search will be directed towards alternatives as similar as possible to existing operations. If horizontal or vertical expansion is ruled out as being too uncertain or not profitable, geographic expansion is often an alternative.

A second underlying assumption was that uncertainty about the outcome of an action increases with distance. Firms are assumed to have better knowledge about their immediate environments. Hence, they seek alternatives with as low degree of "foreignness" as possible.

Operations abroad imply crossing national borders. This creates additional uncertainty, giving rise to what has been termed the "frontier-problem" (Carlson, 1975). Lack of knowledge regarding local business conditions, customers, bureaucratic procedures, foreign exchange-rate fluctuations, tariff and non-tariff barriers as well as how to get information all add to the perceived uncertainty and thus to the degree of "foreignness". A business operation within the borders of the home country at a given geographical distance from the unit making the operation would also create uncertainty. But if the same operation is to be undertaken at the same geographical distance in a foreign country, the uncertainty is greater. The Uppsala researchers assumed that frontier uncertainty is connected with "psychic distance". The larger the difference between the home country and the host country in terms of level of development, level and content of education, language, etc., the higher the level of uncertainty.

With these basic assumptions in mind, the Uppsala researchers interpreted the patterns in the internationalization process they had observed in Swedish manufacturing firms. They had noted, first of all, that companies appeared to begin their operations abroad in fairly nearby markets and only gradually penetrated more far-flung

markets. Second, it appeared that companies entered new markets through exports. It was very rare that companies entered new markets with sales organisations or manufacturing subsidiaries of their own. Wholly-owned or majority-owned operations were established only after several years of exports to the same market.

The researchers' basic question was whether this pattern could be an effect of perceived uncertainty. Did firms without experience of doing business abroad first go to markets (given a market potential) with environments similar to the home market in an effort to minimize uncertainty? Did they then gradually, as their knowledge about doing business abroad increased and the level of uncertainty decreased, consider markets with more different environments? Was it also true that companies entered markets using low-commitment forms like exports and then gradually (if the initial efforts proved successful) increased their commitment, for example by establishing wholly owned sales or manufacturing subsidiaries? The apparent answer to these questions eventually turned out to be yes.

A first step towards hypothesis-testing was taken by Vahlne and Wiedersheim-Paul (1973). With the aid of a multiple regression analysis, they tried to identify factors that influenced the psychic distance between Sweden and other countries. Psychic distance was defined as the sum of factors preventing the flow of information to and from a country. It was found that the psychic distance between Sweden and a given foreign market was influenced by the following principal factors: level of development, difference in level of development (between the home country and the foreign country), level of education, difference in education, business language, cultural difference, everyday language and the extent of existing links between the home country and the foreign market (Carlson, 1975).

In a second step, Hörnell, Vahlne and Wiedersheim-Paul (1973) made a ranking list of countries (table 2:1) according to their psychic distance from Sweden. The ranking list was utilized to study the establishment pattern of foreign sales subsidiaries of Swedish manufacturing firms. It was found that firms seemed to have a strong propensity to make their initial establishments in countries with a low psychic distance from Sweden, i.e. Denmark, Norway, Finland and West Germany, and only gradually tended to penetrate more distant markets. Furthermore, it was found that the establishment pattern varied over time as well as among industries. The time difference

Table 2:1 Psychic Distance from Sweden to 15 Foreign Countries

Denmark	1
Norway	2
Finland	3
West Germany	4
Great Britain	5
Netherlands	6
Belgium	7
United States	8
Switzerland	9
Canada	10
Austria	11
France	12
Italy	13
Spain	14
Portugal	15

Source: Hörnell, Vahlne and Wiedersheim-Paul, 1973

between two consecutive establishments seemed to decrease over time, but also with the number of consecutive establishments. Heavy manufacturing industries seemed, on the average, more prone to establish in more distant markets (in terms of psychic distance) while, for example, the textile industry seemed to prefer more nearby markets (Hörnell, Vahlne and Wiedersheim-Paul, 1973). Two possible explanations for the difference in establishment patterns were put forward by the authors. First, certain industries may have characteristics that limit them to certain nearby markets. Second, the age of an industry may be a factor; some industries may already have begun establishing subsidiaries abroad at the turn of the century, while others have started much later. There seemed to be no major difference between industries in terms of the average time between two consecutive establishments, although larger firms seemed more inclined to establish in distant markets than smaller ones.

In the same study, a first empirical test of the "establishment chain" (see excerpt after next paragraph) hypotheses is made in a case prepared on the Swedish pharmaceutical company Pharmacia. Although not statistically representative, the results provided some clear indications. At the time of the study, Pharmacia had organizations of its own on nine markets. Eight of these showed a similar development pattern: Pharmacia had established relations with an agent and within a few years established sales subsidiaries. Two of these sales subsidiaries later increased their commitment by starting

to manufacture. In the ninth country, a sales subsidiary was opened almost immediately; the decisive factor here was that one of the decision makers was educated in the country and was well acquainted with it.

These results were further substantiated by a study of the internationalization process of four Swedish manufacturing firms (Johanson & Wiedersheim-Paul, 1974 and 1975; see also Johanson & Vahlne, 1977). The conclusions clearly pointed toward the existence of an "establishment chain":

"The establishment chain – no regular export, independent representative (agent), sales subsidiary, manufacturing – seems to be a correct description of the order of development operations of the firms in individual countries. Of sixty-three sales subsidiaries, fifty-six were preceded by agents and this pattern is the same for all the firms. With regard to the manufacturing establishments there is a difference between Sandvik and Atlas Copco on the one hand, where twenty-two out of twenty-seven establishments were preceded by sales subsidiaries, and Facit and Volvo on the other, where five out of seven occurred without the firm having any sales subsidiaries in the country. However, in no case has a firm started production in a country without having sold in the country via an agency or a sales subsidiary before."

(Johanson and Wiedersheim-Paul, 1975 p. 321)

Gradual internationalization did not seem to be an exclusively Swedish phenomenon. Several studies (cf Vaupel, 1970; Bilkey, 1978; Bilkey and Tesar, 1977; Davidson, 1976; Cavesgil, 1980 and 1984) of U.S.-based firms' choice of market as well as development of the establishment chain confirm the findings of the Uppsala researchers. Similar results have also been reported for West-German (Dichtl et al, 1984), Japanese (Yoshihara, 1978; Johanson and Nonaka, 1983), Turkish (Karafakioglu, 1986), Australian (Barrett, 1986), Hawaiian, (Hook Jr and Czinkota, 1988) as well as third-world (Ford et al, 1987) firms. The support for the model is obviously solid:

"The pattern of investments seems to substantiate the evolutionary theory of foreign investments."

(Yoshihara, 1978, p. 372)

The Uppsala researchers, however, did not claim that the evolutionary theory could explain *each* firm's choice of market or *each* establishment chain of a firm within a market. Individual firms might behave differently as a result of firm, industry, location or situation-specific factors or characteristics. But the evolutionary process of internationalization is claimed to be the most typical (Johanson and Wiedersheim-Paul, 1974).

2:3:2 Critique of the Traditional Models

Lately, several authors have claimed for various reasons that the evolutionary theory of the internationalization process proposed by the Uppsala researchers has lost some of its explanatory power. The critique has been supported by the fact that the internationalization process of de novo entrants in certain industries has recently become more spectacular. Firms have lately seemed prone to leap-frog stages in the establishment chain, entering markets "distant" in terms of psychic distance at an early stage, and the pace of the internationalization process generally seems to have speeded up.

Hedlund & Kverneland (1984), studying the strategies of Swedish manufacturing firms for entering Japan, claim that Swedish firms seem to have preferred a "shorter route" strategy there. Around half of the 18 firms investigated went directly from a sales agent to a manufacturing subsidiary, omitting the intermediate step of a sales subsidiary. Although they assert that psychic distance still has some explanatory power, changes in the environment are claimed to have forced firms to adopt more rapid and direct modes of entry:

"The average psychic distance between the countries and Sweden in the Johanson and Vahlne study is lower than between Sweden and Japan. The explanation for the difference in result thus has to be found in changes in the environment and within the companies which have taken place in the time period covered by the two studies. The Johanson and Vahlne study looked at market growth strategies from the

first stage of internationalization of the companies up to around 1970. Our study looks at market growth strategies in the 1970's."

(Hedlund & Kverneland, 1984, p. 70)

The study focuses on one distant market only, and studies the entry strategies of 18 Swedish firms, all of them with long experience of doing business abroad. Since their experience was accumulated from several markets, it is plausible to assume that their perceived uncertainty when entering a new market had decreased. This is consistent with the thoughts of the Uppsala researchers. Firms experienced in doing business abroad can be expected to depart from the gradual learning-by-doing behavior predicted by the model. Since Hedlund & Kverneland (op cit) study entry patterns in a market that was entered rather late in the internationalization process, and do not consider the accumulated experience or the internationalization process preceding the entry of the Japanese market, it is difficult to tell whether the short entry routes observed are due to accumulated experience, special circumstances in the Japanese market or something else. The study is, however, an empirical indication that the traditional model may have lost some of its explanatory power.

Others have criticized the model from a more theoretical point of view. Nordström & Vahlne (1985) claim that the Uppsala school is not valid in situations of highly internationalized firms and industries. In these cases, competitive forces and factors override psychic distance as the principal explanatory factor for the firm's process of internationalization. This argument is quite consistent with Johanson & Mattsson (1984).

"We believe that the internationalization model is less valid in situations where both the market and the firm are highly internationalized."

(Johanson & Mattsson, 1984, p. 27)

Referring to network theory, Johanson and Mattsson assert that competitive forces and factors in highly internationalized industries create a "heterogeneous pattern of entry opportunities" which compels the firm to choose markets and entry strategies that may be very different from those predicted by the traditional model.

The importance and effect of competitive factors are further underscored by Sölvell (1987). In international oligopolies, the options of the actors are severely limited. The action pattern of a specific firm very much depends on the action-reaction pattern of the other incumbents in the industry.

"In oligopolistic industries the choice of country (and timing) is thus more restricted. In the extreme case, the explanation as to why firms choose not to enter certain national industries is associated with tacit collusions, or so called territorial exclusions."

(Sölvell, 1987, p. 59)

Some of the criticism of the Uppsala model has emphasized the fact that the internationalization of competitors has created international oligopolies in certain industries. The action of one firm is interrelated with the action-reaction pattern of its competitors. Hence, understanding competitive conditions is essential for understanding the actions of a single firm. The criticism implies that the international growth of firms studied by the Uppsala researchers occurred under less oligopolistic conditions. While plausible, this implication has not yet been substantiated empirically.

Neither oligopolistic competition in general nor international oligopolistic competition in particular are phenomena of the 70's or the 80's. Why then has the traditional model come under criticism?

Reid (1983) argues that the model is far too deterministic and general. Modes of international growth are context-specific and must be explained by heterogeneous resource patterns and market opportunities – a plausible argument; however Reid presents no alternative.

But what has happened to gradual "learning-by-doing" behavior? Have managers developed an ability and a willingness to act under greater uncertainty than their colleagues twenty, thirty or forty years ago? Probably not.

The Uppsala researchers assumed that knowledge decreased and perceived uncertainty increased in proportion to psychic distance. The concept of psychic distance implies an assumption of a heterogeneous world, i.e. a world that consists of countries that are perceived to be different.

Given a world of zero psychic distance – i.e. a neoclassical world – between any two nations, it is apparent that there is no need for a gradual learning-by-doing process, neither in the choice of markets nor in the establishment chain. Firms will immediately enter potentially profitable markets with the optimal type of establishment, given the restrictions and influence of firm-specific resources and the environment of the firm.

This highlights two important forces undermining the very foundation of the Uppsala school of thought: on the one hand forces driving us towards a less heterogeneous world; on the other, forces or devices facilitating the flow of information (cf Vernon, 1979; Levitt, 1983). We have reason to believe that both forces are propelling us at an ever increasing pace in the direction of "the world of homogeneity" or "the world of costless and free flowing information".

When firms penetrate very distant markets or several markets simultaneously at an early stage of the internationalization process, it is not so much because the decision-makers of today dare to take greater risks than their colleagues in the 30's and 40's. Rather, they are better informed and their world is less heterogeneous than in the past. They can afford the luxury of leap-frogging stages in the traditional learning-by-doing-model. Although it has been indicated by several authors that access to information (Vernon, 1979; Hedlund and Kverneland, 1984), competitive considerations (Nordström and Vahlne, 1985; Sölvell, 1987) and the degree internationalization in industries and firms (Johanson and Mattsson, 1984) might have changed the pattern of internationalization, we still lack a system of hypotheses and a body of solid empirical studies. How has the process of internationalization changed? Which are *the most important factors* behind these changes? Which are *the most important explanatory factors* behind today's internationalization processes?

2:3:2:1 Decreased Importance of Psychic Distance as an Explanatory Factor

Although we are far from a perfectly homogeneous world, we are probably also quite far from the world faced by Swedish engineering firms in the past. Sandvik, Atlas Copco, Facit and Volvo, studied by Johanson and Wiedersheim-Paul (1974), began their internationalization in 1865, 1904, 1929 and 1928, respectively. In many respects we

are also far from the world depicted in the books, publications and reports published between 1966 and 1968 that served as the source of the empirical material ranking foreign countries according to psychic distance from Sweden (Vahlne and Wiedersheim-Paul, 1973).

At least three major tendencies are *undermining the assumptions of the Uppsala research, thus limiting the contemporary explanatory power of the models.*

First, several authors (cf Vernon, 1979; Porter, 1980, 1984, 1986; Levitt; 1983; Ohmae, 1985) claim that the world *generally* over time has moved towards homogenization, especially within the business community. Levitt (op cit) is one of the strongest advocates of this view. According to Levitt, technology is the underlying force that is driving the world toward convergence. Technology has 'proletarianized' communications, transport and travel. In the most isolated and backward areas, people are able to see, hear and experience developments, products, trends and news originating from the most distant places. Levitt also argues that differences in cultural preferences, national tastes, standards and business institutions are vestiges of the past. As consequence, global markets for standardized consumer products are emerging, this in itself driving the world in the direction of commonality.

It is of course difficult to separate cause and effect in a discussion of these forces. Political, technological, as well as economic and psychosocial forces, are at work in complex interaction. However, it is evident, for example, that the formation of common markets in Europe, the Middle East, Asia and South America, accompanied by a general ambition to deregulate world trade (GATT) has contributed to the process of homogenization. The common markets are, of course, a regional phenomenon but still a major step from ethnocentrism towards geocentrism.

Second, firms today also have quicker and easier access to knowledge about doing business abroad. It is no longer necessary to build up knowledge in-house in a slow and gradual trial-and-error process. Several factors contribute to this. For example, universities, business schools and management training centers all over the world are putting more and more emphasis on international business. Their graduates are thus acquainted with the basic problems in this area.

Probably even more important, the absolute number of people with experience of doing business abroad has increased. Hence, it has become easier to hire people with the experience and knowledge needed, rather than develop it in house. This is not a new phenomenon, but the number of people with experience of doing business abroad has increased over time as an effect of continuous growth in world trade and FDI.

A similar way of reducing uncertainty is offered by international consulting firms. The consulting industry has experienced tremendous growth during the last twenty years. It is possible to buy knowledge about legal and financial standards from international accounting firms and investment banks. Local and international consulting firms offer information about competitors, market potential, distribution systems, local buying standards, possible entry modes, etc. There is thus a well-developed market for knowledge about foreign markets.

The spectacular development of information technologies, both in terms of absolute performance and diminishing price/performance ratios, has made it easier for a firm to become acquainted with foreign markets.

Third, the emergence of firms that manage a few or several of their activities *as if* the world was a single borderless and homogeneous entity is also a driving force toward a global commonality. The mere existence of international trade reduces barriers between countries and cultures and evens out differences between countries and regions. In this respect, the process of bringing countries closer to each other is as old as international trade. The emergence of multinational enterprises at the end of the 19th century helped to accelerate the process, as well as confirming similarities in demand structures between countries

One of the first writers to discuss the phenomenon of firms acting *as if* the world was one large homogeneous market was Perlmutter (1969). Studying the headquarters orientation of foreign subsidiaries in MNCs, he found a geocentric attitude emerging among the managers interviewed. The firm's subsidiaries were viewed neither as satellites nor as independent units but as parts of a whole focusing on world-wide objectives.

Several writers (cf Porter 1980, 1986; Hamel and Prahalad, 1985; Kogut, 1984; Sölvell, 1984; Simmonds, 1985) have discussed the emergence and content of what have been called "global strategies". Although the definitions of this concept are far from precise and operational, most writers seem to agree that a global strategy aims to achieve Perlmutter's geocentric ideal (Simmonds op cit). Global strategies focus on worldwide as well as local objectives, and each part of the firm makes a unique contribution with its unique competence. International activities are no longer handled like a portfolio, but integrated on a worldwide basis to utilize synergies between operations in different countries. The world is viewed as an entity, rather than as a collection of independent markets.

The organizational structure of contemporary MNCs confirms the emergence of worldwide strategies. Firms organize their activities by worldwide product lines (cf Stopford and Wells, 1972; Bartlett, 1984) or in matrix organizations in which the geographic dimension is subordinated to the product dimension. Organizational structures and administrative processes are created to allow firms to establish and maintain effective control of worldwide integrated operations.

However, it should be clear that no firm handles *all* its activities as if the world was one single market. Adaptations to local conditions, especially in downstream activities, are always necessary. There are no purely global firms or industries. The term global is too imprecise anyway, since it does not allow us to differentiate between firms integrating just one or a few activities on a worldwide basis and those integrating many or most of their activities.

It should be equally clear that the choice of what and how many activities to integrate worldwide is industry- and firm-specific. Certain industries have homogeneous demand structures worldwide, while others are more heterogeneous. Levitt's (op cit) arguments are not equally true for all industries, even if the long-term trend may be in the direction of homogenization.

In spite of these reservations, it is reasonable to conclude that the assumptions of the Uppsala model of internationalization can be questioned. The world is becoming generally more homogeneous, reducing uncertainty about foreign market characteristics and hence the need for knowledge development. Second, even if the world is still far from homogeneous, there are more ways of acquiring information.

Third, the homogenization process and the opportunities to acquire information are affected by the fact that firms in certain industries act as if the world was a single large market. The homogenization process is accelerating, and it is becoming increasingly easy to acquire requisite knowledge and information.

To a certain extent, the existence of firms with global or geocentric attitudes, strategies and structures confirms and accentuates a movement away from the assumptions of the traditional models. Foreign markets may not be as foreign as they used to. To the extent that they still are foreign, the opportunities for acquiring information and reducing uncertainty have improved greatly.

Apart from the forces which reduce actual and perceived psychic distance and uncertainty about foreign markets, we also have reason to question the ranking of nations according to psychic distance from Sweden as originally developed by Hörnell, Vahlne and Wiedersheim-Paul (1973). The ranking (Table 2:1) was to a large extent based on the authors' subjective opinion.

"The ranking is naturally subjective and can therefore be expected to have limited validity and reliability."

(Hörnell, Vahlne and Wiedersheim-Paul, 1973, p. 204)

This is, of course, a problem in itself. But even if the validity and reliability were good, there are reasons to question the ranking. Changes in trade patterns and in the amount of cultural and political interaction between countries, formation of new political and economic unions or changes in existing ones may over time affect the perceived psychic distance. For example, several of the countries in table 2:1 (Spain, Portugal, Great Britain) have joined the European Common Market since the ranking was made.

Without further empirical studies, it is impossible to tell how the ranking has changed more precisely. The present divergence from the Uppsala model may, on the one hand, be an effect of an *absolute* and general decrease in psychic distance; on the other hand, it may reflect changes in *relative* psychic distance.

2:4 The Internationalization Process of the Firm in a Global Business Community – Key Issues

It could be argued that there are countervailing forces that are working against the virtually implosive reduction of psychic distance suggested in 2:3. Nationalistic forces opposing economic and administrative integration are a fact in several countries and regions. Language and culture will continue to obstruct interaction between countries for yet some time. Furthermore, it could be argued that only in certain segments of society have "global tribes" actually evolved, i.e. the world really "imploded" in terms of psychic distance and people and organizations interact globally with a limited sense of any national borders.

These arguments may all be true. Still, there should be no doubt that the business community is more internationalized than ever. Whether this is a cause or an effect of the homogenization process, the increased information flow and the emergence of geocentric multinationals could be further discussed at length. Similarly, it could be discussed to what extent these phenomena are general in their effects on society. However, what matters from the point of view of understanding and interpreting the actions of business firms is how they – the actors – perceive the world. The emergence of global strategies, global product divisions, global products, global marketing programs etc., confirms that several firms in various industries *perceive* different nationmarkets to be similar or close enough in some dimensions to develop worldwide standardized approaches to various issues and matters. It is this similarity, this closeness as perceived by the actors, which forms the background for the present study of internationalization process of the firm.

The dependent variable, i.e. the internationalization process, is in itself a complex phenomenon. The growth of firms outside their home country involves, or potentially affects, almost every one of their functional aspects. In certain cases the fact that the firm starts to do business abroad is the result of an explicit strategic decision; in other cases it is more due to coincidence. But no matter how the process was initiated and later evolves, the actual growth and development of foreign activities over time is the outcome of complicated interaction between the firm and its environment.

In studying this process *ex post facto* to find interesting patterns, it should be clear that the analyses by definition will be partial. Certain manifest aspects of the process like number of subsidiaries, establishment year, acquisition ratio etc. could be analyzed and discussed in relation to some explanatory variables. These aspects, though, are only the manifest and measurable dimensions of a complex growth process. Any pattern in the manifest variables is merely a proxy or an indicator of the actual process.

The most frequently studied patterns or indicators have been the sequence of foreign markets entered, the establishment process within a particular market and the establishment mode of subsidiaries. What emerged was a picture of a generally slow and gradual underlying growth process (cf Hörnell, Vahlne and Wiedersheim-Paul, 1973).

The major environmental changes discussed in the previous section have altered conditions for firms in general and for firms going abroad in particular. The internationalization process is no longer limited by psychic distance and lack of information to the same extent as before. Therefore the key determinants of the process can be expected to be different from what traditional models have predicted. Given the characteristics of the firm, basic considerations about market potential and competition, for example, would *a priori* seem to be factors of great importance in a less heterogenous world.

2:5 The Internationalization Process of the Firm in a New Perspective

The Uppsala researchers (and many others) studied and interpreted the process of internationalization from a point of view influenced by a behavioral theory of the firm and organizational learning à la Cyert & March (1963).

Depending on the perspective chosen and the frame of reference used, the observer will be able to see and interpret the study object differently. This study will add thoughts from first and foremost industrial organization (IO) theory to the model framework developed by the Uppsala researchers.

Since the IO perspective to some extent is reflected throughout this study from the structure of the case studies to the very conclusions, a brief background and presentation of this frame of reference is appropriate at this stage. The results of the Uppsala research will also be interpreted against this frame of reference, in section 2:5:2, in order to establish some of the basic differences and similarities between the two perspectives.

2:5:1 Strategic Management and Industrial Organization

Edward S Mason (cf Mason, 1939) attempted, during the 1930s, to identify groups of variables relevant for understanding the basic mechanisms of an economy. Mason's model can be illustrated schematically as in fig 2:1. The model was basically intended for use in studying the welfare aspects of imperfections within an economy.

Fundamentally, the model assumed that a number of basic supply and demand conditions constitute a framework for the structure of different industries. Six dimensions of industry structure were defined: concentration ratio, product differentiation, entry barriers, cost structure, vertical integration and "conglomerateness".

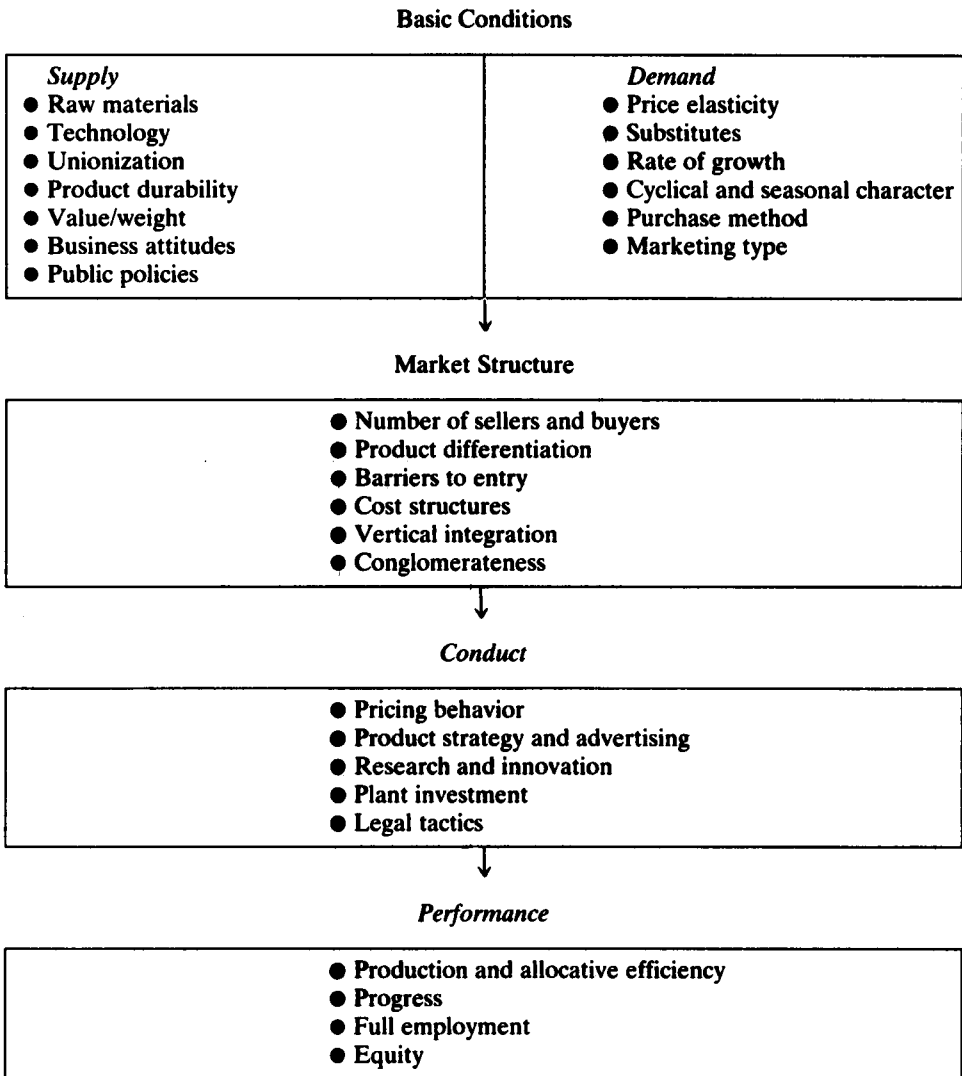
The Industry structure, in turn, provided a framework for the conduct of firms within industries. Finally, the aggregated conduct of firms within an economy determined the performance of the economy in terms of full employment production, allocative efficiency, etc.

As the model indicates, there is interaction between the different groups of variables. Firm conduct, for example in research and development, may result in technological breakthroughs affecting market structure as well as basic supply and demand conditions. By their conduct, firms (or perhaps only one or a few of them) may fundamentally alter both the structure of the market and the basic conditions.

Originally developed for understanding welfare aspects of divergences from perfect competition, the industrial organization research provided a base for studying and describing the interplay between market structure and firm conduct. In the seminal work by Bain (1956), relationships between certain structural traits of industries and their performance in terms of average profitability were empirically established.

Figure 2:1

A MODEL OF INDUSTRIAL ORGANIZATION ANALYSIS



Source: Scherer, 1980.

The contributions by Mason and Bain, often referred to as the Bain/Mason paradigm, later on became an important source of inspiration for researchers in the area of strategic management. It offered a model for systematically analyzing the structure and profitability of industries. Michael E Porter (1981) later became one of the strongest proponents of cross-fertilization of the industrial organization line of thought with the area of strategic management. Porter argues that a

firm's performance in the marketplace is critically dependent on the characteristics of the industry environment in which it competes. In formulating a strategy, firms must therefore take that environment into account:

"The essence of formulating competitive strategy is relating a company to its environment. Although the relevant environment is very broad, encompassing social as well as economic forces, the key aspect of the firm's environment is the industry or industries in which it competes."

(Porter, 1980, p. 3)

Since the industrial organization paradigm was originally developed by economists, and with the aim of understanding entire economies, conduct and performance (see figure 2:1) were defined in the economist's sense. Later, writers in the area of strategic management have redefined these terms and view conduct as the strategy (Porter, 1981) of the firm and performance as the profit or profit potential of the firm. Strategy thus encompasses decision variables such as price, advertising, capacity, quality, etc.

However, strategy and conduct are not argued to be fully determined by the structure of the industry. Rather the structure of the industry imposes limits on the strategic possibilities of firms within it. The strategy actually followed by a particular firm will be affected by firm-specific factors as well as entrepreneurial activities.

A major weakness of the traditional industrial organization paradigm is its neglect of the international dimension (Sölvell, 1987). The paradigm implicitly assumes that industries are congruent with national markets. Historically, this may have been a good approximation of real conditions. However, with the massive growth of international trade, as well as foreign direct investment, during the past thirty years, it is often no longer relevant to refer to local industry structures. In certain industries, national structures have merged into larger international ones (Sölvell, 1987). These constitute the relevant environment and the background for understanding the strategy of industry incumbents. Here of course the dimensions of industry structure and the strategies of firms must be interpreted in an international context.

2:5:2 The Uppsala model from an Industrial Organization Perspective

The Industrial Organization (IO) paradigm – as interpreted by researchers in strategic management – in essence tells us that strategy and performance is critically dependent on industry structure. Consequently, we should also be able to understand the strategy of firms in light of the prevailing structure.

We will here define strategy *ex post*, without considering whether strategy was intended or not. The internationalization process of a firm, in terms of sequence of foreign markets entered, establishment processes within foreign markets and establishment mode of subsidiaries will be studied as "a pattern in a stream of actions" (Mintzberg, 1976).

Given these definitions, it is possible to interpret the Uppsala model in an IO-frame of reference and also to suggest why we have to take industry structure into account to fully understand a firm's internationalization process.

The Uppsala model has proven especially successful in explaining the process of internationalization of older MNCs which entered the international arena early in this century. The assumption of a heterogeneous world may have been a good approximation of actual conditions at that time. In IO-terms, the industries were nationally structured and each nation represented one industry with its own structural traits.

In a world with these traits, the Uppsala model can be expected to have a high explanatory value. The basic conditions of industry structure differed between countries, or at least were perceived to differ. Uncertainty concerning conditions on foreign markets was high. Moreover, information technology, consultants etc. offered very limited opportunities to reduce uncertainty by increasing the knowledge available. It could, for these reasons be asserted that it was actually due to the structural traits of the industries of the firms studied the Uppsala researchers model could be assigned such a very high explanatory value taking into account only one explanatory factor, i.e. experience of doing business abroad.



3 The Internationalization Process at Inter Innovation and Datatronic

It was theoretically discussed in chapter two that a set of fundamental socio-economic forces might be the driving forces toward new patterns observed in the process of internationalization by business firms. The actual mechanism at the firm level was also discussed in theoretical terms. However, the lack of any empirical research on more recent internationalization processes makes the latter discussion somewhat nonspecific. To establish a clearer view of the key mechanisms in contemporary internationalization processes, the growth and development processes of two rather young Swedish international firms – Inter Innovation AB and Datatronic AB – are described and analyzed in greater detail below.

The empirical material in the case studies was collected by the author in cooperation with two research teams, Kerstin Andersson & Annette Berkhahn and Helena Tovås & Camilla Otto, at the Stockholm School of Economics. Their studies were conducted during the academic year 1986/87 and were also used and analyzed by these teams in their own theses (Otto and Tovås, 1987; Andersson and Berkhahn, 1987).

3:1 Methodological Reflexions on the Case Studies

Several authors (Valdelin, 1974; Hägg and Hedlund, 1978; Spångberg, 1982; Normann, 1975) have argued that case studies are the most appropriate research method when a thorough theoretical framework is lacking. Case studies allow the researcher to gain an in-depth and contextual understanding of the study object, a prerequisite for the formulation of interesting and testable hypotheses.

Although there are several theories on the internationalization processes of firms, there is no unified theoretical framework. Most analyses and models have been partial in terms of either the explanat-

ory variables or the explained variables. Of course this is not very surprising, given that the seminal work in this area was published as late as 1966 by Yair Aharoni.

With the state and limitations of existing theory in mind, it was decided to attempt a somewhat broader approach in this study, in terms of both explained and explanatory variables. In order to develop a model, and to unravel some of the complexity in contemporary internationalization processes, an overall empirical impression of the process is needed as a complement to the theory. The case method permits the research to observe the study object closely and to relate and crossrelate different aspects to each other; it thus offers the best possibilities for gaining such an overall impression.

As with any other non-randomized process, each and every step of the internationalization process has its own rationale and background. It should be possible to link the growth and development of international operations to certain decisions taken, the overall strategy, firm specific advantages, the industry structure at home and abroad, the customers location and needs, key actors within the firm etc. Intensive studies of a few study objects should permit the researcher to identify some of the rationales and background factors explaining contemporary patterns in the internationalization process.

3:1:1 Choice of Study Object

It was decided to conduct in-depth studies of firms which at a first glance seemed to deviate from the predictions of the traditional models. Hence, the first and most important criterion in selecting cases was deviation from the process outlined by the "Uppsala School" (see section 2:3:1). The second criterion was that the companies studied had begun their internationalization process during the 1970's. This was considered to be of importance for two reasons. First, a fairly late start would hopefully ensure that information about the internationalization process and critical determinants thereof was still available. It was considered important to be able to follow the whole process, from its very start up to the situation of today. Second, we wanted to keep the "Zeitgeist" in terms protectionism, communications, fashion in organization design, etc. constant and therefore focused on the same period: the 1970's and 1980's. A third criterion or restriction for the choice of companies was

that they were not affiliated with a larger corporate group. This was to ensure that the companies' managers could not draw on the knowledge or capability of such a group. Fourth, a one-industry criterion enabled us to focus on how industry-specific factors affected the process. A final criterion applied was that the internationalization process must have reached the stage where it was relevant to start looking for patterns. Firms with only one or a few establishments abroad, or distributing their products mainly through local representatives were not interesting for our purposes. The potential study objects were required to have at least 4–5 major sales or manufacturing subsidiaries abroad, either wholly or jointly-owned.

Finally, it was decided to study two firms rather than one. The thought was that the similarities and differences between the two processes would serve as a further source of inspiration for the construction of hypotheses.

3:1:2 Data-gathering

The data-gathering procedure followed an overall standardized guide (Appendix 1), based on the model in section 4:1. However, the guide was deliberately not very detailed and precise. If our a priori conceptions turned out to be wrong, an overly precise guide could lead us in the wrong direction. During the research process the guide was continuously adjusted and developed to fit the specific circumstances of the firms under study.

As mentioned above, the empirical material was collected by the author in cooperation with two research teams. The procedure has been the same for both of the cases and can be summarized as follows:

- Initial meeting with student team. The research project is described. The student team receives a standardized data-gathering guide (see Appendix 1).
- Gathering of data from external sources: newspapers, industry publications, statistics, etc, by the student team.
- Introduction and initial interview with the president of the firm. Author together with student team.

- Gathering of internal written material of interest: consultants reports, annual reports, market studies, etc.
- Interviews with the management of the firm about the how, where, when and why of the internationalization process.
- Interviews with competitors and customers in an effort to verify data received from the company, and possibly to add some further insights.
- Follow-up interviews on the telephone.

Apart from those major steps, there were numerous meetings between the student team and the author. The teams held between 6 and 8 interviews with each firm. The interviews were always conducted by two persons, each of them taking notes independently. On the average, the interviews took 1–3 hours. The first and second drafts of the cases were sent to the respective firms for approval and release.

3:1:3 Validity, Reliability and Potential for Generalization

It could be argued that validity, reliability and potential for generalization are non-issues in a study which aims to generate testable hypotheses. When the hypotheses are subsequently tested, non-valid and non-reliable hypotheses will automatically be rejected. Furthermore, it is not possible to generalize the results *per se* of case studies (Valdelin, 1974). Together with existing theoretical models the results of case studies merely provide a foundation for the generation of hypotheses. We may only generalize the hypotheses or theories that are accepted after having been tested on a larger sample.

However, if we apply efficiency criteria to the research process, we may argue that it is waste of scarce research resources to disregard the problems of reliability and validity even in an exploratory study. In an extreme case a researcher could end up rejecting all hypotheses generated, on grounds of limited reliability and/or validity.

We have therefore tried to ensure the reliability of this study through:

- Interviewing several persons at each firm studied.

- As far as possible, checking the results of the interviews with external sources such as competitors, customers and written external material.
- Trying to meet with the persons interviewed in places or at hours where or when they could be undisturbed during the interview.
- Using a data-gathering guide.
- Two persons independently taking notes during the interviews.

Reliability is a prerequisite for validity. We have also tried to improve the internal validity of the case studies through:

- Developing a theory-based data-gathering guide in advance. The guide has been of help in focusing the interviews and in the collection of relevant data in general.

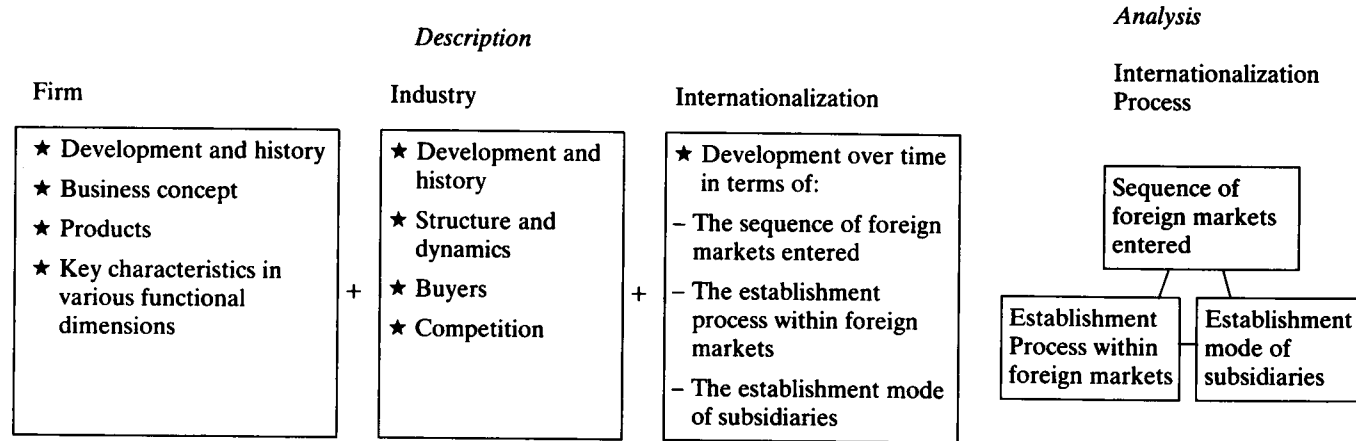
External validity refers to the possibility of generalizing results and is hence of less interest in an exploratory study of this kind.

3:2 Organization of the Case studies

The two case studies are purely descriptive and are structured in accordance with the model in figure 3:1. The first part focuses on introducing the firm, its products and the its characteristics in various functional dimensions. The second part paint a broader picture and highlights key characteristics of the industry and its buyers. The dynamics of the industry are discussed and the main competitors are briefly introduced. With this background, the steps of the internationalization process are presented in the third part. The different steps taken are presented on a year-by-year basis starting with the very first foreign establishment.

The analysis of the two cases is conducted in a separate section immediately after the each case description. The development over time of the three dimensions – sequence of foreign markets entered, establishment processes within foreign markets and establishment mode of subsidiaries – is analyzed and discussed in light of the development of the firms and their industries.

Figure 3:1 Overall Structure of the Case Illustrations



3:3 Inter Innovation AB

Development and History

Inter Innovation was a Swedish high-technology company in the banking automation equipment industry. The business concept of the firm was *to supply the market with systems for bank-note and document handling*. The concept originally arose from the realization that there was a growing need within the banking industry for an efficient and secure method of managing and controlling the flow of bank notes in retail banking.

The firm was founded 1973 as a development company. Intensive R&D activities followed until 1977. In that year, Inter Innovation succeeded in licensing some of its products to Data-Saab – a Swedish computer manufacturer.

The first generation of Inter Innovation's principal future product was introduced in 1978. A teller-operated automatic cash-note dispenser, called "The Cash Adapter", opened up a totally new and untried market in the banking automation equipment industry. The need for a device of this type had existed for some time. A British subsidiary of a bank-note printing company, DeLaRue Systems, had been trying to develop and sell a similar product for some years. However, DeLaRue's cash adapter did not perform satisfactorily and was not very successful on the market.

At the time of the introduction of the Cash Adapter, there were no competitors. Inter Innovation was the first company to supply a device of this type.

In cooperation with the Swedish computer manufacturer Data-Saab, Inter Innovation received an order for Cash Adapters from American Citibank in 1979. The Cash Adapters were part of a system for banking automation to be delivered by Data-Saab. The order received by Inter Innovation was for ten times the company's existing sales.

The order from Citibank was an important reference object for Inter Innovation. Orders from the British National Westminster Bank and Barclays Bank, and the Spanish Banco de Santander were soon to follow. In 1980, the first foreign sales subsidiary was established in the

United Kingdom. It was followed by sales subsidiaries in the United States, the Federal Republic of Germany, Spain and France. Simultaneously, distributors and agents were engaged in numerous countries all over the world.

By 1987, after 13 years of business, Inter Innovation was established as an international company with sales of SEK 390 million in 1986, a net profit of SEK 75 million, and a return on equity of 34%. By 1987, the company was considered to be the technological leader in the industry. The worldwide market share of the main product, the Teller Assist Cash Dispenser was estimated to be 70%.

In 1985, Inter Innovation had also started to build a position as a supplier of cash dispensers to manufacturers of customer-operated automatic teller machines. The Swedish Bankomat system, among others, employed Inter Innovation's technology.

Despite a high degree of equity financing, with a debt-equity ratio of only 1.64 in 1986, the company went public early in 1987. This was done in order to generate capital for further expansion on new markets. In 1987 the founder, Leif Lundblad, and his family were still the largest shareholder with 65 per cent of the voting rights.

Products

The products were computer-controlled, electro-mechanical bank note dispensers. The most vital element of the product was known as the Intelligent Bank Note Cassette. This was a module found in both the teller- and customer-operated dispensers. The module, or cassette, communicated with the bank's central computer and provided it with information about the amount and values of the bank notes it contained.

Both the teller- and the customer-operated dispensers permitted considerable gains in efficiency and security in the handling of bank notes.

The dispensing technology of Inter Innovations products – the Multi Denomination Dispense Mechanism – differed from that of competing manufacturers in its higher speed and its ability to handle bills of

low quality. By 1987, no other manufacturer could supply products of such high reliability with the ability to handle bills of low quality.

In summary, the products that Inter Innovation supplied by 1987 were:

- The Intelligent Bank Note Cassette
- The Teller Assist Cash Dispenser
- The Self Service Cash Dispenser

All products were sold on an OEM¹-basis to suppliers of banking automation equipment systems, as well as directly to end-users, i.e. banks. In 1986, approximately 65% of sales were directly to end-users and the rest to system suppliers.

Production

After the large Citibank order had been received in 1979, Inter Innovation acquired its own production facilities. It was considered important to control production inhouse in order to create customer confidence. By 1987, Inter Innovation operated four wholly owned production subsidiaries located in Sweden.

The fact that the products consisted of modules allowed economies of scale in production and output flexibility. Production of the uniform Intelligent Bank Note Cassettes, the most important technical part of all products, was determined by forecast. The final assembly of cash dispensers was a question of putting the cassette into customer-adapted safes and was done entirely to order.

Research and Development

Inter Innovation was a development-intensive company. Annual research and development expenditures were 10-12% of sales.

Customers were offered the opportunity to participate in cooperative development projects, intended to create market-adapted products. OEM-customers were especially active in these projects. The

¹Original Equipment Manufacturer

management of Inter Innovation considered cooperative ventures with customers to be of the utmost importance for creating new markets.

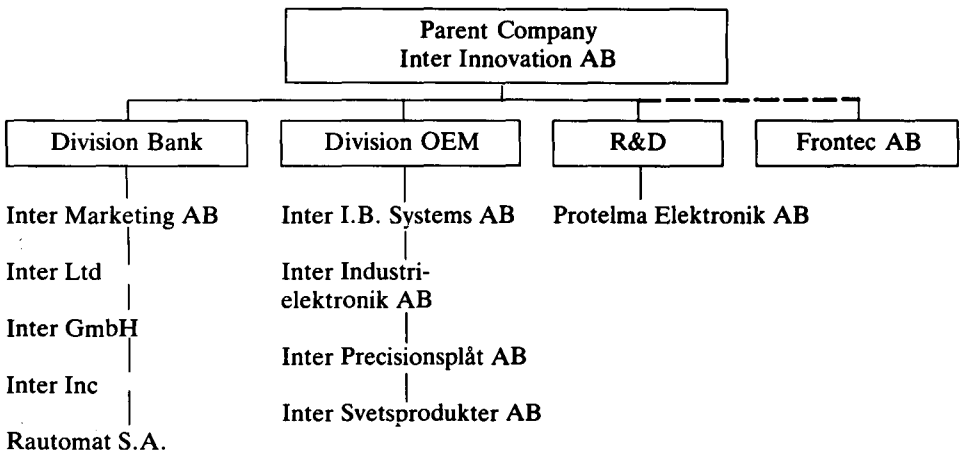
R&D was conducted entirely in Sweden, some by Inter Innovation's own development company, Protelma, and some by company divisions. In 1986, a minority share in the consulting company AB Frontec was acquired to further strengthen Inter Innovation's development capacity in computer software.

By 1987, Research and Development was viewed as one of the most important activities of the firm. Technological superiority was considered a necessity for future growth. It was the opinion of management that the pace of demand growth in this industry was not set by the customer. The *need* for the function was at hand, but the commercial opportunities were thought to be created by development and supply of unique products.

Organization

By 1986, Inter Innovation employed 640 persons in total. Its organization consisted of seven Swedish operating units (including the parent-company) and five foreign sales subsidiaries.

Figure 3:2 The Organization of Inter Innovation



The organization was divisionalized (figure 3:2). Division Bank handled sales to end-users and organized the activities of the Swedish

marketing company Inter Marketing AB, the foreign sales subsidiaries and the foreign distributors and agents. The OEM-Division handled OEM-customer and organized the four producing subsidiaries.

Buyers

Inter Innovation's products were sold to two large groups of customers: end-users, i.e. banks, and OEM-customers, i.e. banking-automation-equipment companies.

The latter group placed stringent requirements on the products in terms of technology and quality since Inter Innovation's products were used as components in their own banking automation systems. The largest OEM-customers in 1987 were Olivetti, Siemens, Unisys, IBM and Kienzle. IBM had previously produced their own cash dispensers in-house but had dropped them as the quality was not good enough. After extensive tests of Inter Innovation's Teller Assist Cash Dispenser, IBM acquired a non-exclusive five-year worldwide right to produce this machine.

Licensing agreements and long-term contracts with these larger firms made Inter Innovation's products compatible with most banking automation systems. Furthermore, these contracts secured the maintenance of a certain level of production and served as important objects of reference for penetrating the end-user market.

OEM-customers were handled centrally by the OEM-division of Inter Innovation AB in Sweden. The other group of customers consisted of the so called end-users, i.e. banks. Among them were both large international commercial and savings banks as well as small national banks. End-users were quality-conscious and required efficient service and maintenance. Product quality and reliability were considered more important than costs. To be able to provide customers with the necessary service and support, Inter Innovation established their own sales subsidiary on a market as soon as the market potential and other circumstances allowed. Local representation also created customer confidence, something that was considered to be of the utmost importance in selling to the banking industry.

End-users were found all over the world, although the potential of different nations varied. The large markets were found in the industrialized countries, or countries with strong financial centers. Exceptions were the Swedish and Japanese markets. The Japanese market was completely isolated and served only by indigenous firms. In the case of Sweden, it seemed as if banks were extremely conservative in their purchasing behavior and unwilling to abandon their original systems suppliers. Furthermore, in Sweden, as in the other Scandinavian countries, relatively small amounts of cash were handled over the counter. Consequently, Inter Innovation had no real home market; only one per cent of its cash dispenser sales came from Sweden.

The dual sales philosophy, with sales to both OEM-customers and end-users, had several advantages. Apart from the high technological requirements posed by OEM customers, which provided information of value for product development, OEM customers also performed large-volume quality tests that gave Inter Innovation important credibility in their efforts to penetrate the end-user market.

The dual sales philosophy was, however, also a potential source of conflict. A conflict could arise if both a system supplier, who was an OEM-customer, and Inter Innovation itself had the opportunity of selling to the same end-user. In such cases Inter Innovation kept a low profile and awaited the development of the market, letting market forces determine whether the order would go to the system supplier or directly to Inter Innovation. The policy was to try as much as possible to avoid offending an OEM-customer.

Marketing and Distribution

Inter Innovation's five foreign subsidiaries played a large part in the company's marketing activities. Aggressive marketing directed at end-users was considered essential. Products had to be customer-adapted, depending on the size, quality and values of banknotes in various countries. Furthermore, customers had different requirements concerning product design, software and security. Location close to the end-users also facilitated essential after-sales service. It was the goal of Inter Innovation to provide service worldwide within two to four hours.

Distributors or local representatives were used in markets where Inter Innovation for some reason – often small market potential or presence of an important OEM-customer – had elected not to establish its own sales subsidiaries. Distributors were considered to be a second-best solution. By 1986, Inter Innovation still had independent distributors in five countries. It was the policy of Inter Innovation first to establish a relationship with an end-user and then to find a distributor or local representative that could guarantee future service and further market penetration. Experience had shown that establishing relationships with distributors without installed reference objects was a waste of resources.

The primary target-groups for Inter Innovation's marketing were banks known to be eager to apply new technology, and banks with banking automation equipment systems which already included products like the company's. The latter group were of course already acquainted with the products and often wanted a second supplier to improve their bargaining power in relation to systems suppliers.

Another important marketing activity was participation in international exhibitions of banking automation equipment. These exhibitions generated contacts with OEM-customers as well as end-users and were considered to be of special interest for a comparatively small company like Inter Innovation.

Industry Characteristics

Broadly defined, Inter Innovation was in the banking automation equipment industry. A more narrow definition, though, would be that Inter Innovation was a member of the cash dispensing equipment industry, a subindustry of the banking automation equipment industry.

The banking automation equipment industry was an international oligopoly, in which the major actors were IBM, Siemens, Olivetti, Philips, Nixdorf, Ericsson, NCR and Diebold. All of those were multibillion dollar firms that supplied entire systems for bank automation including computer hardware, software, document and bank note handling and dispensing equipment. Some, like Nixdorf and Diebold, were specialized in banking automation, but most of the actors had their core activities in other areas such as communications or

computers. This was a truly international industry in which the actors were represented on most Western markets, in direct competition with each other.

The industry was characterized by a basically homogeneous customer need. Banks all over the world were very similar in terms of functions and operations. The systems solutions offered by the industry incumbents differed only to a limited extent, mainly in terms of marginal facilities and functions.

The industry was protected by substantial entry barriers in terms of technology and capital costs, but above all in terms of image and trust. Customers faced substantial switching costs if they wanted to exchange a banking automation system or product of one brand for another: whole organizations sometimes had to be altered, personnel retrained and new routines developed. Banks were therefore only interested in cooperating with well-known and stable suppliers, with a record of well functioning installations.

By 1987, the only serious threat of potential entry into the banking automation industry came from Japan. On their home market, Japanese computer equipment manufacturers had been in the banking automation business for a long time. The Japanese market had historically provided enough volume and opportunities for growth, but there were now indications that these companies were interested in penetrating the Western markets as well. For example their presence at international fairs and exhibitions had become increasingly visible. However, the technology of the Japanese firms was still rudimentary.; their dispensing mechanisms were unable to handle the lower quality notes common in the Western world.

As a supplier of cash dispensing products, Inter Innovation was not really in the banking automation industry, since cash dispensing products were only a minor part of the banking automation system. It would be more appropriate to say that Inter Innovation belonged to the cash dispensing equipment industry, which was both a supplier to and a competitor of the banking automation industry.

Except for Nixdorf, NCR and Diebold, system suppliers bought their cash dispensing units from independent firms on an OEM-basis. There were two major independent firms in the cash dispensing products industry, which together were estimated to have a 70% of the

world market outside Japan: DeLaRue Systems of England and Inter Innovation of Sweden.

DeLaRue Systems, a subsidiary of a British bank note printing company, was established in the beginning of the 19th century. This firm was the pioneer of "through-the-wall" cash dispensers in the 60's. DeLaRue Systems had about the same sales and profile as Inter Innovation, although their product line differed. For DeLaRue, cash dispensing products represented only 25 per cent of sales, which also included document sorting and handling machines and bank note accepting machines. Cash dispensing products were sold both on an OEM-basis and directly to end-users. De La Rue had started as an OEM-supplier but had entered the end-user market for cash dispensers on a large scale in the mid-80's. Their OEM-connections delayed entry into the end-user market since OEM customers considered this as a competitive move.

By 1987, De La Rue Systems had sales and service subsidiaries in five countries; France (established 1973), Spain (1974), USA (1980), Germany (1982) and Portugal (1984). Together with England these were also the largest markets in terms of sales.

It was an advantage for DeLaRue, as well as for Inter innovation, to be an OEM supplier when penetrating the end-user market. It proved the quality of the products and guaranteed 100% compatibility. Furthermore, many banks were afraid of being completely in the hands of the systems suppliers and often wanted a second supplier to improve their bargaining power. It was no secret in the industry that OEM suppliers of dispensing products more or less saw the system suppliers as creating their market.

By 1987, Inter Innovation's modularized technology was still unique and able to handle bank notes of low quality more safely and efficiently than that of their competitors, including in-house producers Nixdorf, Diebold and NCR.

The Internationalization Process at Inter Innovation

1980

- The first foreign country in which Inter Innovation established a sales subsidiary was the *United Kingdom*. The market was entered

through a "greenfield" operation. Orders from two British banks, National Westminster and Barclays Bank, had been received, and Inter Innovation wanted to establish close customer contacts and provide rapid customer service in order to win the confidence of other potential customers. Furthermore, Britain was a market familiar with the concept of teller operated cash dispensing machines and was therefore relatively well prepared for the products of Inter Innovation. A few years earlier De La Rue Systems had developed a similar product and begun marketing it on the British home market. However, its functioning and quality were not satisfactory. These circumstances created an entry opportunity for Inter Innovation. Finally, an important factor was that the OEM customers of Inter Innovation at that time, Olivetti and Data-Saab, were not interested in the British market.

1981

- The *United States* was the next foreign market in which Inter Innovation established a subsidiary. The large Citibank order, received in cooperation with Data-Saab, made it necessary to have a local service organization providing. Furthermore, it was thought that a subsidiary would create confidence in the company both with Citibank and other potential customers. OEM-customers were not disturbed by this entry into the U.S. market, which was made through a greenfield operation.
- A representative was sent to the *Federal Republic of Germany* with the mission of scanning the market for opportunities and service as a link between Inter Innovation and the OEM-customer Nixdorf.
- Independent distributors in South Africa and the Middle East were engaged after requests from the would-be distributors themselves. However, these relationships proved unprofitable and were terminated in 1983. This experience convinced Inter Innovation that the best policy was to establish distributor relationships only in markets where reference objects had been installed. Distributors did not seem to be helpful in opening new markets.

1982

- The company acquired a Spanish distributor of banking automation equipment. As large orders had been received from Spanish banks, after-sales service had to be provided.

The main reason for entering the market was the remarkably good market potential. *Spain* had a comparatively large number of retail bank offices and a tradition of banking automation. Banks were still labour intensive and offered considerable potential for improving efficiency. Furthermore, the oligopolistic structure of the banking industry made banks prone to imitate each other. An order from one of the larger banks was often followed by orders from the main competitors.

Cash dispensing products had not been sold at all on the Spanish market before the entry of Inter Innovation.

- A *U.S.* distributor was acquired by the U.S. subsidiary.
- A relationship with a *French* distributor was established, and reference products were installed. The market potential was large enough to warrant establishing a local sales subsidiary, but local competition from the French company Bull-Transac and the buying behavior of French banks ("We only buy French products!") led to the decision to enter the market through a distributor.

1983

- Distributor relationships were established in *the Netherlands, Turkey* and *Belgium*. However, the Turkish distributor relationship was terminated in early 1984; it had again proven unprofitable to use a distributor for opening a new market.

1985

- A *German* distributor of banking automation products was acquired and transformed into a sales subsidiary. Inter Innovation's OEM-customers, Olivetti and IBM, had recently entered the market with their banking automation systems, thus creating a market for compatible equipment.
- Distributor relationships were established in *Norway, Portugal* and *Austria*.

1986

- The *French* distributor was acquired. An opening in this attractive market arose when Inter Innovation's OEM-customer Olivetti merged with the French system supplier Bull-Transac. Direct sales

to end-users were now possible; the argument "on n'achète que français!" was no longer applicable.

As IBM had managed to gain a foothold on the French market at about the same time, prospects improved even further.

1987

- Negotiations were initiated for the purpose of acquiring the U.S. system supplier Le Febure¹. Three times as large as Inter Innovation in terms of sales, Le Febure was a distributor as well as an OEM-customer of Inter Innovation. An acquisition of Le Febure would provide access to an efficient and established marketing and service apparatus in the U.S.

Comments on Inter Innovation's Internationalization process.

- Germany was a market of interest to Inter Innovation at an early stage and its products were first sold there on license to Nixdorf. The company had decided not to enter the market with its own distribution until the license agreement was terminated, and this occurred in 1985. That same year, Olivetti and IBM entered the market, and Inter Innovation immediately entered the market with its own operation.
- Despite a large end-user market potential, the *Italian* market had not been penetrated by 1987. Inter Innovation did not want to risk offending one of its important OEM-customers: Olivetti.
- By 1987, *further extension* of international operations had been planned, mainly by *acquiring local distributors* in markets acquainted with the products through system suppliers that were OEM-customers of Inter Innovation.

3:4 Characteristics of Inter Innovation's Internationalization Process

The first major export order was received only six years after the foundation of the company. Through domestic cooperation with

¹The negotiations were not completed as of March 30, 1987.

Data-SAAB, Inter-Innovation's unique cash adapters became a part of the banking automation system supplied to Citibank by Data-SAAB in 1979. The order was substantial both in terms of size and value and as a reference object. The main reason for establishing a subsidiary in the U.S. as early as 1981 was to provide necessary service for installed equipment. In effect the U.S. subsidiary was at least initially a service subsidiary rather than a sales subsidiary.

There were similar reasons for the establishment in the United Kingdom in 1980. The large order from Citibank, and the cooperation with the system supplier Data-SAAB, made Inter Innovation's unique technology known within the banking community. Within less than a year after the first order, two British banks placed major orders with Inter Innovation. The subsidiary in United Kingdom also had basically a service function at the start.

Obviously, the service aspect was very important in Inter Innovation's industry. The customers bought continuous functioning rather than a cash adapter per se. Given this factor, the necessity of 100% compatibility with other installed automation equipment, and a need to refine the function and technology of a young firm's products, the establishment of the company's own representation seems logical. By the very nature of the product, it was necessary to firmly control distribution and service in order to reinforce and ensure competitive advantages. This is also reflected in the establishment of subsidiaries in Spain (1982), Germany (1985) and to some extent in France (1986) as well.

Inter Innovation's process of establishment on foreign markets (see fig 3:3) is more direct than traditional models would predict. In four cases out of five, the firm started subsidiaries without any previous relationship with agents or importers. The decision to enter France via a local representative rather than establish a wholly owned subsidiary reflected some circumstances particular to that markets local competition and a strong buyer preference for indigenous firms.

Inter Innovation's establishment process reveals an interesting pattern. Relations are initially established with end-users on a worldwide basis. Through the company's cooperation with system suppliers, and through reference installations, Inter Innovations products became known throughout the international banking community. As soon as the installed volume reaches a certain level, a subsidiary is established to provide service, and also to facilitate

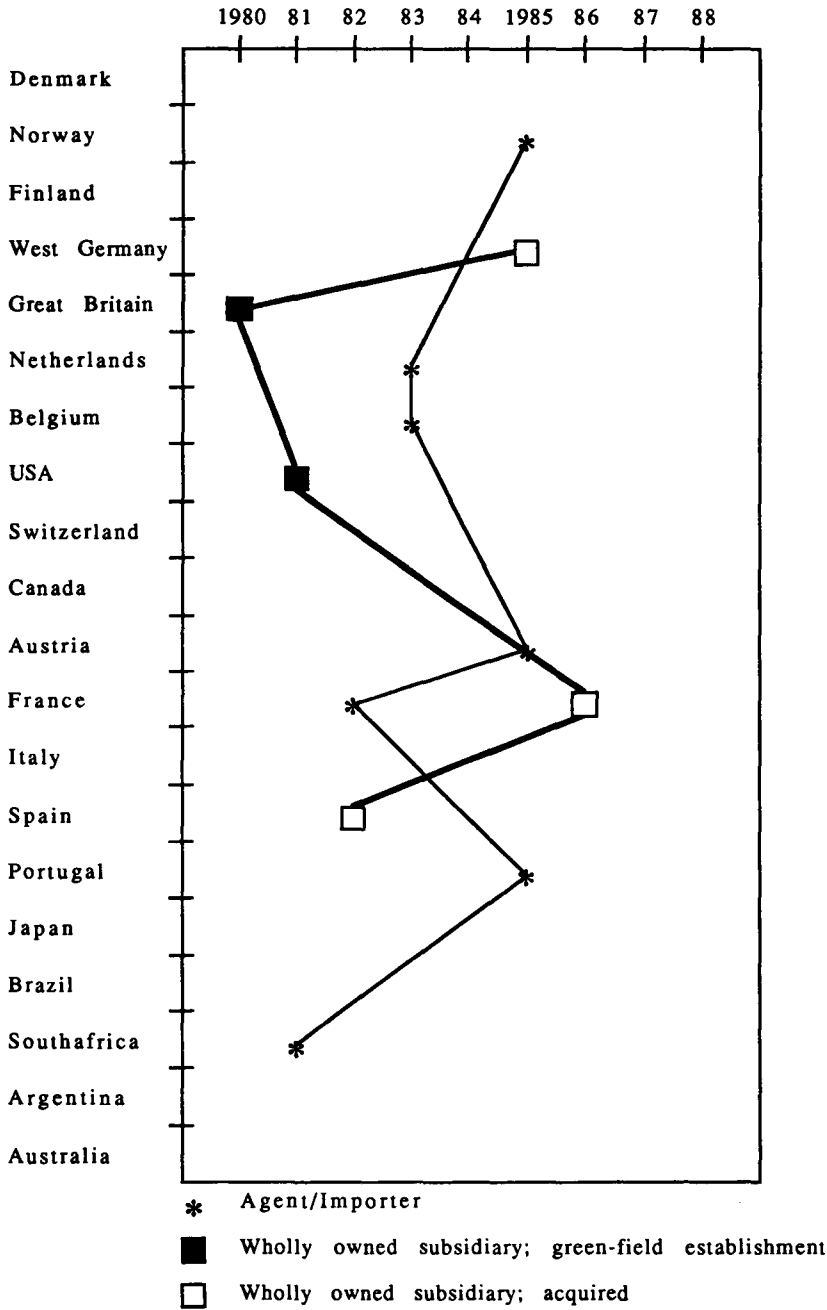
further penetration of the market. Agents or importers are only used on smaller markets where the installed volume and/or the potential volume are too small for the company to be present itself. However, agents after the negative experience in South Africa and the Middle East in the early 80's, or importers are not used for opening new markets.

The sequence of markets entered is of course interrelated with the establishment process on these markets. As shown above in the case of France, local characteristics could affect both the initial entry form and the development over time of the establishment process on a particular market. Inter Innovation's establishment sequence (including both subsidiaries and agents/importers) seems to reflect the growing awareness and acceptance of the company's products in the international banking community, together with the location of competitors and OEM-buyers. Installed volume and market potential, local direct competition from other dispensing equipment manufacturers and the presence or non-presence of OEM-buyers appears to have been the key determinants of which markets to enter with a wholly owned subsidiary and when. For example, the establishment of a wholly owned subsidiary in France was postponed in the face of strong local competition, despite installed reference products and a promising market. Similarly, the establishment of a subsidiary in West-Germany was delayed until 1985 because of the presence of an important OEM-buyer. For the same reason, Italy had not been entered at all by 1986.

In essence it would appear that except where altered because of local competition and the presence of OEM-buyers, the establishment sequence largely followed the pattern by which knowledge and acceptance of the company's products were disseminated throughout the community of buyers. Slower dissemination would most probably have been reflected in fewer establishments per unit of time. Similarly, a more regionalized or local dissemination would have been reflected in a somewhat more regionalized establishment sequence. Obviously, the high degree of internationalization among the OEM-buyers and in the banking community contributed to the rapid spread of Inter Innovation's concept.

The frequent use of acquisitions as mode of establishing wholly owned operations can also be understood in light of these circumstances. Acquiring local distributors of banking automation equipment, rather

Figure 3.3 The Establishment Profile of Inter Innovation Using the Physic Distance Ranking of Hörnell, Vahlne and Wiedersheim-Paul (1973).



than establishing subsidiaries on a greenfield basis, is a way to speed up the establishment process. Apart from the physical facilities, access to an established distribution and service network save valuable time and management resources when the growth and growth potential are substantial on several markets. This argument is particularly valid when acquiring a former agent as in France in 1986.

It is interesting to note that the first two foreign subsidiaries established were greenfield operations, whereas subsequent ones were acquisitions. By the end of 1984, it was the opinion of management that further international expansion would generally follow the latter route.

Neither in terms of the establishment sequence, nor in terms of the establishment process on foreign markets, does Inter Innovation's internationalization fit the traditional models. A rapid penetration of foreign markets is reflected in every dimension of the process. It has been pushed by a powerful and unique product concept, and pulled by a highly internationalized customer community with homogenous needs in both in the OEM and end-user segments. Within the limits set by Inter Innovation's resource base, competitors' establishments and OEM-customers' home markets, foreign operations have expanded to cover a substantial area (see fig 3:3) in only six years. To some extent, the internationalization process of Inter Innovation both reflects and supports the view that psychic distance is rapidly diminishing in the international business community.

3:5 Datatronic AB

Development and History

Datatronic was a Swedish company in the electronics industry. By 1987 the firm was active in several areas: personal computers¹, consumer electronics, parabolic antennas, industrial electronics and hand-held computers.

¹Sometimes called microcomputers.

The largest single business area by far, and the one we will concentrate on in this study was personal computers. Personal computers, related software and computer peripherals accounted for approximately 75 per cent of total sales and almost 100 per cent of international activities. The business concept was to *supply high quality products under a well known brand name at market-leading prices.*

Datatronic started out as a producer of microcomputers in 1968, when it was founded by Torsten Frey and Hans Sundén. In 1975, the company received the agency for the German Diehl computer and was later purchased by Diehl Svenska AB. However, the business was not very successful, and in 1977 Diehl wanted to leave the Swedish market. In this situation, a consultant named Mats Gabrielsson was hired.

In 1978, Mats Gabrielsson and two of the employees bought the company for one Swedish krona, and Diehl now became Datatronic again. Six months after the takeover, and with only seven employees, Datatronic managed to obtain the exclusive rights for Commodore Computers on the Swedish market. The Commodore hardware was supplemented with software developed by Datatronic, and sales increased substantially.

In 1981, Datatronic acquired Handic AB, a company over three times larger in terms of sales. Handic consisted of three divisions: sports, consumer electronics, and sound equipment, and had its own sales subsidiaries in Denmark, Germany, Holland and U.S.A. Since the main reason for the acquisition was to gain access to Handic's well-developed Swedish distribution net, all of the foreign subsidiaries except the Dutch one were sold. A divestment of the Dutch operation was considered too expensive, and a joint venture (50/50) with Commodore was formed instead. This was Datatronic's second foreign operation. The first was in 1980, when a joint venture (50/50) between Datatronic and Commodore was establishment in Norway. Like the Swedish operation the joint ventures distributed the Commodore hardware and the Datatronic software.

Up ... and down for the Software

Growth continued. In 1982, Datatronic acquired Ekman Import, a Swedish distributor of electronic equipment. Again, the reason was to

gain access to a well developed distributor network. That same year, an OEM-agreement was made with Commodore. Under Commodore's name, the Datatronic software was to be distributed worldwide. The OEM-agreement with Commodore was a confirmation of Datatronic's software capabilities.

By 1983, Datatronic's sales had reached SEK 230 million and the number of employees was 145.

The success of the first generations of software led to further development of the software product line. During 1983, software compatible with IBM's operative system MS-DOS was developed. This was a major breakthrough, for the Datatronic software was no longer inextricably tied to the Commodore hardware. It was decided to launch the new software products internationally. To support this venture, sales subsidiaries were established in West Germany, the United Kingdom and the U.S. in 1983.

However, the attempt to launch the IBM Compatible software failed. In 1984, Datatronic lost SEK 25 million; about half of the loss was on the U.S. market. This outcome was attributed to a six-month delay in the market introduction, combined with the lack of an established brand name. Buyers in the computer industry were unwilling to turn to a new and unfamiliar supplier, and Datatronic was almost unknown outside Sweden. Particularly the larger and most interesting buyers, preferred solid and well known suppliers who could be expected to remain in the industry over the long term.

The losses forced Datatronic to dismiss employees in Sweden, as well as abroad and to make their operations less capital intensive.

The Come-back

In April 1984, Mats Gabrielsson of Datatronic by coincidence met Mr. Chuck Peddle, the founder of the U.S. microcomputer company Victor Technologies. Victor, which at that time had sales 10 times Datatronic's, was having severe financial problems and was on the edge of bankruptcy. When Mr. Peddle suggested that Datatronic acquire Victor, Gabrielsson agreed.

The transaction took place in February, 1985, when Datatronic acquired 90% of the shares of Victor Technologies for US \$ 25 million. The price paid by Datatronic was less than the value of Victor Technologies' assets.

To finance the acquisition, Datatronic went public with a share issue of SEK 258 million. For the first time since its foundation, Datatronic now had external shareholders. However, the company was still controlled by Mats Gabrielsson with 61% of the voting rights.

The arrangement with Commodore was terminated in April, 1985, and Datatronic concentrated on the reconstruction of Victor Technologies.

Through the acquisition of Victor, Datatronic gained access to an established and well known brand name. Victor had also built up an international distribution network and had been especially successful in Europe. By the time of the acquisition, Victor had distributors in most Western European markets and its own sales subsidiaries in Germany and France. The French operation had been especially successful, and Victor was ranked as one of the top four suppliers of personal computers in France.

In addition to Victor's market-related assets Datatronic gained access to its product range of hardware. Datatronic foresaw that its own software knowledge and the Victor hardware experience could be a powerful combination on the market.

At a cost of SEK 70 million, Victor was reconstructed during 1985. Fixed costs were drastically reduced by closing down Victor's U.S. production facilities. Production of hardware was entrusted to suppliers in Japan, Singapore and Taiwan. Since hardware technology was becoming increasingly standardized, there were no competitive advantages to in-house production.

At the same time, major investments were made in Victor's marketing organization. The subsidiaries in Germany and France, which had been technologically and product-oriented, were reorganized and given more of a market orientation. During 1985, five new sales subsidiaries were started in the U.K., Holland, Belgium, Austria and Switzerland under the name of Victor Technologies.

By 1986, Datatronic – through Victor Technologies – was established as one of Europe's top four suppliers of personal computers. Corporate sales had doubled compared to 1985, reaching an all time high of SEK 823 million. Victor's distribution in Europe was further strengthened. The responsibility for the European subsidiaries was transferred from Victor U.S. to Datatronic AB in Sweden, and the customer base was broadened by gaining a foothold in the public sector. Sales trends pointed upwards on all European markets except the U.K. The company's best performances were in France and Sweden.

However, the U.S. market presented problems. A slump in personal computers of course hurt a company like Victor, which specialized in that particular product. It was decided to penetrate the U.S. market passively, i.e. not to invest further in strengthening the marketing organization, and to focus on building a stronghold in Europe.

Further acquisitions

In 1986, Datatronic made yet another major acquisition. Micronic, one of the world's three largest manufacturers of hand-held computers was acquired. Micronic had subsidiaries in Belgium, Denmark, France, Spain, the U.K., the U.S. and Germany. Like Victor, Micronic had financial problems but also a strong well established marketing organization, especially in Europe. The acquisition was considered to be of great strategic importance. Apart from entering another product area, Datatronic foresaw a major synergy effect with Victor's international distribution network. Furthermore, Micronic's large corporate customers were also considered of importance for Victor Technologies.

Products and Product Development

The Datatronic products in the business area of microcomputers were personal computers compatible with the industry standard, i.e. the MS-DOS operative systems. It was a "no-frills" type of product range that included personal computers and software for technical and administrative applications.

Datatronic only used approved technology² in their computers. Hence, product development was very much a process of closely watching the technological development of the industry leader, IBM, and gradually adjusting and upgrading the product range accordingly. By 1987, the *technology* for personal computer hardware was standardized and offered little scope for product-differentiation.

Product development was centralized in Stockholm and led by Mr. Gabrielsson. Every other month, subsidiary managers met in Stockholm to discuss the latest ideas and necessary adjustments to the product range.

On the average, Datatronic spent 4% of annual sales on product development, a comparatively low figure. The average for the industry was estimated at 8%.

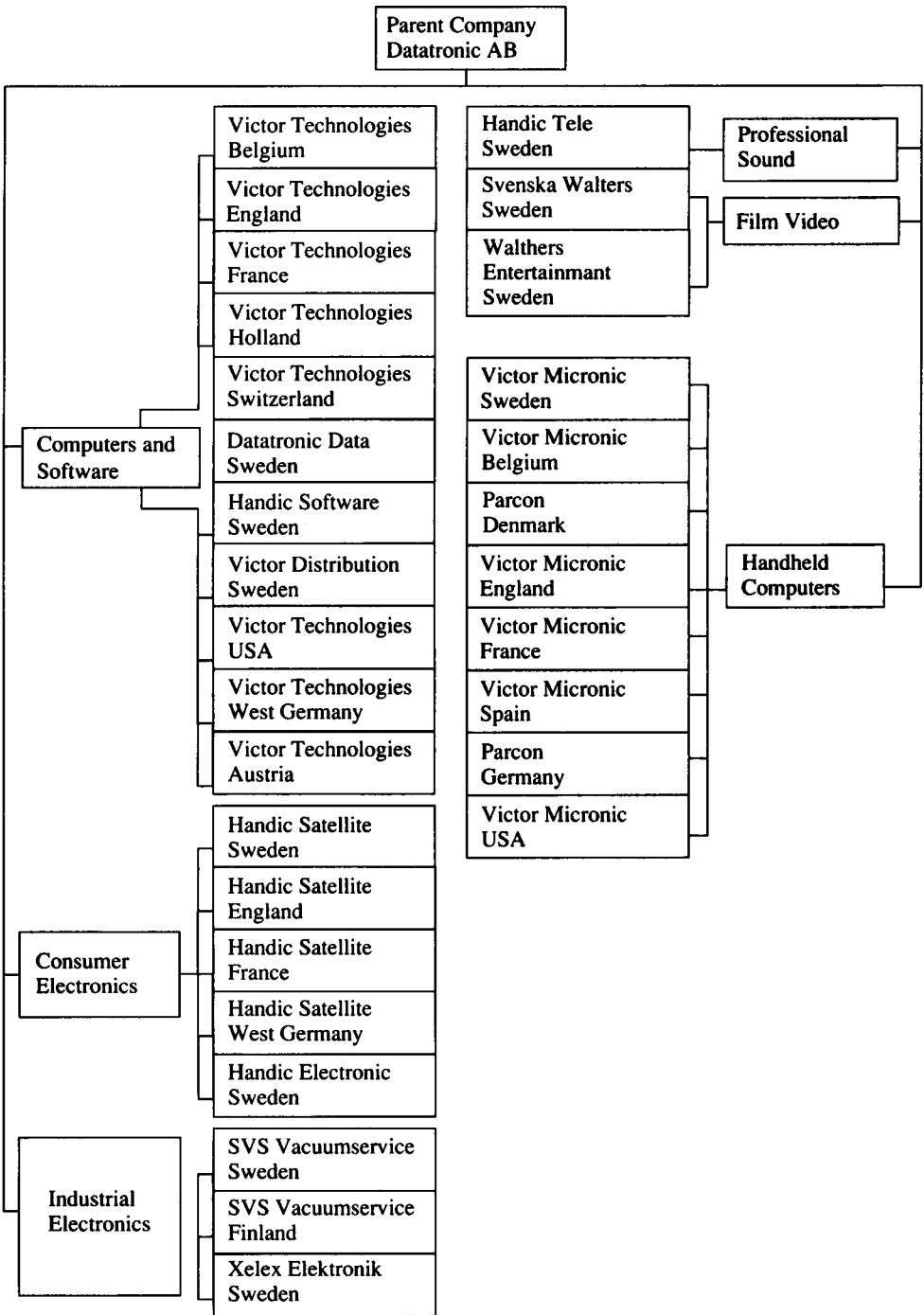
The acquisition of Micronic added a new product family to the Datatronics product range: hand-held computers. Hand-held computers made it possible to collect, process and distribute data practically anywhere. Inventory and goods handling were the largest areas of application. It was the ambition of the Datatronic management to supply computer system solutions involving hand-held computers and personal computers to certain customer groups. However, by 1987, Micronic had still not been completely fitted into the Datatronic organization.

Production

Production was allocated to subcontractors in Japan, Singapore, Taiwan and the U.S., since a part of Datatronic's strategy was to minimize fixed costs. The use of approved technology made it possible to choose the lowest-cost location for a certain series of hardware. Apart from the advantages of low costs, it was argued that these countries also had the traditions and know-how for supplying computer hardware.

²Industry terminology for standard technology and solutions of proven quality that had been in use for some years and were available on the market, often at comparatively low prices.

Figure 3:4 The Organization of Datatronic AB



Organization

By 1986, Datatronic employed an annual average of 496 persons. Its organization (see Fig 3:4) consisted of six different business areas and, after the acquisition of Micronic, of twenty foreign subsidiaries. Eight of the subsidiaries belonged to the business area of computers and software and seven to that of hand-held computers, i.e. Micronic.

Sales and Marketing

The end-user market for personal computers was very heterogeneous. Personal computers were used in every conceivable type of group in society. Datatronic had historically focused on smaller customers, i.e. the consumer market and small and medium sized firms. However, by 1987 Datatronic had managed to gain a foothold in the public sector as well as with some large corporations in its two most important markets, France and Sweden.

Since Datatronic's products used approved technology, they were less expensive than those of its archrivals IBM, Olivetti and Apple. However, according to Datatronic management price was not the most important competitive variable. The key competitive variables were considered to be a well-known brand name, which served to guarantee the company as a serious and long-term supplier, and a well-established service and distribution network.

By 1987, Datatronic was represented by wholly owned sales subsidiaries on eleven national markets and distributed its products through local representatives on a long- or short-term basis in another 15–20 countries. Subsidiaries, including the Swedish operation, accounted for 80–90% of total sales.

Wholly owned sales subsidiaries were preferred to local representatives. If the market potential was large enough, differences in language and mentality were not too great and if there were no legal obstacles, Datatronic preferred to enter a market with its own sales subsidiaries. Wholly owned representation enabled the company to pick the right retailers and support them with service, products and marketing support much more efficiently and quickly than by using a local representative. Adaptability to changes in the industry was considered a major competitive advantage. Furthermore, a company

with its own representation enjoyed greater credibility among the buyers; it was a sign of commitment to a market to have a subsidiary there. On almost all markets, a host of smaller suppliers without long-term ambitions entered and left the industry every month.

In countries where the company was represented by its own sales subsidiaries, products were distributed through authorized retailers, though larger customers were handled directly by the subsidiaries.

Marketing plans were developed centrally in Stockholm because of economies of scale and a desire to coordinate marketing activities. Since the products were almost homogeneous, apart from software, a worldwide marketing approach could easily be adapted to local market characteristics.

According to Mats Gabrielsson, marketing and distribution capabilities were the critical factor for success in the microcomputer industry:

"Well, all firms within the industry sell similar products. It is all a matter of brand-name and marketing."

The Micro-Computer Industry – a Brief Overview

Microcomputers, or personal computers, were the smallest and least expensive computers. The price and size of microcomputers had made computing power available to a larger group of people than had previously been possible.

Although the microprocessor was developed as early as in 1969, it was not until 1981, when IBM introduced their first generation of personal computers, that microcomputers became a serious alternative to other computer solutions.

The industry had experienced tremendous growth, with growth rates of 25 to 40 per cent a year for almost ten years. In 1986, close to 1,500,000 computers were sold worldwide, and the forecasts for 1987 indicated that more than 2,000,000 machines would be sold. However, by 1987, several analysts were claiming that growth rates had to come down during the next five years. The industry showed signs of entering a mature stage with heavy price competition, standardized products and reductions in buying rates. The major actors in the microcomputer industry were large multinational corporations,

but several smaller suppliers operated on a regional or national basis. By 1987, it was estimated that 40 producers together held 90% of the worldwide market, and less than 10 producers held worldwide market shares of over 2%. Three giants – IBM, Olivetti and Apple (with IBM, the indisputable industry leader, having a world market share of 30%) – accounted 50–55% of the world market for micro computers, with some regional differences. In Europe, IBM, Olivetti and Datatronic were the three largest suppliers, while Apple was ranked fourth. NEC and Toshiba were severely challenging the "Big Three" in Southeast Asia.

Increasing standardization of hardware and software had led to fierce price competition and margins were continually decreasing. Despite 35% growth in sales volume in 1986, the income from microcomputer sales by the major suppliers on the European market had increased by only 10–15%. Price competition was further accentuated by about 200 "Clone-producers", i.e. producers of IBM-compatible equipment. These were usually bases in Southeast Asia, used approved technology, offered no or only limited after-sales service, distributed their products at considerably lower prices (for example by mail-order), and were flooding Western markets.

Of the three major PC-suppliers on the world market only one – Apple Computers – specialized in microcomputers. IBM, with a sales of US \$ 51 billion, had a product line that spanned the whole spectrum of information-processing equipment and services. Microcomputer and related equipment was estimated to provide only 3–5% of total IBM sales.

By 1986, IBM accounted for 70 % of the computer industry profit and had established its own sales subsidiaries in 135 countries. It was an explicit strategy of the company to be present with wholly owned representation rather than collaborating with local representatives or even acquiring local firms.

Like IBM, the second largest microcomputer supplier, Olivetti, had a broad product line from typewriters and office automation equipment to banking automation equipment. In 1986 Microcomputers accounted for about 30% of total sales of \$ 3,8 billion.

Olivetti entered the microcomputer industry in 1983 with the goal of covering the European market. However, in 1984, through an alliance

with AT&T, Olivetti at one stroke gained access to the entire U.S. market. By 1986, the U.S. accounted for 50% of Olivetti's total micro-computer sales. A similar alliance that would enable Olivetti to gain access to a strong distribution system in South East Asia and Japan was negotiated with Toshiba in 1986.

By 1986, Olivetti had established its own sales subsidiaries in more than 30 countries. The most important markets in terms of sales were the U.S., Italy, Great Britain, Germany, France and Spain. Contrary to IBM, Olivetti had chosen to acquire firms and integrate them with the group. Quick access to markets and avoidance of time-consuming establishment processes were the reasons for this strategy. Like IBM, Olivetti was reluctant to use independent local representatives. However, Olivetti was represented through other firms, (AT&T in the U.S. and Toshiba in the Far East), these firms were also owners (30% and 20%, respectively) of shares in the Olivetti Group.

The only purely microcomputer firm of the Big Three was Apple. Founded in 1977, with sales, of \$ 1.9 billion by 1985, the company had managed to build a position with its user-oriented hard- and software as the third largest supplier of microcomputers in the world.

Apple's products were not compatible with the industry standard, i.e. IBM's MS-DOS. Still, the company had experienced tremendous growth, and 1986 net earnings before tax reached US \$ 310 million. By 1986, Apple was represented in 85 countries. In 25 of these, the company operated its own sales subsidiaries. The largest markets outside the U.S. were Canada, Australia, France, Great Britain and Sweden. Like IBM, Apple had a strong preference for wholly owned subsidiaries, established greenfield. Still, local representatives of different kinds were used in markets with limited potential. However, this was looked upon as a second-best solution. The management saw difficulties in infusing the "Apple-philosophy" into already established firms.

The Internationalization Process at Datatronic

1980

- Datatronic went into a joint venture 50/50 with Commodore in Norway. The purpose was to distribute Commodore hardware and

Datatronic software on the Norwegian market. The reason for going international was that the Swedish market was too small. The only market on which Commodore would allow Datatronic to distribute was Norway. Commodore claimed that other potential markets were either already covered or too different from the Swedish market to be handled by Datatronic.

1981

- Datatronic entered another joint venture 50/50 with Commodore, this time to distribute Commodore hardware and Datatronic software on the *Dutch* market.

Establishment on the Dutch market followed Datatronic's acquisition of Handic AB, a Swedish distributor of consumer electronics. Handic's well developed distribution network in Sweden was the main reason for acquiring this three times larger, but financially shaky firm. Handic also had wholly owned sales subsidiaries in the U.S., Denmark, Germany and Holland, but these operations except for the Dutch one were divested immediately after the acquisition. Since contractual arrangements would have made closure or divestiture of Handic's Dutch operation too costly, it was decided to retain it. By an agreement with Commodore, Handic's former sales subsidiary became a joint venture between Commodore and Datatronic similar to the one established on the Norwegian market in 1980.

1982

- By acquiring Handic AB, Datatronic also gained access to knowledge in software development. By 1982, Datatronic's software capability was so impressive that the company managed to obtain an OEM agreement with Commodore. Through this agreement, the Datatronic software reached 27 distributors worldwide under the Commodore name.

However, Mr Gabrielsson saw further possibilities for software, especially in the U.S., where Commodore's hardware was well known. A search for an agent for the U.S. market was initiated. Three interesting propositions were received: one from Canada, one from Boston and one from Philadelphia. An agreement had almost been settled with one of the first two proponents when Mr Gabrielsson caught pneumonia in Philadelphia. The Philadelphia

proponent was so nice to him during his stay in the hospital that he decided to give them the rights to distribute Datatronic's software in the U.S.

1983

- At the beginning of the year, the agent in Philadelphia owed Datatronic US\$ 900,000. The distribution in the U.S. had been mismanaged.
- Datatronic launched the IBM MS-DOS compatible software which it had developed during 1982-83. Since the Datatronic software was now compatible with the industry standard, the company saw a sizeable market potential abroad. In early 1983, Datatronic entered the U.S. market with a wholly owned subsidiary. The decision was taken in view of the failure with the Philadelphia agent and a market potential that was considered promising.
- To further support the introduction of the MS-DOS compatible software, wholly owned sales subsidiaries were established on two large markets: the U.K. and Germany, where the market potential was considered to be very good. Here, too wholly owned representation was chosen after bad experience with a local representative.

1984

- The launching of the MS-DOS compatible software proved unsuccessful. A six-month delay in introduction and the lack of an established brand name on the foreign markets led to losses of SEK 25 million. Employees were dismissed at the subsidiaries as well as in Sweden. A program was initiated to make the company less capital-intensive.
- In April, Mr. Gabrielsson of Datatronic met Mr. Chuck Peddle of Victor Technologies at a Hannover fair. They knew each other from before. Mr Peddle's daughter had even worked at Datatronic. Victor was having severe financial problems. Mr Peddle proposed that Datatronic take over Victor, Mr. Gabrielsson agreed and, during the year the necessary managerial, financial and legal preparations were made.

- By February, the acquisition of Victor was a fact; Datatronic had bought 90% of the shares of Victor Technologies. According to Mr. Gabrielsson, the acquisition resulted from meeting Mr. Peddle. But there were several substantial reasons for acquiring Victor Technologies. Datatronic gained access to the brand name of one of the pioneers within the micro-computer industry; Victor also had a complete range of microcomputer hardware; Datatronic was no longer dependent on Commodore. Mr. Gabrielsson was convinced that micro-computers would develop and become a mass-market item. However he did not see any possibilities of expanding in this market with Commodore's hardware, which consisted of home-computers with a simple technology, not suitable for administrative or technical use. Datatronic's growth potential as a local representative for Commodore was thus severely limited, and the cooperation with Commodore was terminated during the year. Victor Technologies could provide an established distribution network in the U.S. and Europe. Victor was especially strong in Europe where it had established market positions with wholly owned sales subsidiaries in France and Germany and local representatives in the U.K., Austria, Switzerland, Belgium and Holland.
- In early 1985, a wholly owned sales subsidiary of Victor Technologies was established in *Austria*, where Datatronic saw a market potential for its hard- and software products and Victor was an established brand. Cultural and physical distance to Germany was short, and the infrastructure of the German subsidiary in Frankfurt in terms of warehousing, service and human resources could be used.
- In July, 1985, a wholly owned sales subsidiary of Victor Technologies was established in *Zurich, Switzerland*, where Victor was an established brand. The market had grown rapidly, and as in Austria, the resources of the German subsidiary could support the Swiss operation.
- By mid-1985, a wholly owned sales subsidiary of Victor Technologies was established in *Belgium*, where Victor had been represented through an agent. Since one major language of Belgium was French, the operation was managed and supported by the French subsidiary.

- The *U.K.* market was a problem. The U.K. had been Victor's largest market in Europe and almost 40,000 PCs had been sold there. However, the computers had been distributed by an agent under the name of Sirius. Cooperation was terminated with this agent, which held the right to use the name Sirius. Afraid of losing an important market and unwilling to abandon old customers in need of service and peripherals, the firm established a wholly owned sales subsidiary by a greenfield investment that year.
- A *Dutch* subsidiary was established. The market was growing fast and Victor was a well known brand because of a long-standing relationship with a local importer. Since English keyboards were used and the physical and cultural distance to the U.K. was short, the subsidiary was supported and administered the U.K. operation.

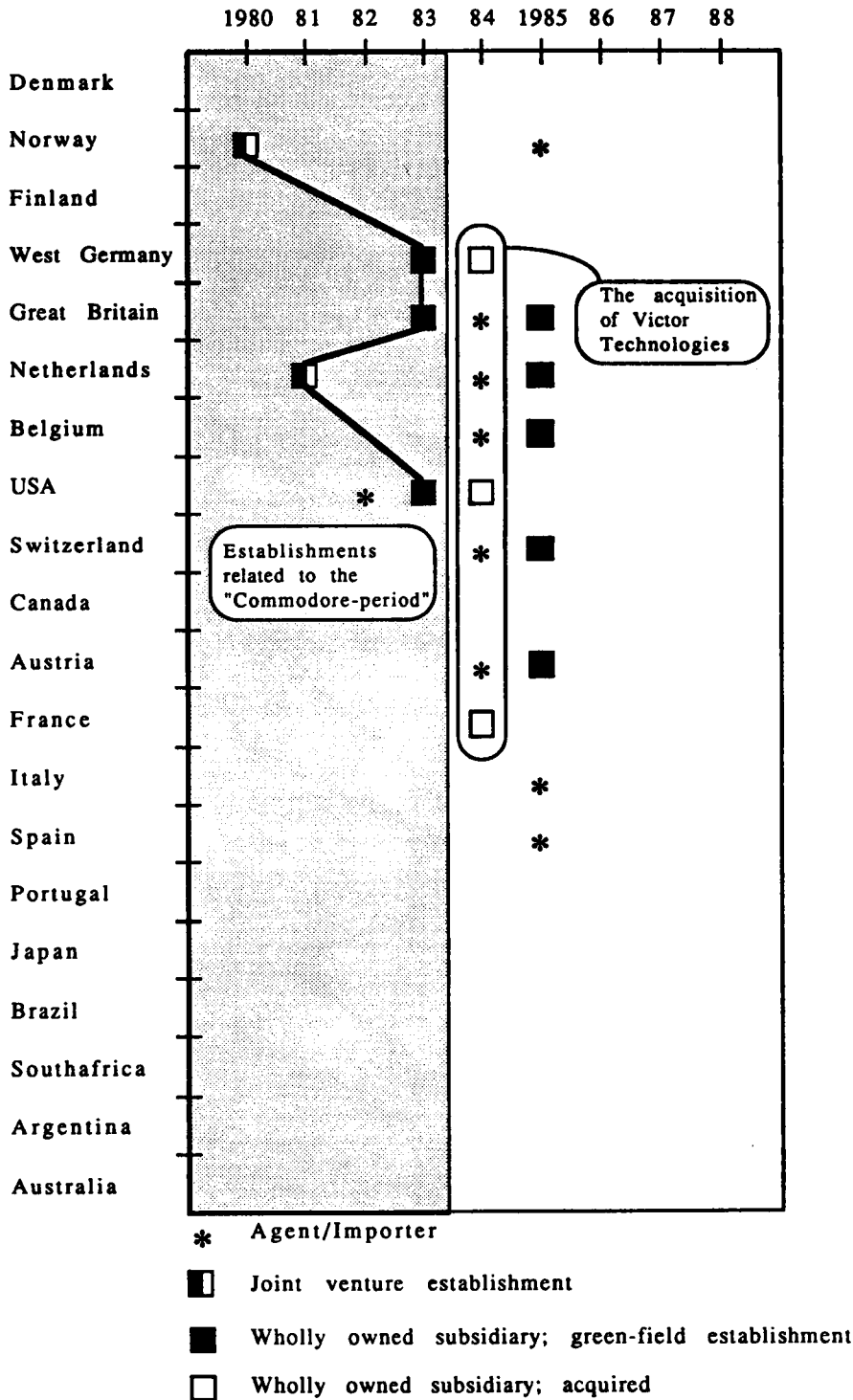
Comments on Datatronic's internationalization process.

- In spite of the size of the markets *in Spain and Italy*, Datatronic had not yet established sales subsidiaries there by 1987. These markets were the European strongholds of Olivetti. However, Datatronic had established relations with local representatives in both countries in 1985.
- In *Norway*, the market potential would not support the establishment of an independent sales subsidiary after the cooperation with Commodore had been terminated. By 1987 Datatronic was represented there through an agent.

3:6 Characteristics of Datatronic's Internationalization Process

The history and development of Datatronic consists of several periods of dramatic change and development. The development during the cooperation with Commodore could be viewed as one such distinct period, with a business mission different from what later developed. These shifts are also reflected in the internationalization process. The first foreign establishments, which were made between 1980 and 1984, were aimed at exploiting Datatronic's skills in distributing

Figure 3.5 The Establishment Profile of Datatronic Using the Physic Distance Ranking of Hörnell, Vahlne and Wiedersheim-Paul (1973).



Commodore's hardware, on the one hand, and Datatronic's software capabilities, on the other, the international establishments made after the acquisition of Victor technologies reflect a somewhat altered business mission, and an ambition to build and exploit a new set of firm-specific advantages.

The first two foreign establishments made by Datatronic (see figure 3:5) were joint-ventures with Commodore.

Datatronic's role as importer and software developer for Commodore hardware severely limited the choice of market as well as the form of establishment. Every step taken outside the Swedish market, required the permission of Commodore. Although the initiative to expand abroad was taken by Datatronic, the markets actually entered, and the entry form chosen in the respective markets, were basically a reflection of Commodore's overall view of distribution in Europe.

The establishment of three wholly owned subsidiaries in 1983 was made independently of Commodore. Datatronic had by that time developed software compatible with the industry standard. Datatronic was thus no longer inextricably tied to Commodore hardware, nor was it any longer dependent on permission from Commodore to enter new markets.

Datatronic obviously believed firmly in their new generation of software. The three largest markets for personal computers and related software – Great Britain, Germany and the U.S. – were immediately entered with wholly owned subsidiaries. The choice of wholly owned representation was made after a bad experience with an agent in the U.S. the previous year.

The simultaneous entry on three markets should be viewed in light of the tremendous growth and fast development of the micro-computer industry, the emerging industry standard and Datatronic's firm belief in its own software capabilities. Datatronic would become one of the major players in the emerging software industry. Furthermore international expansion on a broad front would enable the company to exploit the new software rapidly before any other actor had launched yet a newer generation.

To understand the acquisition of Victor Technologies in 1984, one should recall that the major effort to introduce Datatronic's software

in 1983 had failed. The turbulence in the micro-computer industry had made the buyers uncertain, and an unknown supplier like Datatronic was obviously at a great disadvantage, particularly when competitors were able to take advantage of a six-month delay in Datatronic's software launching. After the time when the founder of one of the oldest micro-computer firms in the industry, happened to meet Mr. Gabrielsson of Datatronic and propose that he take over the firm, the lack of an established international distribution net and brand name was being acutely felt at Datatronic. In addition, the competence of Victor Technologies in hardware, and that of Datatronic in software neatly complemented each other. Last but not least, Datatronic would become completely independent of Commodore.

The decision to acquire Victor Technologies seems plausible when one considers Datatronic's development and the state of art in the industry. In retrospect it seems to have been crucial quickly to build up customer confidence and a well established distribution and service network in this international industry of highly standardized products. The high degree of standardization and the rapid growth of the industry made in-house expansion a slow and risky strategy, particularly for smaller firms like Datatronic, without any really unique competitive advantages.

The decision to establish five new sales subsidiaries in Europe in 1985 should be seen as reflecting the importance of marketing, distribution and service in the micro-computer industry. Victor Technologies had been represented in these markets by importers or agents. Wholly owned subsidiaries, however, are easier to control and manage from a marketing and service point of view, than are agents or importers. The propensity to leap-frog the initial stages in the establishment chain is probably linked to this difference. Two out of three subsidiary establishments in 1983 were made in markets where Datatronic had no previous experience. Obviously the disastrous cooperation with the U.S. agent during 1982 was another reason for immediately establishing wholly owned subsidiaries. Most probably this experience also precipitated the decision to replace five of Victor's agents and importers in Europe by wholly owned subsidiaries immediately after the takeover in 1984-85, a step that was clearly facilitated by Victor's previous relationship with these markets.

The establishment process on foreign markets, as well as the establishment sequence of subsidiaries, i.e. the choice of markets, also seem

to have been affected by competitive considerations. Datatronic refrained from establishing wholly owned subsidiaries in Italy and Spain in 1985. These strongholds of Olivetti were penetrated instead through local representatives. Without any previous experience or links to these markets, at either Datatronic or Victor Technologies, it was probably considered too risky in relation to the profit potential to enter with wholly owned operations.

The pace of Datatronic's internationalization process is striking. It reflects a necessity and urge to become one of the major international actors in the micro-computer industry within a very limited time in order to survive. Both the necessity and the rapid rate of Datatronic's internationalization support the arguments that psychic distance is sharply diminishing in the business community.

The manifest pattern in the various dimensions of the process reveals several key determinants of the sequence of foreign markets entered, the establishment process within markets and the establishment mode of subsidiaries. Experience and knowledge of foreign markets still seem to have a certain effect on the development of the establishment process within a market. One reason for the acquisition of Victor Technologies was to gain access to such knowledge. But, market potential, competitive considerations and the characteristics of the products also seem to have been important factors. With the standardized nature of the products and the marketing intensity in the industry, wholly owned subsidiaries were preferred wherever the market potential were big enough and the key competitors not did dominate the market.

The establishment sequence, i.e. the order in which foreign markets were penetrated, has considerably less in common with the traditional pattern than does the establishment chain. Apart from the first two foreign subsidiary establishments during the Commodore period, the establishment sequence seems to have been determined mainly by market potential. Over and over again, Datatronic approached the world's largest markets. In 1982 Datatronic tried to establish itself in the U.S., the world's largest micro-computer market, through an agent. After this failure, it entered the world's three largest markets simultaneously with wholly owned operations the following year. After this effort had also failed the company entered a host of markets, including the three largest in the world, by way of acquisition. The necessity quickly to become one of the major actors in the

micro-computer industry is obviously reflected in the choice of markets entered and the order of entry. Although psychic distance seem to have played a certain role, such considerations have obviously in many cases been overruled by strategic considerations.

4 The Internationalization Process of the Firm in a New Perspective – a Model and 14 Hypotheses

It is of course a truism that knowledge never has been the *only* factor affecting the pattern of firms' growth abroad. Other groups of variables have always been at work, although the knowledge component historically has been one of the most powerful explanatory variables.

The case studies highlight to some degree the relative weight of these variables today, as well as some of the interplay between the variables. These studies indicate a need for a new and broader perspective to satisfactorily explain patterns in contemporary internationalization processes of Swedish manufacturing firms.

4:1 Towards a Model of the Firm's Internationalization Process

The "internationalization process of the firm" is a somewhat abstract and imprecise concept, encompassing all the various aspects of the firm's growth and development from being solely national to being truly international. A multitude of decisions, actions and events together make up the process of increasing foreign involvement. Some aspects of this process, such as the establishment sequence of foreign subsidiaries, are manifest in the sense that they can easily be studied and analyzed *ex post facto*. Other aspects of the process, such as the decisions preceding a subsidiary establishment, are considerably more subtle and difficult to measure and analyze *ex post*.

The manifest and measurable aspects of the firm's internationalization process can be viewed as the discrete indicators of the underlying continuous international growth process (Johanson and Vahlne, 1990). This process, like firms' growth in general, can of course be stopped or even reversed at any point in time; nevertheless it is a continuous rather than discrete activity.

The traditional model of the internationalization process (cf Vahlne and Wiedersheim-Paul; 1973, Johanson and Wiedersheim-Paul, 1975; Johanson and Vahlne, 1977) described and explained two patterns in the internationalization of the firm: the pattern in the firm's choice of markets, and the pattern in firm's involvement on a specific national market. In both these dimensions the patterns seem to have changed to some extent. The pattern in the establishment mode of subsidiaries, i.e. greenfield establishment v.s. acquisition, is not considered at all in these models. The case illustrations clearly indicate the importance of acquisitions for contemporary firms. Obviously, greenfield establishments are no longer the rule and acquisitions the exception (cf Swedenborg et al, 1988).

Three different patterns in the firm's internationalization process constitute the dependent variables in this model (figure 4:1). Two of these patterns are interesting because traditional models obviously have failed to satisfactorily explain them. The third is interesting in its own right, because of the dramatic changes it has shown at this time when acquisitions year by year are becoming more and more important as a means of establishing wholly owned operations.

A host of different factors simultaneously affect the firm's internationalization process. However, it is possible to discern three broad groups of explanatory variables, when the industrial organization (IO) perspective, introduced in section 2:5:1, is applied.

One of the key notions of the IO-perspective is that a firm's conduct or strategy may be understood by relating it to the industry structure. Accordingly, the first group of variables is industry characteristics.

Strategy or conduct is of course not fully determined by the structure of the industry. This factor imposes certain limits on the strategic possibilities or conduct of firms within industries. The strategy actually followed by a single firm will be affected by firm-specific idiosyncrasies as well as entrepreneurial activities. Firm characteristics are therefore the second group of variables that can be identified.

Since the conduct focused on in this model is the firm's internationalization process, a third group of explanatory variables can be discerned. Although industry characteristics encompass or reflect conditions in many of the host countries, certain country-specific factors, such as psychic distance, are hardly reflected at all in industry-

structure variables. Host country characteristics typically include variables that are location-specific and not reflected in any of the other two groups of variables.

Within the framework of the simultaneous influence of these three broad groups of variables, (see figure 4:1) patterns in the firm's internationalization process can be explained and interpreted. Existing theory and the case illustrations confirm this framework and add valuable details on the actual mechanisms of the model.

The influence of various firm characteristics on patterns in the internationalization process is well documented. The learning-by-doing models (see section 2:3) focused on one firm characteristic. Although this factor seems to have lost most of its explanatory power, the pattern in Datatronic's as well as Inter Innovation's choice of markets reflects a tendency to consider markets first and foremost in Europe and North America. This pattern could of course be argued to reflect considerations of market potential, but the influence of a certain remaining psychic distance between countries cannot be completely ruled out. Similarly, in the pattern of involvement on specific markets, there were indications that the knowledge-based models still had some remnants of their explanatory power. Although Datatronic, as well as Inter Innovation, established several foreign subsidiaries without any previous long-term relationship with agents or importers, links of other kinds seem to have preceded most foreign subsidiary establishments.

However, several other factors linked to the firm and its characteristics are known to influence the internationalization process. Firm size, the type of firm-specific advantages and opportunistic behaviour are in various ways reflected in the internationalization of the firm. Everything else being equal, large firms, or firms that otherwise are resource-intensive can be expected to take larger steps on various dimensions of the internationalization process than smaller or less resource-intensive firms (cf Hörnell, Vahlne and Wiedersheim-Paul, 1973; Johanson and Vahlne, 1990). This influence is much clearer than for example that of opportunistic behaviour (Aharoni, 1966). But although this factor, as in the Datatronic case, might be of considerable value in understanding and explaining patterns in the internationalization of a single firm, it obviously follows no general principles. Therefore, the effects of this factor are evened out and difficult to discern at the aggregate level.

Apart from knowledge of international business, the influence of opportunistic behaviour and resource endowment, the very core capabilities of the firm are reflected in the pattern of its international growth. The more precise characteristics of the firm-specific advantages affects how (cf Buckley and Casson, 1976), as well as where (cf Dunning, 1979), these advantages are exploited. Generally, firm-specific advantages reflected in technology-intensive products or product-packages (i.e. system solutions) can be expected to increase the propensity to operate wholly owned foreign distribution channels (Hörnell and Vahlne, 1973). Both Inter Innovation's and Datatronic's choice of establishment form illustrates this point. Both firms strongly prefer wholly owned subsidiaries. At Inter Innovation, this preference is mainly due to the technical complexity of the product line; at Datatronic it is mainly due to the amount of software in terms of marketing and service, that was required in order to be competitive within the micro-computer industry. It is difficult to establish the same kind of generally valid links between any other patterns in firms' internationalization and the core capabilities of the firm. For example, their influence on choice of market and entry mode are considerably less unambiguous, and will have to be analyzed on a case by case basis.

The second broad group of variables in the model concerns industry characteristics. Few researchers have studied the relationship between structural traits of an industry and any dimension of the internationalization process. Hence, clear relationships have only been established with a few of the structural variables. Still, it is obvious from the case illustrations, that structural traits of the industry are important. Datatronic, for example, avoids establishing wholly owned operations in countries where the market share of key competitors is considerably above average. Furthermore, Datatronic's fast international growth seems partially to have been prompted by the necessity to keep pace with the increasing international concentration in the industry.

Generally, the strategic behaviour of the international firm is affected by industry structure in both the home and host countries. However, in certain industries, like micro-computers, national industry structures have been partly eroded and international industry structures have evolved (Sölvell, 1987). To understand and interpret what has happened in these industries, international industry structures must also be taken into account.

A few general and unambiguous relationships have been established between industry-structure variables and patterns in the internationalization process. High concentration ratios in a home-country industry (Knickerbocker, 1973) have been shown to affect the firm's choice of market when going abroad. Oligopolistic structures on the home market seem to create a propensity among firms in an industry to imitate each other's international moves. Similarly, high concentration ratios in the international arena (Graham, 1974) have been shown to affect the choice of market. Firms in international oligopolies seem to develop a propensity to counteract each others moves.

A firm's choice of mode for establishing its own operations has also been linked to industry structure (Caves and Mehra, 1986). Acquisitions seem to be more likely as an entry mode in host countries with high local concentration ratios, a pattern shown to be particularly clear when the entrant is taking over a large share of the market. Through acquiring a local firm, the entrant avoids the depression of market prices that could result if capacity were increased, and thereby reduces the risk of counter-actions by oligopolistic rivals. Acquisitions were also shown to be favoured in industries with very slow or very fast growth. In rapidly growing industries like micro-computers and banking automation, acquisitions are probably favoured because they are generally faster than a greenfield establishment. In industries with very slow growth, acquisitions are probably chosen because the prices of in-place assets are depressed and no further capacity is added.

A further structural feature that has been shown to affect the internationalization is entry barriers. Although this aspect of an industry is difficult to define, Sölvell (1987) has shown that in spite of geographical or psychic proximity, international firms seem to avoid national industries characterized by high entry barriers over extended periods of time. Datatronic's unwillingness to establish wholly owned subsidiaries in the strongholds of the key competitors, and Inter Innovation's avoidance of the Japanese market, may serve as illustrations of this point.

Apart from the relationships established by earlier research between specific industry-structure variables and patterns in the process of internationalization, the case illustrations highlight another industry characteristic of interest. The degree of erosion of national industry structures, simultaneously reflected in international concentration ratio, cost structures, barriers to entry etc., seem to be linked to the

pace of the internationalization process. Inter Innovation as well as Datatronic operate in industries where it is difficult to discern any national industry structures. Here, the relative homogeneity of the industry and its customers across national boundaries makes it easier, but also more necessary, for industry incumbents to act and react quickly. Hence, firms such as Inter Innovation and Datatronic could be expected to internationalize (as well as "deinternationalize" or divest) faster than firms in less internationalized industries. These firms could also be expected to show a higher propensity to establish their own operations through acquisitions, make more establishments per time unit and have a tendency to leap-frog stages in the traditional establishment chain.

Apart from firm characteristics and structural characteristics of the industry, certain features of host countries affect the internationalization process. The location and size of potential markets have some fundamental and obvious effects on the pattern in the choice of markets, as well as on the pattern of establishment on those markets. The case illustrations indicate that market potential more than ever may be the factor determining choice of market. This would be mainly due to a general decrease in psychic distance between nations. Psychic distance to potential host countries still seems to have some importance, but less so than in the past, for the choice of national markets.

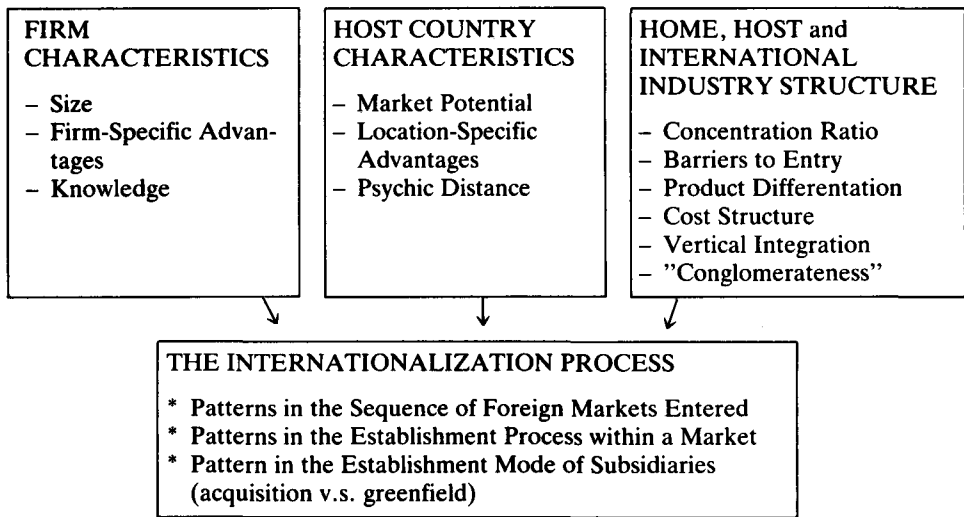
The pattern of establishment on a particular market could also be expected to be influenced by the market's potential. Obviously large markets can carry higher overheads than smaller markets. Low-cost means of penetration, like direct exports, agents and importers, could therefore be expected to be chosen more frequently in markets with lower potential.

Apart from market potential and psychic distance, it is known from the FDI-literature that still other factors relating to the characteristics of host countries might affect certain patterns in the international growth process of MNC's. Trade barriers is one such factor. The existence of trade barriers potentially affects the firm's choice of markets as well as its pattern of establishment on particular markets (cf Horst, 1972; Swedenborg, 1979). Either a firm considering establishment leap-frogs the barriers and enters the market with local assembly or production (even if other factors like economies of scale in production and low transport costs favor exports), or it avoids the market for some time or completely. No matter which of these avenues is actually

followed, the internationalization process is affected compared to how it would have developed without any barriers.

The FDI-literature (cf Vernon, 1966; Swedenborg, 1979) also highlights the influence of location-specific advantages on an MNC's choice of markets. However, location-specific advantages have traditionally been of very limited importance for understanding foreign supply-related activities by MNC's. In highly internationalized industries, however, the difference between supply-related and sourcing activities may become blurred as an effect of the erosion of national industry structures. Advantages relating to location might therefore, under certain conditions, help us to understand contemporary patterns in the choice of national markets.

Figure 4:1 Model of Key Factors Affecting the Process of Internationalization



In light of the preceding discussion, it is obvious that no single variable may be expected to provide a satisfactory explanation for any pattern in the firm's internationalization process. Although three broad groups of variables may be discerned, both theory and the cases confirm that a multitude of variables (see figure 4:1) simultaneously determine any patterns in the firm's international growth process. Some of these variables have a greater explanatory value than others in relation to a certain pattern in the internationalization process, but the relative weights of the variables can be expected to change over time. Continuous change and development in worldwide socio-economic conditions are reflected in the international growth of firms, as well as in the explanations for particular patterns in this growth.

Throughout the world local cultural patterns, demand structures, legal procedures and administrative systems are becoming more and more interlinked and convergent. Several factors of historical significance for the international growth of business firms are becoming less important. Psychic distance is generally decreasing. The need to build up experience and knowledge of foreign markets is considerably less in today's firms than it was earlier. Trade barriers have been abolished or lowered in vast geographic areas, particularly in the Western World. Since the end of the Second World War, the formation of free-trade zones and common markets, economic cooperation, and multilateral agreements on tariffs and trade have facilitated international trade in general and interregional trade in particular. Similarly, location-specific advantages have lost some of their importance for understanding a firm's location of its foreign activities. International commodity markets and generally decreasing transportation costs have eroded several of the traditional advantages of certain locations (Porter, 1990). Factors of production have become more and more "footlose", and the location of foreign operations optimized in regard to other factors.

But while a host of factors have been losing ground because of socio-economic changes, others have been gaining. In the theoretical state of a completely homogenized and harmonized world, trade barriers, location specific advantages and all factors related to psychic distance play no part at all. Firm characteristics other than experience of international business, together with industry characteristics and market potential, would wholly explain any pattern in a firm's international expansion. All other variables would by definition be of no interest. In spite of several countervailing forces, the world in general could be argued to have taken a few faltering steps towards this utopian state. Within certain geographic regions and societal areas like the Western business community, several further and firmer steps have been taken. Given such a development, it seems logical to assume that *the explanation for any patterns in contemporary internationalization processes is to be found in company characteristics other than experience of international business, as well as in industry characteristics and considerations of market potential*. Factors related to psychic distance, trade barriers, location-specific advantages etc. will of course continue to play a certain role; the world is far from the utopian state of complete homogeneity. Nevertheless, these latter factors could be expected to be of secondary importance in explaining patterns in the international expansion of firms.

4:2 Patterns in the Sequence of Foreign Markets Entered, the Establishment Process within Foreign Markets and the Establishment Mode of Subsidiaries – Hypotheses and Possible Explanations

The model in figure 4:1 focuses on three manifest patterns in the firm's internationalization process. The discussion in section 4:1 on the factors explaining these patterns may be summarized in a number of hypotheses. In the following subsections, these hypotheses are presented together with some brief comments.

Patterns in the Sequence of Foreign Markets Entered: H:1-H:8

- H:1 *Swedish manufacturing firms begin their internationalization process by establishing in the Nordic countries.*
- H:2 *Firms establish in the region of Western industrialized countries when the Nordic region is covered.*
- H:3 *Within the Nordic region markets with the highest potential are entered first, and then gradually markets with lower potential.*
- H:4 *Within the region of Western industrialized countries, markets with the highest potential are entered first, and then gradually markets with lower potential.*

Homogenization of the world and the increased availability of information have generally reduced psychic distance and evened out some of the perceived uncertainty about foreign markets. It can now be argued that the perceived psychic distance among the Nordic countries is close to zero. In the Datatronic case, for example, the home market seems to be the Nordic countries, rather than just Sweden.

If psychic distance among the Nordic countries is zero, or close to zero, it seems plausible to expect that the fundamental factor for establishment on a market – market potential – will determine in what order the Nordic markets are entered.

The world as a whole is of course not completely homogeneous. The very limited psychic distance among the Nordic countries is probably an exception to the rule. There are generally still a number of differences among markets, and the information flow is far from perfect. However, especially among the Western industrialized countries, the differences may be so small and the availability of information so good, that firms choose markets within this sphere mainly on the basis of market potential. Both Inter Innovation's and Datatronic's internationalization processes indicate that psychic distance seems to have been overridden to a large extent by considerations of market potential.

H:5 *The propensity to deviate from the normal pattern suggested by H:1-H:4 will be highest in the first 1-2 establishments abroad.*

The internationalization process is often affected by opportunistic behaviour, coincidence and opportunities (Aharoni, 1966). In H:1-H:4 it is hypothesized that market potential determines which markets are entered and in what order. However, it is reasonable to assume that Aharoni's observations are still relevant. Even though an aggregate of Swedish manufacturing firms going abroad can be expected to behave in accordance with H:1-H:4, certain firms will for various reasons depart from this pattern.

The probability of such departures can be expected to be highest in the very initial stages of the internationalization process. The decision to go abroad is often due to coincidence; an order is received from a foreign customer at an international fair, managers of the firm have social or other ties to a certain country etc. Inter Innovation's early entry into the U.S. market is a good illustration.

When one or two foreign subsidiaries have been successfully established and a firm has grown larger, professional management is hired, and doing business abroad becomes a natural part of the firm's activities. There is greater awareness of the idiosyncrasies and potential growth of foreign markets, and a somewhat more rational and active process of selecting foreign markets and entry modes can be expected. Although the experience of international business gained after the first one or two establishments probably leads firms to consider a broader spectrum of countries for future expansion, the geographic spread of the very first establishments can be expected to be still higher.

H:6 *Small firms have a higher propensity than larger firms to follow the traditional establishment sequence when going abroad*

Small firms tend to have more severe resource constraints and be more sensitive to costs. Hence, it is reasonable to assume that smaller firms are more likely to be affected by the costs of gathering information than larger ones. Consequently, smaller firms are probably also more sensitive to the small differences that still persist between markets. They need to gradually build up knowledge in house, and to try to keep uncertainty and costs at low levels.

H:7 *Over extended periods, firms avoid establishing operations in the home markets of major competitors or in potential host countries with high concentration ratios*

Firms avoid markets with high entry barriers, e.g. national markets with strong indigenous firms. Sölvell (1987) asserts that recently proximity factors often have been overridden by host-industry considerations. Here, the argument is rephrased. Proximity factors generally have a low explanatory value (except for smaller firms). It is the market potential of potential host countries that first and foremost determine the firm's choice of markets. Although firms generally will follow this sequence, they tend to avoid host countries with significant entry barriers in the form of high local concentration ratios or otherwise strong indigenous firms. The risk and cost of entering the market are often too high in relation to return. Such markets are entered at later stages in the internationalization process when the necessary resources have been generated.

H:8 *The average time between two consecutive foreign market entries has generally decreased*

Hörnell, Vahlne and Wiedersheim-Paul (1973) established that the average time between two consecutive market entries in Swedish manufacturing firms was 2.6 years between the first and second establishment and 1.2 years between the fifth and sixth establishment. Inter Innovation has entered at least one new market, often several, per year since it began its process of internationalization in 1980.

Foreign markets are not perceived to be as "foreign" as they used to be. Knowledge about, and experience from, foreign markets can today be acquired more rapidly than before. National industry struc-

tures have been eroded, and global or international industry structures are emerging. To a larger extent than ever, it is both possible and necessary for firms to act more quickly in the international arena.

Patterns in the Establishment Process within Foreign Markets; H:9-H:12

H:9 *Firms "leap-frog" stages in the traditional "establishment chain". Firms do not follow the pattern – no regular export, independent representative, sales subsidiary, manufacturing subsidiary*

The "establishment chain" (Johanson and Wiedersheim-Paul, 1974) was interpreted as a manifest confirmation of a gradual learning-by-doing pattern in firm's establishment process within a market. Later, several authors have argued that companies appear to "leap-frog" stages in the establishment chain. This is well in line with what is argued in this study. There is no longer so great a need for slow and gradual accumulation of knowledge. Firms can gather the information necessary for reduction of uncertainty in less time than before, using other means than actually being represented on the market. The optimal establishment form can be chosen without going through the preceding stages of the establishment chain.

Inter Innovation's establishment process within foreign markets supports these arguments. Inter Innovation entered the U.K. and Spain with wholly owned subsidiaries, without any prior experience on those markets. Similarly, the U.S. sales subsidiary was not preceded by any local representative, although the major order received somewhat earlier from Citibank had generated experience from the U.S. market. Excluding the U.S., Inter Innovation by 1987 had established two out of five foreign sales subsidiaries without any previous local representation.

Datatronic initially shows a similar but more complicated pattern. The 1980 joint venture with Commodore in Norway was not preceded by any local representation. Datatronic went directly from sporadic export orders to a joint sales subsidiary with Commodore. The 1981 establishment in the Netherlands was not preceded by any relations at all with that market. However, Datatronic was more or less forced into the Dutch market by the substantial sum it would have cost to

divest the former Handic subsidiary. Because of the exceptional circumstances, it seems reasonable not to draw any firm conclusions from this particular entry. In 1983 wholly owned subsidiaries were established in West Germany, the U.K. and the U.S. Apart from the U.S. these markets had not previously been served by local representatives or exports. Instead, the company entered them with the distribution channels deemed most efficient from the point of view of marketing and control. Subsequent establishments of wholly owned operations, i.e. after the acquisition of Victor Technologies, were greatly facilitated by Victor's accumulated experience on various markets. Every subsidiary established after the acquisition had been preceded by local representatives of Victor Technologies. In acquiring Victor, Datatronic obviously bought the knowledge and experience necessary to leap-frog the initial stages in the traditional establishment chain.

H:10 *Small firms have a higher propensity to follow the traditional establishment chain within foreign markets than large firms*

The reason for this are similar to those presented in connection with H:6. Small firms tend to have tight resource constraints. In order to keep costs and risks at low levels, small firms can be expected to build up their operations on foreign markets more slowly and gradually.

H:11 *Firms have a higher propensity to follow the traditional establishment chain in home markets of major competitors or in host countries with high concentration ratios.*

Datatronic entered the strongholds of its archrival Olivetti in the inexpensive, low-commitment form of local representatives. This entry form has otherwise been used mainly on smaller markets.

It has been argued by Johanson and Vahlne (1977) that the incremental establishment chain is an effect of the perceived uncertainty of firms entering new markets. Firms are uncertain about the outcome of an investment in foreign markets because they lack knowledge of local conditions. A step-wise increase in the scale of local operations allows firms to learn about local circumstances and ensures that the establishment is successful before commitment is increased.

We have argued that the need for this step-wise learning-by-doing process has been reduced. Firms today can more easily assess the outcome of investments in foreign markets.

However, penetrating the stronghold of a major competitor, or a national market where a few firms are dominant, sharply increases the uncertainty about the outcome of the investment. This is not due to lack of knowledge about local conditions, but due to the fact that strong local competition can strike back. The problem is that the intruder does not know when – and if the competitor is multinational, where – a counter-attack will be launched. Under these circumstances, it seems reasonable to assume that firms will adhere to the traditional establishment chain. A low-commitment entry makes it possible to await the reactions of competitors and to ensure that the establishment is successful before taking another step.

Another alternative for the entrant would obviously be to attack the established firms on a market head-on. Rather than go for slow and gradual entry using local representatives in the initial stages, the company enters a market with a major wholly owned operation. However, most young international firms are probably too small and/or risk-averse to follow this strategy, and the normal behaviour will be in accordance with H:11.

H:12 *Over extended periods, firms avoid establishing wholly owned subsidiaries in the home markets of large competitors or in potential host countries with high local concentration ratios*

Host countries with high entry barriers, e.g. in the form of high local concentration ratios, are often costly and risky to enter (cf Sölvell 1987). Adding further actors and capacity in tightly structured oligopolies might disturb the established "equilibrium" (if any...) in the market and initiate competitive warfare. The establishment of wholly owned operations – particularly in manufacturing – not only adds capacity and new actors; it also signals a commitment to the market that might further aggravate the competitive reaction.

Still, competitive considerations (cf Graham, 1974) or scanning reasons might make it valuable to be present in such markets. Under such high-risk conditions a firm can be expected to prefer forms of entry such as agents or importers, which require less resources.

Datatronic's internationalization process clearly illustrates this point. In spite of a massive establishment of subsidiaries in Europe by 1987, Datatronic was still not present with its own operations on two major markets, Spain and Italy, where local representatives were used. The

reason for this was outspoken and clear: these two markets were the strongholds of the world's second largest supplier of personal computers – Olivetti.

Patterns in the Establishment Mode of Subsidiaries; H:13-H:14

H:13 *Firms have a higher propensity to use acquisitions to establish their own representation in home markets of major competitors or in host countries with high local concentration ratios.*

It has been argued by Sölvell (1987) (see also Caves and Mehra, 1986) that acquisitions play an important role when national markets with tight oligopolistic structures are penetrated by foreign firms. Although other penetration routes involving greenfield investments or various forms of coalitions have also been used, acquisitions seem to be the most frequently followed route in Sölvell's case studies of two electrical engineering industries.

The uncertainty under oligopolistic circumstances could be expected to make firms prone to establish their own market representation through acquisitions. Acquiring a former local representative, or another local firm with an established relationship to the market, reduces the uncertainty of the entry and hence the outcome of the investment. The acquired firm already has an established position in terms of infrastructure, distribution channels, brand name, customer base etc.

The propensity to follow the acquisition route outlined in H:13, could be expected to be particularly high in the case of manufacturing establishments. Acquiring a manufacturing unit rather than establishing greenfield is in most cases considerably quicker, and it lowers the risk of retaliation since no further capacity is added (Caves and Mehra, 1986). Obviously these arguments – particularly the latter – are somewhat less valid in the case of sales subsidiaries. Although acquisitions might also be a quicker and less risky route of entry in this case, because of established distribution channels, market positions, brand names etc, it is likely that the gains are relatively less than in the case of manufacturing units. Therefore, it could be expected that in the establishment of sales subsidiaries the propensity to acquire is somewhat less affected by the concentration ratio of the industry.

H:14 *Firms have a higher propensity to enter markets through acquisitions in industries with high global concentration ratios.*

In 1982–83, Datatronic made an attempt to launch its products abroad. It turned out that the company was greatly handicapped by being unknown and lacking an established international distribution network. Acquiring Victor solved this problem.

International or global oligopolies force a de novo entrant to choose between challenging the established international oligopolies head-on or focusing on a special niche. The latter implies avoiding direct competition with the established leaders (Vahlne and Nordström, 1984), i.e. operating within a more narrowly defined, or completely different, industry. If the head-on route is chosen, a prerequisite for survival is to quickly become a player on a global scale. Competitors enjoy established worldwide market relationships, global scale economies in many activities, and the capability to fight less internationalized challengers through cross-subsidizing (Hamel and Prahalad, 1985).

A challenger must establish a customer base that can support global scale economies. This requires more or less simultaneous establishment in several of the major markets in order to permit the cross-subsidization. Internal growth is too slow. Acquisitions, or cooperative ventures with partners that have strong local, regional or global distribution networks, are the most plausible alternatives.

However, for the same structural reasons as discussed in connection with H:13, the propensity to follow the acquisition route outlined in H:14 is probably somewhat higher for the establishment of manufacturing subsidiaries than is the case for sales subsidiaries.

5 Towards Testing the Hypotheses

The hypotheses generated in chapter four, may be viewed as the conclusions of the first part of this study. The first four chapters aimed firstly at developing and discussing the theoretical foundation of this study, and secondly at underpinning the theoretical discussion with some empirical material, in order to develop some testable hypotheses about the internationalization pattern of Swedish manufacturing firms.

In the remaining part of this study, the purpose is to confront these hypotheses with a larger body of empirical material and to "test" the degree of generalizability. Another aim in connection with these tests, is to give an descriptive overview of some of the foreign operations of Swedish manufacturing firms abroad.

5:1 The Data Material

The Industrial Institute for Economic and Social Research (IUI) has undertaken surveys of Swedish manufacturing firms and their foreign affiliates on four occasions; 1970, 1974, 1978 and 1986. The material collected in the surveys covers all Swedish manufacturing firms which had manufacturing subsidiaries abroad in any of these years. In the 1970 and 1986 surveys, the material included all Swedish manufacturing firms that had manufacturing and/or sales subsidiaries abroad.

The purpose of the surveys from IUI:s perspective has been to obtain information about the foreign manufacturing activities of Swedish industry. Hence, the surveys have generally requested detailed information on foreign manufacturing affiliates and their parents, and a comparatively limited amount of information on other affiliates.

5:1:1 The IUI/IIB Collaboration

During the planning of this study, IUI was preparing its 1986 survey of Swedish manufacturing firms' activities abroad 1986. The idea to

collaborate with IUI emerged for several reasons. First, the IUI survey included all Swedish manufacturing firms that had manufacturing and/or sales subsidiaries abroad, and thus the population of interest for this study (see figure 5:1). Second, indications had been received from several research colleagues that companies in general were overloaded with questionnaires from various institutions, and response rates had been suffering. In the spring of 1987, when the IIB survey was planned to take place, the Central Bank of Sweden¹, Statistics Sweden² and IUI, launched major survey operations, focusing on more or less the same population as the one of interest for this study. Furthermore, research had given IUI Swedens most complete lists of firms with foreign operations, and base of information related to that which the IIB survey could be seeking. Rather than burden the companies with yet another survey the decision was taken to propose collaboration with IUI.

A third section (section III of the questionnaire, see appendix 2) was added to the IUI questionnaire. The author was also given the right to use certain data collected in the IUI parts of the questionnaire. It was also agreed, that the author would join the IUI research team for the entire data collection process.

5:1:2 The Population Studied

This study ideally required data about the internationalization process and industry setting of Swedish manufacturing firms that had initiated their internationalization process rather late, i.e. during the 60's, 70's and 80's. Researchers developing the traditional models had studied the internationalization pattern in earlier periods.

It soon became clear, for reasons that will be further discussed below, that data about the internationalization process in itself, as well as other intra-firm data, should be collected through a mail survey, while data about the industry most probably had to be collected through a telephone survey. Hence, two methods would be used on one population.

¹Sveriges Riksbank

²Statistiska Centralbyrån

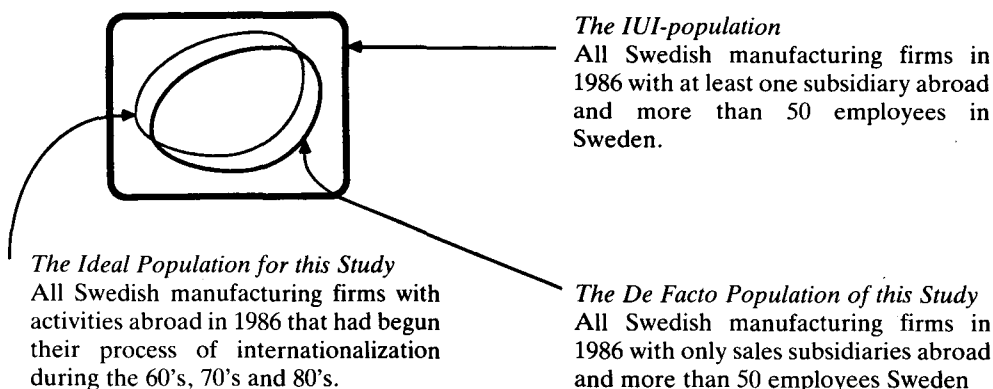
The population of interest for this study was a sub-population of the IUI-population (see fig. 5:1). IUI's ambition was to survey *all* Swedish manufacturing firms with activities abroad. It was not known beforehand which companies belonged to our sub-population (see figure 5:1). Consequently, a simple and easy to communicate branch, or "go to" statement, had to be formulated so that those for whom the items in the third section did not apply would skip it.

Branching instructions within a questionnaire can be very useful and are sometimes unavoidable. However, their use in self-administrated mail questionnaires should be strictly limited. Each branch adds greatly to the complexity of the response task and tends to reduce the validity and the reliability of the results (cf Alreck & Settle, 1985).

The original IUI-questionnaire already contained one branch statement: firms with *only* sales subsidiaries abroad could skip certain parts and items of the questionnaire. Rather than adding further complexity through a second branch directing "our" sub-population to the third section of the questionnaire, an agreement was made to seek a solution that did not require any further branching.

The solution chosen was to approximate the ideal population (i.e. firms that had begun their process of internationalization during the 60's, 70's and 80's) with the IUI-subpopulation having *only foreign sales subsidiaries* (see fig. 5:1); most of these could be expected to have established abroad fairly recently. Conversely, many firms that had established themselves abroad fairly recently could be expected to have only sales subsidiaries.

Figure 5:1 Graphic Illustration of the Populations.



This approximation introduces certain biases in our material. The validity is affected and our possibilities of generalizing are to a certain extent limited. However, these drawbacks, which are further discussed in chapter 6, had to be weighed against the potential negative effects of an overly complex questionnaire.

5:1:3 Choice of Unit of Analysis – SBU vs Firm

Strategy may be defined *ex post* as "a pattern in a stream of actions" (Mintzberg, 1976). The internationalization process of the firm, studied *ex post*, may be considered such a pattern. To interpret and understand this pattern, we must consider the industry setting.

This approach assumes that clearly and readily identifiable industries exist. At the empirical level, two problems are encountered. Firstly, it might be difficult to define industries and markets. Secondly, even if we are able to define the relevant industry setting, many business firms are active in more than one industry (this is of course also a matter of definition). The existence of such multi-industry business firms would, at least theoretically, require an understanding of the structure and dynamics of several industries.

In the normative literature that is based on the industrial organization framework of analysis (cf Porter, 1980), the problems of multi-industry activity have been solved by subdividing the business firm into a collection of Strategic Business Units, SBU:s. Each SBU is active in its own industry setting and is governed by the rules of the game in that industry.

Delineation of industries and markets has usually been based on the concept of cross-elasticities of demand (Abell, 1980). However, the required data do not exist, and most empirical research has used standard industrial classifications. These classifications are usually fairly crude and based on a variety of criteria (Sölvell, 1987), such as raw materials used, the type of user, production process and combinations in which goods are sold.

In the choice between focusing on SBU:s or whole business firms, the business firm has been selected as the relevant unit of analysis. Most decisions concerning the internationalization of firms, multi-industry or not, are assumed to be taken at the corporate level, rather than

that of the SBU. Only in very large corporations, where certain SBU:s have their own international distribution and/or production networks, would it be relevant to choose SBU:s as the unit of analysis.

This study focuses on firms that have begun their internationalization process fairly late, i.e. during the 60's, 70's and 80's. The majority of the firms in the population can be expected to be small and medium-sized (the actual median of the population in terms of sales is SEK 120 million), with one or a few related SBU:s. Hence, it is likely that decisions concerning their internationalization are taken by top management in light of the overall corporate situation, rather than by management at the SBU-level.

Implicitly, this means assuming that each firm within the population is active in one broad industry setting, or more precisely; *acts as if* active in only one broadly defined industry.

5:1:4 Choice of Data Gathering Method

Part I of this study focused on the internationalization process in general in Swedish manufacturing firms that have established themselves abroad fairly recently (i.e. during the 60's, 70's and 80's). Various indications were sought for the determinants of the different decisions and actions taken. It was also important to try out questions and relevant areas for investigation. The internationalization processes of two firms were studied intensively and several interviews were conducted. The views of different actors concerning the respective industries were compared and found to show no striking differences. The only area where several of the actors interviewed had slightly different opinions concerned the market share of a certain firm or group of firms. In most cases, the variation in the answers received was due to different views on the relevant industry definition, rather than to differences in absolute terms.

The experience gained from the case studies, and the interviews conducted in connection with them, served as an excellent base for the choice of data-gathering method in this second part of the study. Here the aim was to obtain a picture of the internationalization process and of certain industry characteristics of a large number of firms, reasonably quickly and at a moderate cost.

A combination of survey methods was used. Data on the firm and its internationalization process were collected through a mail survey whereas data on the industry setting was collected through a complementary telephone survey.

Certain data on the firm and its internationalization process in the case studies proved to require some research by the respondent. In many cases colleagues and written material had to be consulted before any answer could be given. While the mail survey has its disadvantages – it is time consuming and reduces the possibility of interacting with the respondent, asking follow up questions or observing when and how the respondent approaches the questions – it is a standardized and cost efficient method that is well suited for situations where the questions might require some research from the respondent.

Data on the firms' industry settings, was collected through a complementary telephone survey. The case studies clearly indicated that it was often necessary to interact with the respondent to clarify certain nuances of both questions and answers about industry characteristics. Often the relevant industry definition had to be discussed and agreed on with the respondent before any further questions could be asked.

Telephone interview collection of data is a personnel-intensive and often time-consuming method, with some risks of interviewer bias. These drawbacks and their potential nonmeasurable adverse effects on the results, had to be weighed against the risk of problems with interpretation and definition when using a noninteractive method of data collection.

To obtain the highest quality of data would have required personal and structured interviews with several decision makers in every firm, access to written material and complementary interviews with other persons active in each and every firms industry environment. This was obviously not an alternative. Subdividing the data needed into two groups, using the most suitable and cost efficient method given the characteristics of each group, gave us a realistic second-best solution. Comparisons of telephone and face-to-face interviews (cf Alreck & Settle, 1985), have shown an almost equal reliability for the two methods. Furthermore, the telephone interviews gave an opportunity to corroborate some of the mail survey data with a second person, and when necessary to ask for supplementary data.

5:1:5 Survey Design and Instrumentation

The population surveyed by IUI (see fig 5:1) was all Swedish manufacturing firms with operations abroad in 1986. Swedish manufacturing firms are defined as firms registered in Sweden, which are not subsidiaries or affiliates of foreign firms and which are mainly active in manufacturing. Firms with less than 50 employees in Sweden are excluded.

As a rule the whole corporation is regarded as the unit of analysis, and the consolidated group of Swedish firms as the investing firm or the "Swedish Parent". The Swedish corporate parent was asked to supply information regarding its overall operations, in Sweden as well as abroad. There were some exceptions from the general rule of considering the consolidated group of Swedish firms as the unit of analysis. Companies owned by holding or investment companies have been assumed to have freedom similar to that of independent firms. In such cases, the individual firm was treated as the relevant unit of analysis.

Some other definitions of interest relate to the foreign subsidiaries of the firms surveyed. A foreign affiliate has been defined as a subsidiary if the Swedish parent directly or indirectly controls more than 50% of the equity capital³. Foreign affiliates in which the Swedish parent controls at least 10%, but less than 50% of the equity capital, are defined as minority interests. The latter group is not consolidated in the corporate accounts, and the investing firm often lacks detailed information about these interests.

Foreign subsidiaries that in any form are engaged in the manufacture of products (including assembly) – even if this is not their main activity by value – are defined as manufacturing subsidiaries. The reason for this fairly broad definition is that IUI historically, as well as in this study, has endeavored to cover all foreign manufacturing by Swedish firms. Foreign subsidiaries that only sell, install and service the products of other companies within a group are defined as sales subsidiaries.

³This definition of a subsidiary is in accordance with the Swedish Companies Act (par. 21 Aktiebolagslagen).

The respondents have been assured that the data material collected will be handled confidentially. Hence, data will not be presented in any way that would permit individual firms to be identified.

5.1:5:1 The Mail Survey

The first two sections of the questionnaire used were designed by IUI. The third section (see appendix 2, form A, page A:9), covering information specifically needed for the purpose of this study, was designed by the author.

The questionnaire consists of two forms (see appendix 2). Form A covers information on the Swedish parent group, the consolidated firm and sales subsidiaries abroad. Form B (one for each manufacturing affiliate abroad) focuses on information about manufacturing subsidiaries abroad.

Firms with any manufacturing subsidiaries abroad were asked to answer all relevant questions in both forms, except questions 6a and 6b in form A. The sub-population of firms with just sales subsidiaries abroad were only asked to answer questions 1-13 (including 6a and 6b) in form A.

The population of firms meeting the criteria of the mail survey was not known beforehand and had to be determined. Swedish firms wanting to invest abroad have to apply for permission from the Swedish Central Bank. The research team was allowed to use this confidential register to determine the population of firms that had received such a permit between 1978 and 1986.

The register of the Central Bank contains only information on which companies that have been *granted permission to invest abroad*, not on which companies have utilized their permission and actually invested abroad. As a complement to the Central Bank's register, an excerpt from the Statistics Sweden corporate register⁴ of all firms within SNI 3) with more than 50 employees and subsidiaries abroad was used.

These two sources made it possible to define the population of manufacturing corporations based in Sweden. The number of employees and the country of origin of this raw population was still not known. Using external information and telephone calls, we elim-

⁴Koncernregistret

inated a number of corporations not fulfilling the criteria of the survey. The population finally defined for 1986 consisted of 280 corporations.

In April, 1987, the questionnaire was distributed. Most corporations answered, after having been reminded a number of times, within three months after receiving the questionnaire. Including the work with defining the population, and control and compilation of collected data, the work on the questionnaire took slightly more than one year.

5:1:5:2 Response Rate

Out of the 280 corporations, 112 answered that they have manufacturing subsidiaries abroad. For the reasons presented above, this group of corporations will, not be discussed or analyzed hereafter in this study (for further readings see Swedenborg et al, 1988). The focus will be on the sub-population of 156 corporations responding that they operate only sales subsidiaries abroad.

In spite of considerable efforts by the research team, 12 corporations were not been willing to cooperate in any form. Thus, in terms of the number of corporations, the response rate is 96%. Since we lack any information on the 12 non-responding corporations, we do not know how they are distributed between the two sub-populations. However, regardless of distribution the response rate of the two sub-populations is still more than 90%, and the results cannot be affected more than marginally.

Yet another reservation might be added. The coverage of Swedish manufacturing firms in the registers of the Bank of Sweden and Statistics Sweden used for defining the population might be incomplete. However, experience indicates that the incompleteness of these registers is marginal and is mainly restricted to a handful of smaller firms. Again, the findings cannot be affected to any major extent.

5:1:5:3 The Telephone Survey

All of the 156 responding corporations with only sales subsidiaries abroad were interviewed by telephone by the author, in order to collect some key data about each respondent's industry environment.

All firms contacted agreed to participate, in certain cases after some discussion.

The interviews followed a simple interview guide (see appendix 3) and took on the average 20 minutes. The persons approached in each organization were the president, the vice president, the director of exports or the director of international marketing. In certain cases, when the respondent did not have the data asked for, or doubted the reliability of the data he had, supplementary interviews were held with appropriate colleagues at the company.

The questions asked in the telephone interviews were as follows:

- Q:1** Which are your corporation's four largest foreign markets in terms of sales? Please rank them by size.
- Q:2** What are the nationalities of your four most serious/important competitors in your industry on these four markets? Please rank them by degree of seriousness/importance as competitors.
- Q:3** What would you estimate to be the combined market share of the four largest corporations in your industry on these four markets?
- Q:4** What would you estimate to be the combined worldwide market share of the four largest corporations in your industry?

With a few exceptions the respondents were able after some clarifications to answer the questions during the interview. Several respondents needed, as we had foreseen, an explanation of the concept of an industry. The explanation given had been prepared in advance and was as follows:

"..... think of the group or collection of firms that you compete with on a certain market – whether it is a country, region or the whole world is just a matter of definition – as your industry."

Once we had given the explanation and discussed it for a while with the respondents, the interviews normally went smoothly. In many cases, after the interview there were discussions between the interviewer and the respondent about various matters related to the questions asked.

5:2 Operationalization of the Model and the Variables in the Analysis

The material will be analyzed in chapter 6. A number of methods will be applied. The assumptions made about interrelationships among the independent variables, as well as their relationship to the dependent variables, are presented below. Furthermore, the variables in the model and how they have been measured will be presented in greater detail.

5:3 The Causality

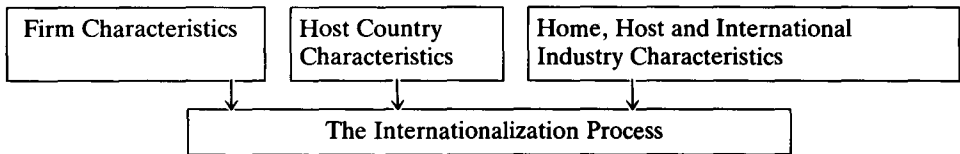
According to the perspective of this study (cf Fig 4:1) the firms internationalization process is basically a function of three groups of variables.

Internationalization process = f (Industry characteristics, Firm characteristics, Host country characteristics).

However, the three groups of explanatory variables are though not independent of each other. The structural traits of industries provide a framework for the conduct of firms within industries, and hence affect firm characteristics. Conversely, a single firm can affect, and in certain cases change, the structure of an industry through its actions. Similarly, there is an two-way relationship between the dependent variable and the explanatory variables. The internationalization process of a particular business firm produces feedback that may alter, both the firm characteristics and to a certain extent the industry structure.

Although these interdependencies certainly reflect real conditions, it should be clear that the feedback loops in our model have limited effects in the short run. Certainly a single firm can change the structure of its industry. But in most cases this is a slow and gradual process. Similarly, the internationalization process of a particular business firm can be expected to affect the industry structure both directly, and indirectly via altered characteristics and conduct of the firm itself. But again, no instantaneous changes at the industry level can be expected.

Figure 5:2 The Assumed Casual Relationship.



Since for several practical reasons it was not possible to collect time-series data on any of our explanatory variables, our study implicitly assumes a causal relationship as indicated in figure 5:2.

5:4 The Variables in the Analysis

The ambition of this part of the study is to test as many as possible of the hypotheses presented in chapter 4. Hence, the hypotheses have served as the guideline for selecting variables on which to focus in the collection of data. The only restriction has been that the variables must be measurable at reasonable costs in terms of time and money.

Apart from certain hypotheses on a firm's establishment process within foreign markets, it has been possible to collect data that have at least made some kind of test possible on all of the hypotheses. For reasons discussed in section 5:1:2, it was not possible to collect any data on the establishment chain.

In sections 5:4:1 – 5:4:4 the operationalized variables will be presented in greater detail. Beginning with the three groups of independent variables and ending with the group of measures that constitute the dependent variables, a complete account is provided of the variables used in the analysis and how they have been measured.

5:4:1 Industry Variables

5:4:1:1 *Industry Classification*

Question 3 form A (see appendix 2) concerns the firms' industry classification. The classification is based on a firm's principal activity. Ten different classes, corresponding to the two- and three-digit SNI⁵

⁵Svensk Näringsgrens Indelning

industry classification, have been used. A more refined classification was considered, but it was rejected since it would obviously yield too few observations per class. The classification used, and the number of firms within each class are presented in table 5:1.

Table 5:1 Industry Classification and Number of Firms within each Class

Industry	No of Firms
Food, drink, tobacco	5
Textiles, apparel, leather and leather products	10
Pulp and paper	3
Paper and allied products, printing industry	7
Chemicals, rubber, plastic product	16
Primary and fabricated metals	40
Machinery (ex, electrical)	23
Electrical machinery	3
Transportation Equipment	10
Other manufacturing	39
Mixed	—
All Industries	156

5:4:1:2 Local Concentration Ratio

The industry concentration ratios for the studied firms' four largest foreign national markets in terms of sales, have been estimated on the basis of data collected in telephone interviews. As a measure of the concentration ratios on these four markets, the sum of the market shares of the four largest actors in each market have been used. The "top-four" measure is frequently used in the industrial organization literature. It gives a reasonably good estimate of the concentration ratio in an industry without requiring indepth studies.

The measure can not be expected to be very precise; only one firm within each industry was to estimate the ratio. However, it is reasonable to assume that at least, the order of magnitude is right. The respondents were generally in management positions, that normally give/require a good overview of the industry and its incumbents. The impression from the telephone interviews was that the respondents in most cases had a clear picture of who their competitors abroad were. The relative size and approximate market share of the archrivals on each foreign market, also seemed quite familiar to the respondents.

The precision of the local concentration ratio measure could of course have been improved considerably through complementary interviews

with one or a few more actors within each industry. However, this was not considered worthwhile. Most of the analysis only require that we are able to divide the material into two or three categories on the basis of local concentration ratios.

5:4:1:3 Global Concentration Ratio

As with the local concentration ratios, the global or worldwide concentration ratio in the industries of the firms in this study has been determined through telephone-interviews. The measure used has been the sum of the worldwide market share of the world's four largest actors in the industry.

In contrast to the questions about local concentration ratios, some of the respondents had difficulties with the top four firms' total worldwide market share. In oligopolistic industries, or industries with high to extremely high concentration ratios, the respondents rarely had any problems, since the number of actors is limited. Similarly, respondents in industries with very low concentration ratios rarely had any problems in establishing that the four largest firms in their industry would not even have one percent of the world market. It was the group of industries in between those two extremes that experienced some difficulties. In such cases it was often necessary to interview more than one person to get an unambiguous estimate.

Even more than in the case of local concentration ratios, the precision of the measure can be expected to be low. But the order of magnitude can be assumed to be right, thus permitting the use of the ratios for subdividing the material into two or three categories.

5:4:1:4 International Competition

The degree of international competition in the industries of the firms studied has been estimated on the basis of information collected in telephone interviews. The respondents were asked to rank their firms' four largest foreign markets in terms of sales. The respondents were then asked about the nationality of the first, second, third and fourth in size of their key competitors on these markets (see also section 5:1:5:3 and appendix 3). A four-by-four matrix was created for each firm in the population. Firms active in less than four markets and/or

meeting less than four competitors in any market were also included. Some positions in the matrices were consequently coded as missing values.

Very few respondents indicated any problems with these questions. On the contrary, the respondents seemed well informed and actually appreciated the questions.

In several cases the respondents had more detailed information on their competitive situation abroad than actually asked for, and were eager to share this information with the interviewer.

The data collected on the competitive situation of the studied firms abroad have served as a base for the creation of an "international competition index" (ICI). This is an index that on the basis of the competitive situation on each national market, roughly estimates the degree of international competition in the industries of the firms studied. The measure is standardized and takes into consideration the fact that some firms in the population have less than the maximum of $N=16$ observations in their matrix, since they are active in less than four markets and/or meet less than four competitors in some markets.

The equation for ICI is:

$$ICI_{x1} = \frac{NLC_{x1}}{N_{x1}} \times 100$$

where

ICI_{x1} = International competition index for the industry of firm $x1$

NLC_{x1} = Number of local competitors out of the four largest competitors on firm $x1$:s four largest foreign markets

N_{x1} = Number of observations for firm $x1$

The ICI can assume values between 0–100. Table 5:2 present the assumed relationship between index values and the degree of international competition in an industry. An index value of 0, for example indicate that out of the competitors faced on the largest markets, not one was local ($NLC_{x1} = 0$). Hence, the degree of international competition in such an industry is high.

Table 5:2 The Relationship Between ICI and the Degree of International Competition in an Industry

ICI Value	Degree of International Competition in the Studied Firms Industry
0	Very High
.	
.	
.	
50	Moderate
.	
.	
.	
100	Very Low

ICI is a rather crude estimate of the degree of international competition. On the basis of 16 observations for one single firm in an industry (assuming that all firms are active in different industries), conclusions are drawn at the *industry* level about the degree of international competition. It could be argued that statistics on trade flows or MNC activity within industries, for example, would offer more reliable measures of the same phenomenon. However, such statistics are usually at a high level of aggregation. The basic idea behind collecting firm-specific data was to try to disclose some of the reality at the micro level. The degree of international competition actually *perceived* by the firms studied is interesting per se, because it is the firm's perception of reality that is decisive for decisions and actions taken at the firm level.

For practical reasons, only a limited number of markets and competitors per firm are, included in the study. But a priori there are no indications that the degree of international competition in the four largest markets would depart in any unambiguous way from what could be expected on any of the other markets. Still, because of the crude nature of the measure, it will like local and global concentration ratios be used with a certain caution.

5:4:2 Firm Variables

5:4:2:1 Turnover Measures

The size of the studied corporations and their foreign oprations in terms of sales have been measured in five different dimensions in the

questionnaire (see appendix 2, Form A, question 6b and 9–12). The abundance of measures is explained mainly by the needs of the researchers at IUI. All of the measures are not equally important for the purposes of this study. The measures used in this study are:

1) *The Corporation's Total External Turnover*

This measure is defined as total invoiced sales plus other revenues. Internal sales are eliminated.

2) *Total Invoiced Exports from the Swedish Parts of the Corporation*

Total exports from the Swedish part of the corporation, including sales to foreign subsidiaries

3) *Total External Turnover in the Foreign Markets where the Corporation Operates a Sales Subsidiary*

5:4:2:2 *Other Measures*

Apart from the turnover measures two others have been included at the firm level; number of employees with the foreign subsidiaries, and number of subsidiaries (Appendix 2, Form A, Question 6a). Both these variables have been used for control purposes rather than as explanatory variables per se. The number of employees with each foreign subsidiary were checked against that subsidiary's turnover. This procedure made it possible to check whether a subsidiary could reasonably be classified as a sales subsidiary. Several firms originally classified themselves as only having foreign sales subsidiaries, although they actually had production or as assembly abroad. Firms with production subsidiaries abroad were requested to answer considerably more questions, and more complicated ones, than firms with only sales subsidiaries.

Similarly, the number of sales subsidiaries declared on page A:5 question 6a, was checked against the number of subsidiaries indicated in question 6b page A:9, where considerably more information is requested on each subsidiary.

Corporations with discrepancies in their questionnaire were contacted by the research team for further questioning.

5:4:3 Host Country Variables

5:4:3:1 *Host Country Market Potential*

The testing of some of the hypotheses required an estimate of the market potential of the different markets. At the single-firm or single-industry level, the indications of future market potential can be expected to differ substantially among industries and among firms in a particular industry.

The nature of the products, its linkages to other industries or firms, government policies etc are just a few factors of importance at the micro level. Ideally, it would have been interesting to map each of the studied firm's "objective" market potential on each national market. For obvious reasons, such a measure is not available. Instead an estimate of general attractiveness of a national market in terms of market potential has been developed.

Three different dimensions of host country characteristics have been taken into account. Firstly, GNP and growth in GNP have been included. Earlier research (cf Caves, 1982) has indicated that a country's attractiveness to foreign investors might be related to these figures.

GNP in absolute terms provides a better indication of a country's general market potential in the industrialized part of the world than does GNP per capita. The latter measure tends to differentiate only to a very limited extent among the various markets.

GNP is a static measure. The dynamic component, i.e., growth in GNP, can be expected to be equally important to a potential investor, adding valuable information on the direction and pace of economic development, and thus also on the development of the general market potential within a country.

In addition to these two measures of a country's attractiveness in economic terms, a third parameter, host country size in population terms, has been used. The absolute size of a population is significant because a country with a large population, *ceteris paribus*, has a greater market potential than a smaller one (Swedenborg, 1979). Large

nations, with the same or considerably lower figures for GNP and GNP growth, might still be attractive because of their sheer size.

GNP and population are both 1986 figures and serve as proxies for the ideal data, i.e. conditions prevailing at the time of entry on a certain market. The rate of change in these basic conditions, though, is limited, and the order of magnitude can be expected to remain the same over rather long periods of time.

The GNP growth, however, can be expected to fluctuate considerably over time. Hence, the GNP growth figure is a weighted average, with the rate of growth two years before a subsidiary establishment weighted by the number of establishments that particular year.

5:4:3:2 Psychic Distance

In order to test the explanatory value of psychic distance on the establishment sequence of the firms studied, i.e. their choice of markets, an index of psychic distance has been constructed. Although such indices, or in certain cases rankings, are already available (cf Beckman, 1956; Hörnell, Vahlne and Wiedersheim-Paul, 1973), these are outdated and/or based on aggregate data that severely limits their validity. In order to obtain a more recent and valid picture of psychic distances from Sweden to other countries, a survey was conducted during the autumn of 1989.

In three of the general management courses of The Swedish Institute of Management, IFL, a questionnaire (see appendix 4) was distributed after a standardized lecture of 40 minutes on the concept of psychic distance had been held. The managers were asked in this questionnaire to put an index value between 0–100 on 22 different countries, among them the markets most frequently entered by the firms studied. The lowest index value was to be assigned to the country perceived to be closest to Sweden in terms of physic distance. Similarly, the highest value was to be placed on the country perceived to be most remote from Sweden, while the remaining countries were to be given intermediate values.

Out of the 121 managers in the three courses, 118 completed the questionnaire correctly. The data were then used to calculate the average index for each of the 22 countries (see table 5:3).

Table 5:3 Psychic Distance from Sweden to 22 Countries

<i>Country</i>	<i>Index of Psychic Distance</i>
Norway	0.5
Denmark	3.3
Finland	8.5
England	14.8
West-Germany	17.7
Switzerland	20.7
Austria	22.4
Holland	23.4
USA	25.3
Canada	27.1
Belgium	31.7
France	34.8
Spain	38.2
Australia	39.2
Italy	39.9
Portugal	47.5
Japan	59.5
Turkey	71.6
Brazil	74.0
Mexico	74.2
Argentina	78.2
Chile	79.2

The average index figures converged towards the ranking presented in table 5:3 after about 50 questionnaires had been reviewed. It can therefore be concluded that a larger sample would have added only marginally to the reliability of the survey, and that table 5:3 reflects in part the average Swedish middle manager's "psychic distance map" of the world.

5:4:4 The Dependent Variables

The dependent variable is the firm's internationalization process. This process, however, is in itself a multi-dimensional phenomenon. To be able to study and discuss this phenomenon. One must determine its critical key dimensions. On the basis of the theoretical background discussed in chapter two concerning multinational corporations, foreign direct investments and the internationalization process of the firm, a model was developed that emphasized three dimensions of the process: the sequence of foreign markets entered, the establishment process within a market and the establishment mode of subsidiaries. These three key dimensions are the ones used in this study.

Data have been collected that have made it possible to construct measures of all the important dimensions except the establishment chain. For reasons discussed in section 5:1:2, the population by definition contains corporations with only sales subsidiaries. In spite of some complementary data from the IUI-population on the establishment process of firms with foreign manufacturing subsidiaries as well, it has only been possible to conduct some rudimentary tests of the hypothesis on the firm's establishment process within foreign markets.

Question 6(a) in a straightforward way provides information on which markets the firms have established sales subsidiaries, since when, whether the establishment was acquired or not, if acquired whether the acquired firm had served as a local representative before the acquisition and since when, and finally the turnover on each market.

6 Testing 11 of the Hypotheses

This chapter will be focused on various tests of H:1-H:14. After a brief descriptive introduction to the data material, the results of the tests are presented and commented on. Apart from hypotheses H:9-H:11 on the establishment pattern within foreign markets, all of the hypotheses will be subject to some kind of test. The very nature of the population studied excludes any extensive tests of the establishment pattern within markets. The decision to approximate the ideal population (see 5:1:2 and figure 5:1) with the population of Swedish manufacturing firms operating *only* foreign sales subsidiaries, ruled out testing whether the "establishment chain", as it was observed by earlier research, is still valid. In spite of this limitation in the data-material, some partial tests of the establishment pattern within foreign markets will be conducted in H:9 and H:11.

6:1 Some Characteristics of the Studied Population

It is virtually a complete census of Swedish manufacturing firms with one or more foreign sales subsidiaries that has been conducted. In terms of number of firms, the response rate is as high as 96%; 161 firms were approached with questionnaires which 156 of them ultimately completed.

Consistant with the ambition to study patterns in fairly recent internationalization processes, the firms studied are relatively new entrants on the international scene. About 70% of them established their first foreign subsidiary during the last ten years (see Table 6:1), and more than 95% established their first foreign subsidiary after 1960.

That the firms are rather new entrants in the international arena, is also reflected in the percentage of sales abroad and the number of foreign subsidiaries. On the average the 156 corporations studied exported 43% of their sales, as compared to an average of 49% for all Swedish manufacturing firms with at least one foreign susidiary and more than 50 employees in Sweden. In terms of foreign subsidiaries,

Table 6:1 Establishment Year of First Foreign Sales Subsidiary. 156 Corporations with Only Foreign Sales Subsidiaries.

Establishment Year	Frequency	%	acc %
1948	1	0.6	0.6
54	1	0.6	1.3
59	1	0.6	1.9
60	2	1.3	3.2
61	1	0.6	3.9
62	1	0.6	4.5
65	2	1.3	5.8
66	1	1.3	5.8
67	1	0.6	7.1
68	2	1.3	8.4
69	4	2.6	10.1
70	5	3.2	14.2
71	1	0.6	14.8
72	4	2.6	17.4
73	4	2.6	20.0
74	1	0.6	20.6
75	8	5.2	25.8
76	3	1.9	27.7
77	9	5.8	33.5
78	9	5.8	39.3
79	9	5.8	45.1
80	12	7.7	52.9
81	10	6.5	59.3
82	10	6.5	65.8
83	11	7.1	72.9
84	17	11.0	83.8
85	15	9.7	93.5
1986	10	6.5	100.0

the difference is considerably greater. The younger international firms in this study have an average of 2.7 foreign sales subsidiaries, whereas the average for the population of all 264 Swedish manufacturing firms with foreign establishments, sales as well as manufacturing subsidiaries included, is 9.1.

For obvious reasons the younger multinationals focused on in this study could be expected to differ from the population of all Swedish manufacturing firms with foreign establishments in being smaller, and in having a lower percentage of sales abroad and fewer foreign subsidiaries. However, in other respects, like distribution by industry and country, it is not so obvious a priori how the studied population per se is distributed, or whether it has any special traits as compared to the population of all Swedish international manufacturing firms. The following two sections provide an overview of both populations in terms of distribution by industry and country.

6:1:1 Distribution by Industry

The population focused on in this study is, as mentioned before, a subpopulation of all 264 Swedish manufacturing firms with more than 50 employees in Sweden and one or more wholly owned establishments abroad in 1986. The other subpopulation, which together with the firms studied constitutes the grand total of Swedish manufacturing firms with operations abroad, is the group of firms with both sales and manufacturing operations abroad. The distribution by industry of the two subpopulations as well as the total population is presented in table 6:2.

Table 6:2 Industry Distribution of the Total Population of Swedish Manufacturing Firms with One or more Foreign Subsidiaries and the Two Subpopulations.

Industry	Swedish Manufacturing Firms with Foreign Sales and Manufacturing Subsidiaries		Swedish Manufacturing Firms with only Foreign Sales Subsidiaries		All Swedish Manufacturing Firms with one or more Foreign Subsidiaries	
	No of Firms	%	No of Firms	%	No of Firms	%
Food, drink, tobacco	9	8.3	5	3.7	14	5.3
Textiles, apparel, leather and leather products	4	3.7	10	6.4	14	5.3
Pulp and paper	6	5.6	3	1.9	9	3.4
Paper and allied products, printing ind.	5	4.6	7	4.5	12	4.5
Chemicals, rubber and plastic products	21	19.5	16	10.4	37	14.0
Primary and fabricated metals	23	21.3	40	25.6	63	23.9
Machinery (ex. electr.)	17	15.7	23	14.7	40	15.2
Electrical machinery	3	2.8	3	1.9	6	2.3
Transportation equipm.	3	2.8	10	6.4	13	4.9
Other manufacturing	8	7.4	39	25.0	47	17.8
Mixed	9	8.3	–	–	9	3.4
All industries	108	10.0	156	100.0	264	100.0

There seems to be no dramatic differences between the two subpopulations in the relative distribution by industry. In those cases where the differences in relative terms are large, like the paper and pulp industry, the underlying absolute figures are very small. Apart from the rubber and plastic products industry, where firms with manufacturing

and sales subsidiaries abroad seem to have a somewhat higher percentage than the studied population, the only really significant difference between the two subpopulations seems to be in the "other manufacturing" category. However, if the two residual categories of "other manufacturing" and "mixed" are taken together, there is considerably less of a difference. Both these categories serve as a way out for respondents that cannot identify themselves with any of the other industry classifications in the questionnaire.

It seems plausible that there should be at least some differences between the two subpopulations in terms distribution by industry. Firms with only foreign sales subsidiaries are either ones that are at an early stage of the internationalization process or corporations that have centralized production located in their country of origin. In the latter case international operations are limited to sales and/or sales support activities. In certain industries, or for certain products or product families within an industry, centralization of production might be either uneconomical and/or difficult because of local regulations on foreign markets. Low value/weight relations in the bulk segment of the chemicals, rubber and plastic products industry might for example be one of the factors explaining the low percentage of firms with centralized production in this industry. In spite of these differences between the subpopulations, the 156 corporations studied seem on the average to reflect fairly well the industry distribution of the total population of 264 Swedish manufacturing firms with one or more foreign subsidiaries.

The studied population has a combined total of 435 wholly owned subsidiaries abroad (see table 6:3). The frequency of minority interests, or jointly owned operations, is very low. Only three of the corporations have indicated that they are involved in operations abroad which according to the definitions in the questionnaire (see appendix 2) could be defined as minority interests. Jointly owned operations purely for sales and/or sales support activities are in general particularly unstable (Porter and Fuller, 1986). They are usually formed because of the access motive on one or both sides. One partner needs market access, while the other needs access to the product. As the foreign partner's knowledge of local conditions increases, there is less and less need for a local partner.

The industry distribution of the studied firms' foreign subsidiaries is presented in table 6.3. Again, there seem to be no dramatic differ-

ences between the two subpopulations. A slight overrepresentation in the primary and fabricated metals industry, and a slight underrepresentation in the machinery and electrical machinery industry, could be noted in the group of firms studied. One reason for these differences might be the different age structure of the firms within the two subpopulations. The firms that constitute the studied population are on the average considerably younger than firms in the other subpopulation. Since changes in basic supply and demand are continuously altering industry conditions, it seems almost natural that the industry distribution of firms that have established abroad during the last decades is different from that of firms established several decades earlier. However, the differences are rather small, and may be due largely to random variations, either in the underlying de facto industry distributions, or in the respondents' industry classification.

Table 6:3 Industry Distribution of Subsidiaries in the Total Population of Swedish Manufacturing Firms with One or more Foreign Subsidiaries and the Two Subpopulations.

Industry	Swedish Manufacturing Firms with Foreign Sales and Manufacturing Subsidiaries.				Swedish Manufacturing Firms with only Foreign Sales Subsidiaries		All Swedish Manufacturing Firms with One or more Foreign Subsidiary	
	No of Sales subs.	%	No of manuf.	%	No of Sales subs.	%	No of Sales subs.	%
Food, drink, tobacco	14	1.2	19	3.0	10	2.3	43	1.9
Textiles, apparel, leather and leather products	2	0.2	11	1.7	26	6.0	39	1.7
Pulp and paper	56	4.6	16	2.5	27	6.2	99	4.3
Paper and allied products, printing ind.	23	1.9	50	7.8	18	4.1	91	4.0
Chemicals, rubber and plastic products	187	15.5	123	19.1	36	8.3	346	15.1
Primary and fabricated metals	124	10.2	104	16.2	110	25.3	338	14.8
Machinery (ex. electr.)	380	31.5	171	26.6	82	18.9	633	27.7
Electrical machinery	138	11.4	69	10.4	6	1.4	211	9.2
Transportation equipm.	101	8.4	28	4.4	21	4.8	150	6.6
Other manufacturing	39	3.2	54	8.4	99	22.2	192	8.4
Mixed	144	11.9	—	—	—	—	144	6.3
All industries	1 208	100.0	643	100.0	435	100.0	2 286	100.0

6:1:2 Distribution by Region and Country

As table 6:4 indicates, most of the foreign subsidiaries are located in industrialized countries. In the case of the total population of Swedish manufacturing firms, about 90 % of all foreign subsidiaries are located in the industrialized parts of the world. Within this region, the industrialized countries of Western Europe are by far the most important host countries in terms of number of subsidiaries.

It should be mentioned that these figures somewhat underestimate the activities of Swedish multinationals in third-world countries. Here local authorities often try to force foreign firms to do business in forms other than wholly owned subsidiaries. However, even if the "disguised" operations in third world countries were taken into account, this would only marginally affect the overall relative distribution of foreign activities. (For more detailed figures on Swedish MNC:s activities in third-world countries, see Swedenborg et al, 1988).

The firms studied are even more concentrated within the industrialized world and Europe than the total population of Swedish manufacturing firms with foreign activities. This could be expected. As table 6:1 indicates, about 50% of these firms established their first foreign sales subsidiary abroad during the last ten years. More than 95% established their first foreign subsidiary after 1960. These rather young international firms can generally be expected to have begun their internationalization process in areas perceived to be fairly close to Sweden in terms of psychic distance and demand structure. In spite of two underlying assumptions of this study – a more homogeneous world and a general decrease in psychic distance to foreign markets – it is plausible to assume that in some respects the "old heterogeneous world" will remain with us for the foreseeable future. Even if the industrialized countries are becoming increasingly linked to each other economically, administratively and culturally, particularly in Europe, third world countries are only to a certain extent affected by this international homogenization process. Apart from the fact that these countries are marginal markets with very limited purchasing power (which contributes to their unattractiveness to foreign investors, especially de novo ones) they are still rather distant in terms of psychic distance, and generally entered at later stages of the internationalization process.

Table 6:4 Country and Regional Distribution of Subsidiaries in the Total Population of Swedish Manufacturing Firms with One or more Foreign Subsidiaries, and the Two Subpopulations.

Region/Country	Swedish Manufacturing Firms with Foreign Sales and Manufacturing Subsidiaries.				Swedish Manufacturing Firms with only Sales Subsidiaries		All Swedish Manufacturing Firms with One or more Foreign Subsidiary	
	No of Sales Subs.	%	No of Manuf. Subs.	%	No of Sales Subs.	%	No of Sales Subs.	%
<i>Industrialized Countries</i>	1 064	87.8	557	86.2	429	98.0	2 047	89.4
<i>EC6</i>	354	29.3	204	31.6	116	26.7	647	29.4
Belgium/Luxembourg	41	3.4	14	2.2	116	1.8	63	2.8
France	77	6.4	56	8.7	23	5.3	156	6.8
Italy	51	4.2	32	5.0	5	1.1	88	3.8
Holland	56	4.6	26	4.0	23	5.3	105	4.6
West-Germany	129	10.7	76	11.8	57	13.7	262	11.4
<i>EC3</i>	234	19.7	99	15.3	120	27.6	453	19.8
Denmark	95	7.9	39	6.0	48	11.0	182	8.0
England	128	10.6	55	8.5	72	16.6	255	11.1
Ireland	11	0.9	5	0.8	—	—	16	0.7
<i>EFTA</i>	264	21.9	106	16.4	133	30.6	503	22.0
Norway	92	7.6	29	4.5	77	17.7	198	8.7
Finland	69	5.7	41	6.3	34	7.8	144	6.3
Switzerland	50	4.1	14	2.2	11	2.5	75	3.3
Austria	45	3.7	14	2.2	11	2.5	70	3.1
Portugal ¹	8	0.7	8	1.2	—	—	16	0.7
<i>Rest of Europe</i>	38	3.1	23	3.6	4	0.9	69	3.0
Eastern Europe	4	0.3	—	—	—	—	4	0.2
Spain ¹	21	1.7	21	3.3	4	0.9	42	1.8
Greece ¹	13	1.1	2	0.3	3	0.7	18	0.8
Turkey								
Cyprus								
<i>North America</i>	111	9.2	95	14.7	48	11.0	254	11.1
US	86	7.1	79	12.2	37	8.5	202	8.8
Canada	25	2.1	16	2.5	11	2.5	52	2.3
<i>Other industrialized countries</i>	60	5.0	30	4.6	8	1.8	98	4.3
Australia	34	2.8	22	3.4	5	1.1	61	2.7
New Zealand								
South Africa	3	0.2	5	0.8	—	—	8	0.3
Japan	23	1.9	3	0.5	3	0.7	32	1.4
<i>Newly industrialized countries</i>	147	12.3	89	13.8	6	1.4	242	10.6
Africa	15	1.2	3	0.5	—	—	18	0.8
Asia	73	6.0	16	2.5	6	1.4	95	4.2
Latin America	59	4.9	70	10.8	—	—	129	5.6
<i>All countries</i>	1 208	100.0	646	100.0	435	100.0	2 289	100.0

¹ Have by 1990 joined the EC.

6:1:3 Changes in Distribution by Industry and Region over Time

The contemporary relevance of models of the internationalization process, particularly for those developed at Uppsala during the late 60's for Swedish firms, is to some extent challenged in this study. Since the Uppsala studies, Swedish industry in general has undergone extensive structural change, particularly in the 70's. Given the transitional nature of this period for Swedish industry, it could be of some interest to see how the overall population of Swedish manufacturing firms with foreign sales or manufacturing subsidiaries has developed over time in certain dimensions like industry and country distribution.

Material available from the Uppsala study (Hörnell, Vahlne and Wiedersheim-Paul, 1973) of Swedish firms' international activities and the report from the Committee on Foreign Direct Investments (DIRK, SOU 1982:27) provides a basis for comparing the regional and industrial distribution of the stock of foreign subsidiaries of Swedish manufacturing firms at three points in time; 1969, 1978 and 1986 (see table 6:5 and 6:6). The 1978 study was similar to the 1986 study conducted by IUI. With minor changes, the same questionnaires were used. Similarly, the results were reported in an almost identical form. Hence, it is readily possible to compare the 1978 and 1986 figures.

The figures from 1969, however, call for some reservations. Firstly, this study used a somewhat wider definition of Swedish manufacturing industry, including the farming, building and electricity, gas and water-supply industries. There are no breakdowns available that would have made it possible to eliminate the 29 manufacturing and 10 sales subsidiaries of these industries from table 6:5 and 6:6. Secondly, the researchers rather than the respondents have made the industry classification of the 1969 material. There may be differences in classification principles, which limit the comparability of the figures with those of the two later studies.

In terms of the regional distribution of the subsidiaries (table 6:5), the picture seems to have changed only marginally since 1969. In 1986 the group of EC and EFTA countries still hosts about 70% of the foreign subsidiaries of Swedish manufacturing firms. The largest percentage change, an increase from 7,0% in 1969 to 11,1% in 1986, can be noted in the North American region, which in the era of global competition has become more and more strategically important for a number of reasons, including its size, market potential, advanced buyers and stiff

competition. In several industries, such as telecommunications, it is close to a vital necessity to be represented in the U.S. market in order to be competitive globally (for further readings on Swedish firms in the U.S., see Ågren 1990).

A somewhat surprising, though small, relative decrease since 1969 could be noted among the newly industrialized countries. In spite of their often asserted importance, Africa, Latin America as well as Asia have declined in relative importance as host countries of Swedish wholly owned subsidiaries. However, in view of the propensity of third world-countries to legislate against wholly owned foreign operations, table 6:5 might well not reflect the actual level of activity of Swedish MNC:s in these regions. (For more details on Swedish MNC:s activities in these regions, see Swedenborg, 1988.)

Table 6:5 Regional Distribution of Swedish Manufacturing Firms' Foreign Manufacturing and Sales Subsidiaries 1969, 1978 and 1986.

Region	Swedish Manufacturing Firms with Foreign Sales and Manufacturing Subsidiaries 1969 ⁵ . Source: Hörnell et al 1973			Swedish Manufacturing Firms with Foreign Sales and Manufacturing Subsidiaries 1978. Source: SOU 82:27			Swedish Manufacturing Firms with Foreign Sales and Manufacturing Subsidiaries 1986.		
	No of Manuf. Subs.	No of Sales Subs.	%	No of Manuf. Subs.	No of Sales Subs.	%	No of Manuf. Subs.	No of Sales Subs.	%
<i>Industrial Regions</i>									
EC 6	243	210	30.8	331	180	31.5	354	204	30.1
EC 3	—	—	—	210 ³	83 ³	18.1	234	99	18.0
EFTA (incl Portugal)	426	198	43.2	251	96	21.4	264	106	19.6
Rest of Europe (incl Eastern Europe)	26	16	2.9	33 ⁴	25 ⁴	3.6	38	23	3.3
North America	64	37	7.0	83	58	8.7	111	95	11.1
of which U S	n.a	n.a	n.a	58	42	6.2	86	79	8.9
Other industrialized countries	18	15	2.3	42	25	4.2	60	30	4.9
<i>Newly Industrialized Countries</i>									
Africa	12 ¹	13 ¹	1.7	11	2	0.8	15	3	1.0
Asia	24 ²	22 ²	3.2	30	16	2.8	73	16	4.8
Latin America	58	71	8.9	62	78	8.6	59	70	7.0
Not distributed	—	—	—	—	4	0.2	—	—	—
All regions	871	573	100.0	1 054	567	100.0	1 208	646	100.0

¹ Including 14 subsidiaries in South Africa

² Including 9 subsidiaries in Japan

³ Excluding Ireland

⁴ Including Ireland

⁵ Since the definition of manufacturing firms is somewhat broader here than 1978 and 1986, the number of foreign subsidiaries is larger than it would otherwise be.

Table 6:6 Industry Distribution of Swedish Manufacturing Firms' Foreign Sales and Manufacturing Subsidiaries 1969, 1978 and 1986.

Industry	Swedish Manufacturing Firms with Foreign Sales and Manufacturing Subsidiaries 1969. Source: Hörnell et al 1973			Swedish Manufacturing Firms with Foreign Sales and Manufacturing Subsidiaries 1978. Source: SOU 1982:27			Swedish Manufacturing Firms with Foreign Sales and Manufacturing Subsidiaries 1986.		
	No of Manuf. Subs.	No of Sales Subs.	%	No of Manuf. Subs.	No of Sales Subs.	%	No of Manuf. Subs.	No of Sales Subs.	%
Food, drink, tobacco	11	24	2.5	8	11	1.2	19	24	1.9
Textiles, apparel, leather and leather products	38	46	6.0	24	14	2.3	11	28	1.7
Pulp and paper	31	79	7.5	21	70	5.6	16	83	4.3
Paper and allied products, printing industry	11	16	1.9	50	22	4.4	50	41	4.0
Chemicals, rubber and plastic prod.	68	80	10.5	79	118	12.2	123	223	15.1
Primary and fabricated metals	145	143	20.5	122	122	15.2	104	234	14.8
Machinery (ex. electrical)	111	253	25.9	123	296	25.9	171	464	27.8
Electrical machinery	67	104	12.2	78	108	11.4	69	144	9.3
Transportation equipment	13	35	3.4	19	81	6.2	28	122	6.6
Other manufact.	49	80	9.2	43	51	5.8	54	138	8.4
Mixed	—	—	—	—	160	9.9	—	144	6.3
All Industries	544	860	100.0	567	1054	100.0	1208	1645	100.0

In terms of industry distribution of foreign establishments, there have been no dramatic shifts since 1969, in spite of the radical structural changes in Swedish industry during the 70's. Obviously, one explanation is that the industry distribution to a large extent is determined by the group of large Swedish multinationals (see Swedenborg, 1988) that were established early this century and still dominate Swedish export industry today.

Two of the industries that were most severely hit by the Swedish cost crises during the 70's – textiles and related products and the primary and fabricated-metals, have had the most substantial decrease in their share of wholly owned foreign operations since 1969. The largest increases over the same period were in plastic products, the paper and allied products and transportation equipment. Overall, industries

with a higher value-added seem to have been growing in importance as foreign investors while those with a lower value-added have been declining.

To explain in more detail the net changes over time in industry and regional distribution, we would need flow data in addition to the stock data provided in table 6:5 and 6:6. Such an analysis, however, is beyond the scope and purpose of this study. Here it will suffice to provide an overview of the principal changes in the industry and regional distribution of foreign establishments by Swedish manufacturing firms since the last major study of this process was made 1969. Such an overview will furnish a contextual framework for the interpretation of the results of this study as well as earlier studies.

6:2 Tests of the Hypotheses

In the following subsections hypotheses H:1-H:14 will be confronted one-by-one with the empirical material. In those cases where relevant material is available from earlier studies of the internationalization process of Swedish manufacturing firms, comparisons will be made.

Patterns in the Sequence of Foreign Markets Entered: H:1-H:8

6:2:1 Hypotheses H:1 and H:2

Hypotheses H:1 and H:2 concern the determinants of the firm's choice of national markets when going abroad. An implicit assumption of these hypotheses is that psychic distance no longer can explain the choice of markets to the same extent as it has done historically. Hörnell, Vahlne and Wiedersheim-Paul (1973) could not reject the hypothesis that Swedish manufacturing firms begin their internationalization process in psychologically nearby markets and then gradually penetrate more distant markets. Table 6:7 presents the result of their study: a ranking based on the "mean establishment rank" of the twenty most frequent host countries for Swedish manufacturing firms.

Table 6:7 Number of Establishments of Subsidiaries of Different Orders on 20 Markets in 1973, and the Mean Establishment Rank (MR) for these Markets.

Country ¹	Number of Establishments												
	1	2	3	4	5	6	7	8	9	10	Total	MR-D ¹	MR-FD ²
Denmark	86	29	13	10	6	4	2	3	0	1	157	2.3	2.4
Norway	69	35	14	9	1	3	6	0	2	1	143	2.6	2.2
West-Germany	80	24	19	13	8	8	5	0	0	0	165	2.9	3.1
Finland	43	30	7	6	5	3	2	3	1	2	107	3.1	3.1
Great Britain	49	19	8	6	11	1	3	1	1	1	111	3.3	3.3
USA	20	17	10	3	5	1	5	1	1	0	68	3.8	3.8
France	8	10	15	3	8	2	2	3	2	1	57	4.3	5.2
Japan	5	0	1	1	0	0	0	0	0	1	9	5.7	8.7
Netherlands	15	15	6	5	5	6	3	6	2	2	73	4.9	5.1
Switzerland	30	5	5	9	5	4	4	2	3	3	81	5.2	4.3
Spain	3	5	6	0	0	1	0	3	0	1	26	6.9	6.2
Belgium	5	2	4	5	5	0	2	4	3	2	42	6.9	5.8
Austria	1	7	1	2	3	1	4	3	1	1	31	6.9	5.9
Italy	5	2	5	1	6	4	3	1	4	1	42	7.0	6.2
Canada	4	2	3	3	0	4	2	1	3	2	32	7.9	7.7
Brazil	6	0	1	4	0	1	0	1	4	2	26	8.1	7.6
Portugal	6	2	2	1	1	0	0	0	0	0	20	8.2	9.0
South Africa	3	0	1	0	2	1	0	2	0	0	14	8.3	9.2
Argentina	0	0	5	1	1	0	0	1	2	3	19	9.5	9.7
Australia	2	0	2	1	2	0	2	1	0	4	25	9.7	10.3

Source: "Export och Utlandsetablering" Hörnell-Vahlne-Widerström-Paul, 1973

¹ The countries are ranked according to the mean establishment rank (MR).

² The MR-D and MR-FD are the respective mean establishment ranks calculated for subsidiary establishments (D) and establishment of sales subsidiaries (FD).

The mean establishment rank, or MR, is defined as:

$$MR = \frac{\sum W_i R_i}{\sum W_i}$$

where

R_i = the establishment rank, i.e. first establishment, second establishment etc.

W_i = number of establishments of a certain rank within a certain market.

$\sum W_i$ = total number of subsidiary establishments within a certain market.

If our hypotheses are correct a low correlation could be expected between the ranking in terms of MR in table 6:7 and a similar ranking of markets based on the material in this study.

A straightforward comparison between table 6:7 and the results of this study – table 6:8 – is unfortunately not possible. The population of firms on which this study is focused has a considerably smaller stock of subsidiaries than the population studied by Hörnell, Vahlne and Wiedersheim-Paul (op cit). A sufficient number of observations to make any MR calculations meaningful and reliable are only available for ten markets. The rankings for these ten markets are presented in table 6:8.

In comparing tables 6:7 and 6:8 some of the crucial differences between the two studies should be kept in mind. First, the earlier study includes data on both sales and manufacturing subsidiaries. Second, approximately 25% of the 2,045 subsidiaries in the 1973 study are foreign establishments of service firms like banks, insurance companies, trading companies etc.

It is difficult to have any firm a priori opinions about the scope and direction of the biases introduced by these differences. A few remarks, however, may be made. The location decisions of service firms could basically be expected to be influenced by psychic distance in a way similar to those of manufacturing firms. A slight bias towards generally being somewhat more sensitive to psychic distance than manufacturing firms could perhaps be expected in view of the nature of services; the high "human content" in the production, exchange, and consumption of services may render them more subject to national and regional idiosyncrasies than for example heavy industrial goods. If there is such a bias among service firms, this would in effect mean that the 1973 study "overestimates" the importance of psychic distance as compared to a population consisting purely of manufacturing firms.

The fact that the 1973 data is based on the establishment of both sales and manufacturing subsidiaries, introduces a bias that to a certain extent could be controlled. The 1973 data provides MR values based firstly on the establishment of both sales and manufacturing subsidiaries (MR-D in table 6:7), and secondly on the establishment of sales subsidiaries only (MR-FD in table 6:7). With the exception of Japan, MR-D and MR-FD appear to be roughly of the same order. The rank correlation (significant at the 0.05 level) between the countries ranked on the basis of MR-D and MR-FD respectively, is as high as 0.86. The country distribution of sales subsidiaries in the 1973 study

Table 6:8 Number of Establishments of Subsidiaries of Different Orders on 10 Markets, 1973 and 1986, and Mean Establishment Rank (MR) for these Markets.

1973 Ranking ¹		1986 Ranking	Number of Establishment 1986													
Country	MR ²	Country	1	2	3	4	5	6	7	8	9	10	11	12	Total	MR
Denmark	2,3	Norway	48	10	5	3	1	1	1	1	0	0	0	0	70	1,1
Norway	2,6	Great Britain	29	21	10	0	1	0	1	0	0	0	0	0	62	1,1
West-Germany	2,9	West-Germany	18	24	8	2	0	0	0	0	0	0	0	0	52	1,1
Finland	3,1	USA	20	8	5	4	1	0	0	0	0	0	0	0	38	1,1
Great Britain	3,3	Denmark	20	12	6	1	0	2	0	1	0	0	0	0	42	2,7
USA	3,8	Finland	18	9	2	0	0	1	0	1	0	0	0	1	32	2,7
France	4,3	Switzerland	5	1	2	1	0	0	0	1	0	0	0	0	10	2,7
Japan	4,7	France	9	4	3	1	4	1	1	0	0	0	0	0	23	2,7
Netherlands	4,9	Italy	3	1	0	0	0	0	0	0	1	0	0	0	5	2,7
Switzerland	5,2	Netherlands	4	5	2	3	1	2	1	1	0	0	0	0	19	3,1
Other markets	7,9	Other markets	8	12	5	3	3	4	1	2	0	1	1	0	45	3,1
		Total no of Establishment	182	107	48	23	11	11	7	6	1	1	1	1	399	

¹ Source: "Export och Utlandsetableringar", Hörnell, Vahlne and Wiedersheim-Paul, 1973.

² MR-D (see table 6:7 note 2), i.e. the mean establishment rank calculated for all subsidiary establishments.

was obviously a fairly good proxy of the country distribution of all subsidiaries and vice versa. However, even if there is a strong correlation between MR-D and MR-FD in the 1973 study – i.e., an indication of a strong correspondence between the establishment sequence of sales subsidiaries and that of and sales and manufacturing subsidiaries – it has not been proven that this correspondence is valid to the same extent 1986.

With these limitations in mind, we notice that the order and composition of the top ten markets have changed somewhat since 1973. Denmark has moved from a first to a fifth position, and Great Britain and the U.S.A. have become the second and the fourth markets respectively. Norway has taken over as the market which on the average is entered first, and West Germany has kept its ranking. Japan is by 1986 no longer among the top ten markets, and Italy has shown up as a newcomer. Apart from these major differences, Finland, Switzerland, the Netherlands and France have marginally changed their rankings since 1973.

On the whole, however, there have been no radical changes in the picture, whether one considers the composition or the ranking of the top ten markets. There is an interesting question though, from the perspective of this study; how can we explain the changes that in fact

have taken place, if we can explain them at all? What is the role of psychic distance? Of other factors? And last, but by no means least, do H:1 and H:2 receive any support?

From table 6:8 it is obvious that the gradual establishment sequence proposed by the Uppsala researchers 1973 can still not be ruled out in 1986. All of the top ten markets but one are still European in 1986. Furthermore, apart from the U.S.A., the first seven markets are all northern European countries with historically well established ties to Sweden. Actually, the non-European countries among the top ten markets have declined from two to one since 1973. In 1986 Japan is no longer among the top ten markets in terms of MR. This fact should, however, be interpreted with a certain caution. The high MR-value for Japan in the 1973 study highlights some of the problems with the MR-measure rather than the "real" ranking of Japan in the establishment sequence. The MR-measure puts equal weight on all establishments regardless of rank and does not reflect the weight of a country in terms of absolute number of establishments.

In spite of these limitations in the MR-measure, table 6:8 provides a good overall picture. The composition of the top ten markets in 1973 and 1986 indicates that psychic distance in 1986 may still play a role in explaining the aggregate foreign-establishment sequence of Swedish manufacturing firms. At the same time, the MR-values hint that the nature of this role may have changed somewhat over time. The spread in the MR-values for the countries in the 1986 material is considerably smaller than in the 1973 material. By 1986, there seems to be more indifference to which markets are entered at a certain stage in the establishment sequence than in 1973. The differences in terms of MR are particularly small between the first six markets in the 1986 ranking.

This is either an indication that the psychic distance to the various markets within the group of the top ten markets is evening out, or/and an effect of the fact that a population of rather young firms has been studied. In the 1973 population the average number of foreign subsidiaries per firm is slightly higher (3.25) than in the 1986 population (2.6). This is reflected in the generally higher MR-values for the 1973 population. However, not only the general level but also the distribution of the MR-values could be expected to be influenced by the age of the firms studied. Older firms obviously have had more time to establish subsidiaries. As can be seen in table 6:8 there are

very few establishments subsequent to the fourth in the 1986 population. This means in effect that the MR-values tend to converge towards values between 1 and 4. More observations of subsequent establishments would have broadened this span and might have differentiated more clearly between the MR-values of different markets. This effect is obviously a major reason for the limited spread in the MR-values. If the absolute number of first and second establishments are taken into account the picture is not one of complete indifference between the various national markets; in 1986 the top six national markets account for 82 % and the top three for 52 % of the first and second establishments.

Taken together, the rankings in table 6:8 based on MR provide little support for H:1 and H:2. The average sequence in the establishment of subsidiaries does not support the idea of a Nordic "home" region that is penetrated before the rest of Europe. Although Norway is the market with the lowest MR, the other Nordic markets are on the average the fifth and sixth to be entered. On the average firms seem to establish in Great Britain, West Germany as well as the U.S. before Denmark and Finland are entered. The high ranking of the U.S. is also contrary to the hypotheses. The U.S. is entered fourth on the average, i.e. even before such nearby markets as Denmark and Finland and before most European markets.

The results indicate that H:1 and H:2 must be rejected. The hypothesis that foreign markets are penetrated region by region receives very limited empirical support in the MR-based establishment ranking presented in table 6:8.

However, the ground for rejecting H:1 and H:2 are far from firm. Firstly, only the establishment pattern of sales subsidiaries has been studied. Secondly, the low ranking of Finland and Denmark may well be an effect of the definition of establishment used. Within culturally and administratively homogeneous regions like the Nordic Region, the sales subsidiary measure might be too crude. If a region as a whole could be considered as virtually one large market, other distribution forms than sales subsidiaries may in many cases be equally effective at lower costs. Norway, Denmark and Finland, for example, could be served directly from Sweden, it would just be a matter of finding suitable local distribution channels. With a broader definition of establishments, including agents, importers, local distributors and manufacturing subsidiaries, the picture of the establishment sequence

might look different. Thirdly, the limited differentiation between the markets that the MR-measure provides makes it difficult to draw any really firm conclusions about the ranking.

The MR-measure is obviously not able to provide a complete picture of the establishment sequence. Particularly not when the number of observations is low and the establishments are largely limited to the beginning of the establishment sequence. These idiosyncracies also rule out the possibility to separate the material into two groups in order to check for the influence of other factors. The absolute number of first, second and third establishments, representing as much as 85% of the total number of observations, can certainly provide valuable supplementary information.

Table 6:9 presents the number of first establishments and the total number of first, second and third establishments in four regions for the 1973, as well as the 1986, material. The first two regions, i.e. the Nordic countries and Europe, are the same as in H:1 and H:2. The U.S. because of its absolute size as a market and its importance to Swedish manufacturing firms (cf Ågren, 1990), is important as a region of its own.

From table 6:9 we find the most significant change since 1973, in terms of which regions are penetrated at the early stages of the internationalization process, to be that the U.S. has been growing in importance. The percentage of early establishments in the Nordic countries, Europe and the rest of the world are of the same order of magnitude in 1973 and 1986, apart from a slight decrease from 45.9% to 39.6% in the share of first establishments in Europe. Interestingly enough, this decrease in the number of first establishments here, seems to have been offset by an increase in the number of first establishments in the U.S. In 1973, Europe and the U.S. together accounted for 51.4% of the first establishments; in 1986 the corresponding figure is 50.6%.

That the U.S. has been growing in importance lately as a host country for Swedish FDI:s, and Swedish export activities in general, is well documented (cf Swedenborg et al, 1988; Ågren, 1990; Lindquist, 1990). Swedenborg et al establish that U.S. manufacturing subsidiaries accounted in 1986 for as much as 30% of the total stock of assets and 19% of the employees in the foreign manufacturing operations of Swedish manufacturing firms. In 1970 the U.S. accounted for only 7% of the assets and 5% of the employees.

Table 6:9 Number of First and Total Number of First, Second and Third Establishments in Four Regions 1973 and 1986.

	1973			
	Nordic Countries	Europe	USA	Rest of the World
No of first establishments	198	202	20	20
	45.0%	45.9%	4.5%	4.5%
No of first, second and third establishments	326	364	47	35
	42.5%	47.4%	6.1%	4.6%

Source: "Export och utlandsetableringar", Hörnell, Vahlne and Wiedersheim-Paul, 1973

	1986			
	Nordic Countries	Europe	USA	Rest of the world
No of first establishments	86	72	20	4
	47.2%	39.6%	11%	2.2%
No of first, second and third establishments	130	160	33	14
	38.6%	47.5%	9.8%	4.2%

But it is not only Swedish firms that have been interested in the U.S. market. In spite of the spectacular growth of Swedish FDI:s in the U.S., the Swedish share of the total stock of FDI in the U.S. has declined from 2,0% in 1980 to 1.7% in 1986 (Ågren, 1990). Hence, the increased importance of the U.S. observed in table 6:9 is consistent not only with the overall pattern in the FDI:s and exports of Swedish companies, but also with an international wave of investments in, and exports to, the U.S.

Although the overall trend of investments in the U.S. is well in line with the observations presented in table 6:9, the high percentage of early establishments in 1986, particularly first establishments, is somewhat surprising. The absolute number of first establishments in the U.S. is the same in 1986 and 1973, in spite of the fact that the 1973 population contained 2.5 times more establishments than the one in 1986. This early interest in the U.S. market was also observed by Ågren 1990 in his comprehensive study of Swedish investments in the U.S. He found that of all Swedish firms with subsidiaries in the U.S.,

45% had less than five subsidiaries located outside Sweden. Furthermore, as much as 10% of the firms studied had only one subsidiary, i.e. the American one.

Why the U.S. market has become such an important early market has more than one possible explanation. Obviously the U.S., being politically stable and for many products providing the largest single market in the world, has always constituted a massive potential for many firms. But the contemporary relative increase in U.S.-bound FDI:s from Sweden and elsewhere and the early establishments in the U.S., cannot be satisfactorily explained by the market-potential argument. Relatively speaking the U.S. was probably even more important in terms of market size and potential twenty or more years ago than it is today. Nor does it seem plausible that the psychic distance to the U.S. should have decreased more than to any other market. More subtle explanations must be sought.

Some limited support for the notion of a general decrease, and reduction of differences in psychic distance can be found in the 1986 establishment sequence shown in table 6:8. At the same time, table 6:9 generally confirms the 1973 pattern of regions entered at early stages, apart from the case of the U.S. Now, *if* psychic distance to western non-communist countries generally has decreased and/or become more uniform, other factors like market potential, competitive considerations, access to advanced customers etc., might in relative terms become strong enough to overrule the psychic-distance factor. For small or medium-sized companies, an early (and successful) establishment in the U.S. not only provides access to the world's largest market. Valuable economies of scale might reinforce a company's general competitive position and thereby promote further international expansion. Similarly, and particularly for technologically sophisticated products, relations with U.S. purchasers who in some cases are the most advanced in the world, can provide a critical addition to a suppliers package of competitive advantages (cf Schoenberg, 1985; Ågren, 1990).

These fundamental forces favoring early establishments in the U.S. may well have been further accentuated by a "bandwagon-effect" (Knickerbocker, 1973). For several larger Swedish companies and MNC:s in highly internationalized or global industries like telecommunications, a strong presence in the U.S. has more and more become a matter of survival rather than merely an option (Porter,

1986). The wave of investments, particularly acquisitions, by these firms in the U.S. during the 1980's, may well have also inspired small and medium sized firms with limited or no experience of foreign operations, to jump on this enormous band-wagon of investments bound for the U.S.

6:2:1:1 Assessing the Influence of Some Other Key Factors on the Establishment Sequence.

It is a complex web of decisions and non-decisions, based on numerous conscious as well as unconscious factors, that determines what foreign markets a firm enters and in what order. To explain in detail and to interpret a single firm's establishment sequence, we would require an in-depth understanding of the firm and its environment past and present. However, for an aggregate of firms, it can be expected that the number of explanatory factors for any average pattern are reduced to a few critical ones that are strong, general and unambiguous enough to be discernible at the aggregate level in the sea of noise from the firm-, industry- and situation-specific factors that are always present for every single establishment. Psychic distance, or its reflection within the firm – experience of doing international business – is obviously one such factor, although its importance seems to have decreased somewhat over time.

In chapter four (see also chapter two) we discussed the influence of various factors on a firm's internationalization process in general. We were able to identify a handful of factors which firstly, could be expected to a priori have an influence also at the aggregate level, and which secondly would be possible to measure in this study. We hypothesized (H:3 and H:4) that market potential will become the critical factor explaining the average establishment sequence of foreign subsidiaries by Swedish firms, when, and if, psychic distance in general, and within the Western World in particular, is decreasing and becoming more uniform.

However, even if market potential and what is left of psychic distance are expected to provide the main explanations of the average foreign establishment sequence, there were also other factors worth testing for: firm size, industry concentration ratio, degree of international competition and the "Zeitgeist", i.e. during what period the establishments were made. Through a series of dichotomizations (= dividing

Table 6:10 Number of First and Total Number of First, Second and Third Subsidiary Establishments in Four Regions; Firms That Began Their Internationalization Process Before vs. After 1977.

First Foreign Subsidiary Established Before 1977					
No of first establishments		Nordic Countries	Europe	USA	Rest of the World
		34 49.3%	30 43.5%	5 7.2%	0 0%
No of first, second and third establishments		65 39.9%	79 48.5%	14 8.6%	5 3.1%

First Foreign Subsidiary Established After 1977					
No of first establishments		Nordic Countries	Europe	USA	Rest of the World
		52 46.4%	41 36.6%	15 13.4%	4 3.4%
No of first, second and third establishments		65 37.4%	81 46.6%	19 10.9%	9 5.2%

the material into two groups), of the first, second and third establishments, these factors will be subjected to control. Though rather crude, this technique has been chosen because of the sensitivity of MR calculations' by country to the number of observations, and because of a lack of any powerful and suitable simultaneous analytical technique.

The distribution by region of the first establishments of firms that began their internationalization process before and after 1977 is presented in table 6:10. The figures indicate that the changes in the regional distribution of subsidiaries have taken place rather recently. Firms that have established their first foreign subsidiary before 1977 show a regional distribution that in percentage terms is surprisingly similar to what was observed in the 1973 study (see table 6:9 and table 6:10). The changes in the regional distribution of early establishments have obviously taken place after 1977. Again, the number of observations is in certain cases small, but there is a general and unambiguous

pattern in the percentage differences between the group of firms that established their first foreign subsidiary before and after 1977, respectively.

After 1977 there is a tendency, albeit weak, towards fewer early establishments in the Nordic countries and Europe and more of them in the U.S. and the rest of the world. The increase in the U.S. is particularly apparent. Obviously, the previously discussed increase in establishments in the U.S. is a rather recent phenomenon. Both Swedenborg (1988) and Ågren (1990) highlight the substantial increase in Swedish FDI-activities in the U.S. during the last 20 years. In Ågren's (ibid) study of all (i.e. not only manufacturing firms) Swedish subsidiary establishments in the U.S. in 1986, almost 80% had established their first U.S. subsidiary in 1970 or thereafter, and almost 40% had established their first U.S. operation during the period 1980–1985.

While the growing importance of the U.S. region is interesting per se, it is the overall tendency towards fewer early establishments in the traditional regions, i.e. the Nordic countries and Europe, and the corresponding increase in establishment activities in more distant regions after 1977, that is of central importance for this study. Although the percentage differences are small, the absolute number of observations is low in certain regions, and only the establishment of sales subsidiaries is studied, this tendency is an important indication of changes in the establishment sequence. Even if these changes do not fully correspond with what H:1 and H:2 actually predict, our observations are well in line with the basic ideas underlying H:1 and H:2. These rather recent changes in the establishment sequence also indicate that the socio-economic processes leading to a smaller world in terms of psychic distance (see for example chapter 2:3:2:1), may be phenomena of the 70's and 80's, or else have been speeded up considerably during this period.

In a similar way, it was possible to subject the following variables, firm size, global concentration ratio and degree of international competition within the studied firms' industries – to control. However, we encounter a slight methodological problem here. The figures for these variables are all from 1986, while the establishments considered in our study were made between 1948 and 1986 (see table 6:1). During the planning and tryout of the 1986 questionnaire, it became evident that it was impossible to require the respondents to provide historical firm and industry data for every subsidiary establishment. In order to avoid

preposterous explanations of historical establishments on the basis of firm and industry conditions prevailing in 1986, firms with their first foreign subsidiary establishment before 1979 are excluded from table 6:11–6:13 and 6:21–6:25. The 1979 cut-off point is chosen in order to ensure a meaningful number of observations to analyze, while keeping the average time period between the establishments and the 1986 control variables as short as possible. In spite of this rather late cut-off point, about 50% (148) of the total number of subsidiary establishments (399), 55% of the first establishments and 44% of the total of first, second and third establishments remain to be analyzed. The average time period between the establishment year of the subsidiaries included and 1986 is reduced to 3.3 years for the first establishments and to 3.4 years for the total of first, second and third establishments, as an effect of this adjustment.

The 1986 control variables, particularly the two industry structure variables, could therefore be argued to serve as rather good proxies for conditions prevailing at the actual time of establishment. There is considerable inertia in the global concentration ratio and the degree of international competition in most industries. Major changes can be expected to require well over three years, even when a major international restructuring process is going on in the industry. The variable most sensitive to time is firm size. Mergers and acquisitions, but also extraordinary internal growth, can change the order of magnitude of this variable rather rapidly. However, we may still expect that the size of most firms will at least remain of the same order of magnitude over several years. The average compounded growth in total sales among Swedish manufacturing firms with foreign manufacturing subsidiaries was 13% in nominal terms between 1978 and 1986. (SOU 1983:17; Swedenborg, 1988).

Table 6:11 Number of First and Total Number of First, Second and Third Subsidiary Establishments in Four Regions; Small vs. Large Firms

Small firms < SEK 100 millions/year				
	Nordic Countries	Europe	USA	Rest of the World
No of first establishments	21	17	7	0
	46.7%	41.5%	17.1%	0%
No of first, second and third establishments	27	29	7	0
	42.8%	46.0%	11.1%	0%

Large firms > SEK 100 millions/year				
	Nordic Countries	Europe	USA	Rest of the World
No of first establishments %	26	18	5	3
	50.0%	34.6%	9.6%	5.8%
No of first, second and third establishments	30	38	8	7
	36.1%	45.8%	9.6%	8.4%

Note: Firms with their first foreign subsidiary establishment before 1979 are excluded.

Table 6:11 presents the regional distribution of the early establishments made after 1979 for firms below and above the median turnover of the studied firms in 1986. There appear to be limited differences between the two groups. Although the larger firms seem to have a somewhat higher propensity for early establishment outside Europe, the U.S. and the Nordic countries, the two groups have an otherwise surprisingly similar distribution of their early establishments. Even in the case of the U.S., the smaller firms seem to have a propensity for early establishment at least as strong as that of larger firms (cf Ågren, 1990; Lindquist, 1990). Since smaller firms, with their limited resources, may be expected a priori to be more sensitive than larger firms to risks (and consequently to psychic distance), the distribution in table 6:11 underscores some of the conclusions made earlier. Psychic distance may have decreased and become more uniform in the Western World to the extent that market potential has begun to override psychic distance even for small firms. At the same time, the distribution of establishments among the four regions, as well as the somewhat higher propensity of larger firms to establish in the "rest-of-the-world" region, indicates that psychic distance probably remains an explanatory factor of some importance for the sequence of a firm's foreign establishment.

The two industry-structure variables of global concentration ratio and degree of international competition provide further valuable information about the establishment sequence and its determinants. The regional distribution of the early establishments in industries of low and high global concentration ratios, respectively, (where the concentration ratio is measured as the worldwide market share of the four largest firms in each industry) is presented in table 6:12. There is a very clear difference in the distribution of establishments between the two groups. Firms active in industries with low global concentration

ratios are considerably more prone than their colleagues in industries of high global concentration ratios to establish their first foreign subsidiaries in the Nordic countries. Almost 80% of the first establishments and slightly more than 65% of the total of first, second and third establishments are made in the Nordic countries. The same figures for the group of firms in industries with high global top-four ratios are 21.8% and 19.5%, respectively. Hence, within this latter group of firms, about 80% of the first as well as the total of first, second and third establishments are made outside the Nordic countries. The rest of Europe is the most frequently chosen region, and the U.S. and the Nordic countries are of almost the same weight in terms of absolute number of early establishments.

Even though the number of observations is low, and in certain cases very low, it is hardly a random effect that we have noted. The differences between the two groups in table 6:12 are both large and unambiguous in the sense that they all point in the same direction. However, the observed relationship between the establishment sequence and the global industry concentration ratio may be spurious, i.e., the concentration ratio is correlated with some other variable or variables which actually explain the observed phenomenon.

The concept of spurious correlation is of particular interest in this context. Given the very nature of an industry, with close interdependence among the various structural dimensions (cf figure 2:1 and the following discussions), it is obvious that any given structural dimension has relationships of some type and degree with every other. If the number of actors in an industry is extremely low, we may expect this to be reflected in the cost structure, product differentiation, entry barriers etc. Similarly, we may expect that a high global concentration ratio in an industry will also be reflected in other structural dimensions. The one single dimension that actually explains an observed pattern at the firm level is obviously in most cases difficult to discern. A certain degree of "spuriousity" is always at hand, even if one or two dimensions might be more important than the others in explaining a certain phenomenon.

The interdependence of industry-structure variables and the difficulty of isolating and specifying the influence of any single structural dimension, can be well illustrated by comparing table 6:12 to table 6:13. As in table 6:12, the influence of an industry-structure variable on the regional distribution of foreign subsidiaries is assessed in table 6:13.

Table 6:12 Number of First and Total Number of First, Second and Third Subsidiary Establishments in Four Regions. Firms Active in Industries with a High vs. a Low Global Concentration Ratio.

Worldwide Marketshare of the Four Largest Firms <10%				
	Nordic Countries	Europe	USA	Rest of the World
No of first establishments	35	6	3	0
	79.5%	13.6%	6.8%	0%
No of first, second and third establishments	40	18	3	0
	65.5%	29.5%	4.9%	0%

Worldwide Marketshare of the Four Largest Firms > 10%				
	Nordic Countries	Europe	USA	Rest of the World
No of first establishments	12	29	10	4
	21.8%	52.7%	18.1%	7.3%
No of first, second and third establishments	17	49	13	8
	19.5%	56.3%	14.9%	9.2%

Note: Firms with their first foreign subsidiary establishment before 1979 are excluded.

When the material is dichotomized on the basis of the degree of international competition – high and low – distribution patterns very similar to those observed in table 6:12 can be discerned. In industries with a high degree of international competition, as in industries of high global concentration ratios, the tendency towards early establishment outside the Nordic countries is very clear. About 70% percent of the first as well as the total of first, second and third establishments are made outside this region. In industries of a low degree of international competition, as in industries of low global concentration ratios, the tendency is equally clear towards early establishment first and foremost in the Nordic countries. About 70% of the first establishments and 54% of the total of first, second and third establishments are made in these countries. Whether the crucial factor is the degree of international competition, the concentration ratio or some other structural dimension not included in this study, is obviously difficult to establish. The correlation between the two industry structure variables in table 6:12 and 6:13 is as high as 0.56.

Table 6:13 Number of First and Total Number of First, Second and Third Subsidiary Establishments in Four Regions; Firms Active in Industries With a High vs a Low Degree of International Competition.

High degree of International Competition ICI ¹ < 44.4				
	Nordic Countries	Europe	USA	Rest of the World
No of first establishments	19	27	9	4
	32.2%	45.8%	15.3%	6.7%
No of first, second and third establishments	24	44	9	5
	29.3%	53.7%	11.0%	6.1%

Low degree of International Competition ICI ¹ > 44.4				
	Nordic Countries	Europe	USA	Rest of the World
No of first establishments	27	8	4	0
	69.2%	20.5%	10.3%	0%
No of first, second and third establishments	32	21	6	0
	54.2%	35.6%	10.1%	0%

¹ International Competition Index

Note: Firms with their first foreign subsidiary establishment before 1979 are excluded.

There may be several plausible explanations for the patterns observed in table 6:12 and 6:13. The concentration ratio within an industry may in itself affect the establishment sequence. Within industries of high global concentration ratios, the smaller de novo entrants on the international arena might tend to avoid certain national markets which are established strongholds of the industry leaders. At least in the beginning of the internationalization process, they might not want to risk confrontation with these giants in the "lions' den". Thus traditionally "natural" early markets for Swedish manufacturing firms, such as the Nordic countries in particular, might be avoided in many cases, in spite of their proximity in terms of relative psychic distance and their potential as markets for the products in question. Similarly, and in line with the above reasoning, firms in industries of low global concentration ratios can usually afford to be more sensitive to whatever is left of psychic distance. To keep the risk level as low as possible, the closest markets in terms of psychic distance are entered first, provided

there is a satisfactory demand level. From table 6:12 it is obvious that the average establishment sequence in industries with low global concentration ratios is very heavily biased towards the region of Nordic countries.

Even if the global concentration ratio in an industry could be expected to be strongly correlated with the degree of international competition in that industry, the correlation is obviously not a total one. For example, while the degree of international competition in certain segments of the furniture industry is very high, the concentration ratio at the global level is quite low. As with the global concentration ratio, the degree of international competition per se provides possible explanations for the patterns in table 6:12 and 6:13. A high degree of international competition might force firms to go international in order to be on the offensive competitively, and avoid being surrounded by competitors on its home market. Under these circumstances the choice of market when going abroad very much becomes a matter of competitive strategy. The competitors' countries of origin and the location and strength of their foreign establishments are all factors that have to be taken into account in considering the establishment of foreign operations. Whether the competitors' home markets and strongholds in general should be avoided or attacked depends on firm-, industry- and situation-specific factors. No matter what direction is taken in this respect, the choice of early (and probably also subsequent) markets and the entire establishment sequence will in general probably be affected by these considerations to such an extent that psychic distance and market-potential factors are overridden.

Coming back to the interdependence among dimensions of industry structure, it is obvious that the forces overriding the more traditional explanatory factors for the foreign establishment pattern become even stronger if a high global concentration ratio in an industry coincides with a high degree of international competition. At the same time it should be clear that extremely high concentration ratios almost by definition, and a high degree of international competition to a certain extent, often coincide with considerable economies of scale and high barriers to entry. Considerable economies of scale, for example, could be reflected in a strong propensity to enter very large markets rather early, even with very limited experience of doing business abroad. Similarly, barriers to entry, such as collusive behaviour – not unusual in highly concentrated industries – or price discrimination by the established international actors, might override psychic

distance factors and partially explain the patterns observed in tables 6:12 and 6:13.

It is clear, though, that in practice establishment decisions are taken in light of the general "state-of-the-art" in the industry. The partial analysis in tables 6:12 and 6:13 is nothing but an indication that industry structure certainly plays a part. However, it is difficult to establish whether the critical aspect of industry structure consists mainly in the two dimensions measured here, a combination of these two and any other structural dimension, or even the effect of other dimensions not measured or included in this study, but strongly correlated with the two variables used here. We could only assert that we could not rule out the possibility that the degree of international competition and the global concentration ratio in industries influence firms in their choice of markets when going abroad.

Finally, referring back to H:1 and H:2, we can discern an interesting pattern in tables 6:12 and 6:13, that obviously was hidden when the non-dichotomized material was presented in table 6:8 and 6:9. On the one hand, H:1 and H:2 do not go far enough; under certain industry conditions psychic distance appears to play an even smaller role than is predicted by these hypotheses. On the other hand, H:1 and H:2 probably go too far; firms going abroad in industries with low global concentration ratios and/or low degrees of international competition appear to be extremely sensitive to psychic distance. The percentage of early establishments in the Nordic region in 1986 under these industry conditions is considerably higher than in 1973. Given the very high propensity to begin international expansion in Nordic countries, it is reasonable to believe, though not proven, that H:2 goes much too far in stating that market potential will be the key determinant of the sequence in which markets are entered.

6:2:2 Hypotheses H:3 and H:4

The notion of H:3 and H:4, is that market potential rather than psychic distance is the major factor explaining the establishment sequence in regions which in terms of psychic distance are rather homogenous. The region-by-region pattern of penetration proposed in H:1 and H:2 did, however, receive only limited support. Although there have been changes in the average establishment sequence since

1973, these changes have only to a limited extent been in the direction predicted by H:1 and H:2. At the same time, the tables presented in connection with the tests of H:1 and H:2 show that although psychic distance still seems to be a factor in explaining the foreign establishment sequence, it is in a somewhat different way than in 1969. Either psychic distance in 1986 is still the most important factor, but the relative psychic distance relations among markets have changed, or/and psychic distance in general has decreased to such an extent that other factors have become more important. The underlying assumption of H:3 and H:4 is that the latter has probably occurred by 1986.

To test the influence of market potential as well as psychic distance on the establishment sequence, measures of the various markets' market potential and psychic distance are regressed on the MR-values of the respective countries. As proxies for market potential (see section 5:4:3 for further details on the measures used) Gross Domestic Product (GDP) in 1986, a weighted average of growth in GDP and population in 1986 are used, while psychic distance is measured on an index from 1 to 100. Table 6:14 presents the dependent variable and the corresponding independent variables of the regression.

Table 6:14 Dependent Variable MR and Corresponding Independent Variables.

Dependent Variable		Independent Variables			
Country	MR	GDP 1986 in billions USD	Population 1986 in millions	Weighted deflated growth in GDP in %	Index of psychic distance from Sweden
Norway	1,73	69 827	4,17	4,08	0,5
Great Britain	1,82	549 088	56,76	3,71	14,8
West Germany	1,88	895 852	61,05	2,55	17,7
USA	1,89	4 169 900	241,60	3,30	25,3
Denmark	2,04	81 854	5,12	2,30	3,3
Finland	2,12	70 588	4,91	3,45	8,5
Switzerland	2,40	135 333	6,50	5,19	20,7
France	2,73	723 795	55,39	2,55	34,8
Italy	2,80	599 920	57,22	2,50	39,9
Netherlands	3,36	170 959	14,56	2,99	23,4

In order to establish the simultaneous as well as partial association between the independent variables and MR, the independent variables are removed in three steps, i.e. a backward-elimination regression procedure. This procedure, apart from establishing the simultaneous association of the independent variables, makes it possible to

assess the net contribution of each variable to the explanatory value of the regression equation. Furthermore, stepwise elimination is helpful in checking for multicollinearity.

The results of the four steps in the regression analyses are presented in table 6:15. In the first step all four variables are entered into the equation. After removing two variables, GDP in 1986 and GDP growth, that neither were significant nor contributed to the explanatory value of the model, we are left with two variables, population in 1986 and index of psychic distance, both significant at the 5% level, in step 2. About 55% of the variation in MR is associated with or explained by these two variables.

Obviously, it is first and foremost a country's population and psychic distance from Sweden that simultaneously determine the establishment sequence of foreign sales subsidiaries. The negative sign in front of the parameter estimate for the population variable, indicates that firms—consistently with what was hypothesized – tend to enter larger markets before smaller ones. In relative terms, judging from the adjusted R^2 values, the size of a national market in terms of population seems to be even more important than psychic distance. The population variable explains about 33% of the variation in the dependent variable, while psychic distance explains only 22%.

The population variable was included in the analysis as one of three crude proxies for market potential. A large market in population terms, *ceteris paribus*, is a reflection of a higher market potential. Over and above a certain level – that most industrialized countries have surpassed – of other general indicators of market potential, such as GDP and GDP growth, sheer size of a market in population terms may become decisive given that psychic distances generally have become more uniform.

The underlying assumption of H:3 and H:4, that market potential is the primary determinant of the establishment sequence of foreign subsidiaries in Western industrialized countries, can obviously not be rejected. At the same time, though, it is important to keep a set of reservations and nuances in mind. Firstly, it is clear from the tests that psychic distance and other factors are still significant, the second most important factor is still psychic distance, and 45% of the variation in MR is obviously related to other firm-, industry- or situation-specific factors. Second, only within the region of Western countries can we

expect the observed pattern to be valid. Psychic distance to several third-world, communist and former communist countries may still be regarded as substantial. Third, the number of observations is rather small; it is a handful of countries – the U.S. and nine European countries – that constitute the dependent variable. Although it is probable, it has not been shown that the observed pattern is valid for the whole region of Western countries.

Table 6:15 Backward Stepwise Regression of MR on GDP in 1986, Weighted GDP Growth, Population and Index of Psychic Distance.

Step 0		All variables entered			Level of Significance		
<i>Variable</i>		<i>Parameter Estimate</i>	5%	10%	15%		
GDP		0.00000126	No	No	No		
Population		-0.02640279	No	No	Yes		
GDP Growth		-1.10007412	No	No	No		
Index of Psychic Distance		0.04309839	Yes	Yes	Yes		
<i>Explanatory Value of Model</i>		$R^2=0.76$	No	Yes	Yes		
	Adjusted	$R^2=0.69$					
Step 1		Variable GDP 86 Removed					
<i>Variable</i>		<i>Parameter Estimate</i>	5%	10%	15%		
GDP		-0.00000111	No	No	No		
Population		-0.02370848	No	No	Yes		
Index of Psychic Distance		0.04372113	No	Yes	Yes		
<i>Explanatory Value of Model</i>		$R^2=0.74$	Yes	Yes	Yes		
	Adjusted	$R^2=0.66$					
Step 2		Variable GDP Growth Removed					
<i>Variable</i>		<i>Parameter Estimate</i>	5%	10%	15%		
Population		-0.00408329	Yes	Yes	Yes		
Index of Psychic Distance		0.03518632	Yes	Yes	Yes		
<i>Explanatory Value of Model</i>		$R^2=0.65$	Yes	Yes	Yes		
	Adjusted	$R^2=0.55$					
Step 3		Variable Population Removed					
<i>Variable</i>		<i>Parameter Estimate</i>	5%	10%	15%		
Index of Psychic Distance		0.02628460	Yes	Yes	Yes		
<i>Explanatory Value of Model</i>		$R^2=0.40$	Yes	Yes	Yes		
	Adjusted	$R^2=0.22$					

6:2:3 Hypothesis H:5

The internationalization process is often affected by opportunistic behaviour, coincidence and opportunities (Aharoni, 1966). It is reasonable to assume that these observations by Aharoni are still valid. The decision to go abroad is often a coincidence; an order is received from a foreign customer, managers have social or other relations abroad with a potential customer etc. In the initial stages of the internationalization process the influence of such factors on the choice of national market for the first foreign subsidiary establishments is likely to be higher than at later stages. When the firm grows larger, professional management is hired, and doing business abroad becomes a more natural part of the firm's activities. A general awareness of foreign markets and their respective features develops. Hence, after the first unsteady efforts, a more rational and active selection of foreign markets and entry modes can be expected.

In consistency with the above, H:5 hypothesizes that the propensity to depart from the internationalization pattern suggested in H:1-H:4 regarding choice of national markets will be highest in the first 1-2 establishments abroad. However, no real support for H:1 and H:2 was actually received when they were tested against the empirical material. The *de facto* establishment sequence of the studied firms' subsidiaries, (table 6:8) did not support the idea of a Nordic region penetrated before the rest of Europe, except under certain particular industry conditions (table 6:12 and 6:13).

Obviously H:5 can not be tested against H:1 and H:2, since these hypotheses could not be accepted. However, the underlaying principle of H:5, i.e. the propensity to depart from the average establishment sequence in the first steps of the internationalization process could be tested.

In order to test H:5, we calculated the percentage distribution of subsidiary establishments of a certain order among the different countries in the study. The figures in table 6:16 show no indication of the relationship hypothesized in H:5. Contrary to the assumption of H:5, the propensity to deviate from the average ranking seem to be lowest in the first and second establishment abroad. About 26% of the first establishments and 20% of the second establishments were made in the countries which on the average were the first and second entered, while only about 17% of the third and fourth establishments were

made in the countries which on the average were entered third and fourth, i.e. West Germany and the U.S.

Table 6:16 Percentage Distribution of Subsidiary Establishments of a Certain Order among the Countries in the Study. First Five Subsidiary Establishments and the Average First Five Markets Entered.

Country	Rank on the basis of MR	Percentage Establishments of a certain order				
		1	2	3	4	5
Norway	1	26,3%	9,4%	10,4%	13,1%	9,0%
Great Britain	2	15,3%	19,6%	20,8%	–	9,0%
West Germany	3	9,9%	22,4%	16,6%	8,7%	–
USA	4	11,0%	7,5%	10,4%	17,4%	9,1%
Denmark	5	11,0%	11,2%	2,5%	4,3%	–

A similar pattern can be observed if the percentage distribution of the first and second, second and third, third and fourth etc. establishments are considered (table 6:17). Again, the figures indicate that the propensity to depart from the average pattern is lowest in the first two subsidiary establishments. H:5 obviously has to be rejected.

Table 6:17 Percentage Distribution of Two Consecutive Subsidiary Establishments of a Certain Order Among the Countries in the Study. First Six Subsidiary Establishments and the Average First Five Markets Entered.

Country	Rank on the Basis of MR	Percentage Establishments of a Certain order				
		1+2	2+3	3+4	4+5	5+6
Norway	1	20,1%	–	–	–	–
Great Britain	2	–	20,0%	–	–	–
West Germany	3	–	–	14,1%	–	–
USA	4	–	–	–	14,7%	–
Denmark	5	–	–	–	–	9,1

The pattern observed is probably due to one or both of the following explanations: 1) there is still considerable psychic distance; 2) increased awareness and rationality in the choice of markets – after the first one or two foreign establishments are made – actually may imply that a broader spectrum of markets is considered. Nevertheless, it may still be true, that the location of the first one or two foreign subsidiary establishments is mainly determined by coincidence. At the same time it should be clear that certain coincidences are more probable than others. Coincidence relating to someone or something is more likely to involve countries closer to Sweden in psychic-distance terms than countries more distant in these terms.

After the first one or two establishments – which tend to be concentrated to the nearest countries – companies have gained some experience of doing business abroad. The choice of markets may now be expected to be somewhat more structured and rational. It is probably a more active process in which the market potential and demand characteristics of countries are considered before any further establishments are made. It can also be expected that the choice of markets will no longer be limited to the closest markets in terms of psychic distance. The experienced firm will more actively choose from a broader spectrum of markets. The more experienced – the broader the spectrum. At the aggregate level this will be reflected in a higher propensity to depart from the average establishment sequence the higher the ordinal number of the subsidiary establishment.

6:2:4 Hypothesis H:6

H:6 concerns the foreign-establishment sequence of small firms. It is hypothesised that these firms have a higher propensity than larger firms to follow the traditional sequence. H:6 is tested in relation to H:1 and H:2 (table 6:11, section 6:2:1:1). The result of this test implies that H:6 must be rejected. There appear to be no significant differences between small and large firms in terms of the establishment sequence. For further details and a more extensive discussion of the result see section 6:2:1:1.

6:2:5 Hypothesis H:7

H:7 hypothesizes that over extended periods firms avoid establishing wholly owned subsidiaries in the home markets of large competitors, or in host countries with high local concentration ratios. If H:7 is generally valid, it should be reflected in a negative correlation between the ranking of establishments and the average local concentration ratio for the respective market entered.

The average local concentration ratio of the markets of first, second and third establishment (among firms that made their first foreign subsidiary establishment post 1979) is presented in table 6:18. The pre-1979 establishments have been excluded in order to compensate for the fact that the concentration ratios are 1986 figures. Unfortunately, this compensation has the side effect of reducing the number

of establishments subsequent to the third to almost nothing. In spite of this rather short chain, however, some tendencies could be discerned.

From table 6:18 it is clear that there are very limited differences between the average local concentration ratios of different establishment ranks. With maximum differences of 5% between the average concentration ratios, and a standard deviation that varies between 27 and 33, there is no significant difference between the figures of different establishment ranks.

Table 6:18 Average Local Concentration Ratios in the Market of the First, Second and Third Establishments.

Establishment Rank	Average Local Conc. Ratio	Std. Dev	N
1	58%	27	79
2	56%	33	27
3	61%	27	10

Note: Firms with their first foreign subsidiary establishment before 1979 are excluded.

On the basis of table 6:18, hypothesis H:7 obviously has to be rejected. The material indicates no general relationship between local concentration ratio and establishment rank. However, the limitations of the test should be kept in mind! Only a very short segment of the establishment sequence is tested for any relationship to concentration ratio in table 6:18. A more complete list of say the top ten rankings, would have provided a considerably firmer ground for conclusions. Thus, even if there are only limited differences between the average local concentration ratios of the markets of the first, second and third rank, there may well be significant differences between the first and eighth or between the first three markets and the seventh, eighth and tenth ones. Furthermore, with such a limited number of observations, it is not possible to check (for example, by dichotomizing the material) for the influence of other factors. Hence, certain relationships not discernible at the level of the total population may also be hidden behind the figures in table 6:18.

6:2:6 Hypothesis H:8

Hypothesis H:8 states that the average time between two consecutive foreign subsidiary establishments has decreased over time. In order to facilitate comparisons between this study and the Hörnell, Vahlne,

Wiedersheim-Paul (1973) study, the calculations have followed similar procedures. All of the 435 subsidiaries of the 156 corporations under study have been included. For each parent company the differences in time between the first and second, second and third, third and fourth etc. establishments have been calculated. In order to establish the average difference in time between two consecutive subsidiary establishments (see table 6:19) we used the following procedure: for each establishment of a given rank or order, we noted the time that had elapsed after the previous establishment; we then added up all of those elapsed times and divided the total by the number of establishments of that rank. The results of the calculations are presented in table 6:19 together with the results of the Hörnell, Vahlne, Wiedersheim-Paul (op cit) study. The average time difference between two establishments has been calculated up to the fifth difference, i.e. the time difference between the fifth and the sixth establishment. For time differences relating to subsequent establishments, there were too few observations to produce any reliable results.

The uncorrected values in table 6:19 strongly indicate that the average time between two consecutive establishments of the same order has declined over time. The average time differences between two consecutive establishments are generally much lower in this study than in the 1973 study. However, this is not very surprising. Several of the firms in the 1973 study began their internationalization at the very dawn of this century (see table 6:20), and almost 1/3 of the subsidiaries were established before the end of 1930. Hence, the firms in the earlier study have, on the average, had more time to establish each subsidiary than firms in this study, of which nearly 95% established their first foreign subsidiary after 1960.

Table 6:19 Time Difference Between Establishments of Subsidiaries, 1969 and 1986.

study	Rank of Time Difference									
	1 ¹		2		3		4		5	
	\bar{x}	n	\bar{x}	n	\bar{x}	n	\bar{x}	n	\bar{x}	n
Hörnell et al 1969	6.54	223	5.06	148	3.07	101	3.32	81	2.10	68
C ²	2.62	184	2.16	109	2.05	72	2.26	53	1.28	39
Nordström 1986	3.47	90	2.65	55	2.90	31	1.70	20	1.85	13
C ²	2.27	80	2.06	51	1.57	28	1.70	20	1.00	12

¹ Example: Average time difference between establishment of first and second foreign subsidiary

² Time differences of more than 10 years have been excluded.

In order to compensate somewhat for this phenomenon, and make the studies more comparable, we performed a second calculation, in which time differences of more than ten years were excluded (table 6:19, the rows marked C). Even if this correction factor is somewhat arbitrarily chosen, the corrected figures should be slightly less biased from differences in establishment periods than when left uncorrected. The corrected figures, although not at all so strongly as the uncorrected ones, also indicate that the average time between two establishments has decreased over time. Generally, it is shorter among the firms in this study than for those in the 1973 study. However, it is unfortunately not possible to determine whether these differences are significant in statistical terms; no data on the variance or standard deviation of the 1973 material is available. The problem of knowing to what extent the observed changes over time reflect actual conditions, is further accentuated by the differences between the two studies (earlier discussed in 6:1:3) in terms of how the populations have been defined. It is unlikely, though, that the pace of the establishment process of the 25% non-manufacturing firms included in the 1973 study, was different enough to provide the entire explanation for the differences observed between the two studies.

Table 6:20 Percentage of Subsidiaries Established During Different Time Periods in the Hörnell, Vahlne, Wiedersheim-Paul study 1969

Establishment Period				
-1910	1911-1930	1931-1950	1951-1960	1961-
16%	24%	15%	18%	27%

Source: "Export och Utlandsetableringar", Hörnell Vahlne, Wiedersheim-Paul, 1973

In spite of these differences between the two populations, an interesting similarity in the results may be noted. In the 1973 study it was hypothesized that the time difference between two establishments decreased for establishments of higher orders. As can be seen in table 6:19, the figures support this hypotheses in both studies, apart from an unexpected increase in the fourth difference for the uncorrected as well as the corrected figures for 1973. The same increase – although small – in the fourth difference could also be observed in this study in the case of the corrected figures.

This "threshold" in the establishment sequence is certainly not an effect of a major change in environmental conditions at a certain point in time. Nor does it seem to be a random effect or related to any

particular industry. Hörnell, Vahlne, Wiedersheim-Paul (op cit) find the same hump in the fourth difference in industries with different characteristics. The "random-effect explanation" seems less plausible in light of the similarities between the 1973 and 1986 observations. In the 1973 study it is suggested that firms on the average have covered the European market after four establishments, and that they then pause and consolidate before the fifth establishment, which generally tends to be non-European. The 1986 material on the establishment sequence does not support such a conclusion. On the average, firms make their first non-European investment (i.e. in the U.S.) as early as the third or fourth establishment. It seems more plausible that intra-firm changes of some kind create a need to pause and consolidate after the fourth foreign establishment. To determine the precise nature of these intra firm factors, i.e. to what extent and in what proportions structural, systemic, financial or managerial constraints and reasons generally force firms to pause and consolidate before the fifth foreign establishment, would require an in-depth analysis of a single firm's foreign establishment process and is beyond the scope of this dissertation. For the purpose of this study, it is enough to establish differences and similarities in the average establishment sequence over time. Any similarity observed, particularly at the more detailed level, is of help in ruling out differences in the populations of 1973 and 1986 as the key explanatory factor for the observed differences in the average establishment sequence.

Taken together, the material in table 6:19 provides some support for H:8. Although this support is not very strong and it is not possible to establish its level of significance, H:8 cannot be rejected. The average time between two consecutive subsidiary establishments has decreased over time.

6:2:7 Assessing the Influence of Some Other Key Factors on the Time Difference Between Foreign Subsidiary Establishments

In section 6:2:6 some support for H:8 was noted. The average time between two consecutive establishments is somewhat shorter than previous studies had found. It is tempting to conclude that this, at least partially, is due to the previously discussed grand environmental changes that in certain aspects have made the world less heterogeneous. In effect, foreign markets do not seem to be as "foreign" as they used to be. Furthermore, knowledge about, and experience from, foreign markets can today be obtained faster than ever before.

However, it should be kept in mind that H:8 was tested on a total of 455 foreign subsidiaries. No control procedures were employed to check for the influence of any firm, industry or host-country characteristics. A priori it is possible to identify several factors that may affect the timing of foreign establishments: Small firms with their resource constraints, may generally proceed more slowly than large firms. A high degree of international competition, or a high concentration ratio within the industry, may "force" firms to penetrate foreign markets faster than otherwise, in order to reach critical mass in size or geographical spread. Highly internationalized firms, with greater experience of doing business abroad, may be able to proceed faster than their less experienced colleagues.

While in certain of these cases the cause might be identified a priori, it is more difficult to have any a priori opinions about the actual effect. For example, it is possible that a high degree of international competition within an industry "forces" firms to refrain completely from going international or to proceed at a much slower pace than otherwise because of the activities of competitors. However, no matter the *direction* of the effect, the sheer influence or non-influence of certain measurable key factors like firm size, degree of international competition, concentration ratio and experience of doing business are of interest per se.

In order to test the influence of these variables, proxies for each control variable were regressed on the time difference between the first and second and first and third establishments. Tables 6:21 and 6:22 present the results of these regressions. The four proxies used for degree of international competition, concentration ratio, firm size and experience of international business, respectively, are the international competition index (ICI), the combined worldwide market share of the four largest actors in an industry (WTOP4), turnover in 1986 and percentage of exports in 1986.

As in earlier tests where these control variables were used, firms with their first foreign subsidiary establishment before 1979 are excluded in order to compensate for the fact that the control variables are 1986 figures. This operation obviously reduces the number of firms to a certain extent, but – more important in the context of calculating time differences between subsidiary establishments – the average number of subsidiary establishments per firm is reduced. Since only fifteen of the firms making their first foreign subsidiary establishment after 1979

have more than three foreign subsidiaries, the time-difference calculations are limited to the first, second and third establishments.

Table 6:21 First step of Backward Stepwise Regression of Time Difference Between First and Second Foreign Subsidiary Establishment on ICI, WTOP4, Turnover and Percentage of Exports.

Step 0	All variables entered	Level of significance		
Variable	Parameter Estimate	5%	10%	15%
ICI	-0.00672794	–	–	No
WTOP4	-0.01174789	–	–	No
Turnover	-0.00000072	–	–	No
Percentage of exports	0.37220612	–	–	No
Explanatory Value of Model	R ² =0.0540	–	–	No
	Adjusted R ² =0			

N = 34

Note: Firms with their first foreign subsidiary establishment before 1979 are excluded.

Table 6:22 First step of Backward Stepwise Regression of Time Difference Between First and Third Foreign Subsidiary Establishment on ICI, WTOP4, Turnover and Percentage of Exports.

Step	All Variables Entered	Level of significance		
Variable	Parameter Estimate	5%	10%	15%
ICI	-0.01508890	–	–	No
WTOP4	-0.01601334	–	–	No
Turnover	-0.00000105	–	–	No
Percentage of exports	1.87323398	–	–	No
Explanatory Value of Model	R ² =0.1257	–	–	No
	Adjusted R ² =0.0010			

N = 15

Note: Firms with their first foreign subsidiary establishment before 1979 are excluded.

Table 6:21 presents the results of the regression of the variables on the time difference between the first and second subsidiary establishment. The result is clearcut; neither the parameters nor the model are significant. The variables obviously have no unambiguous linear relationship to the difference in time between the first and second establishment.

The observed non-association may have several plausible explanations. One of these is related to Aharoni's (1966) work on the process of internationalization; in terms of pace, pattern as well as establishment forms, this process is affected to a considerable extent by opportunistic behaviour, coincidence and opportunities – particularly in its initial stages. At later stages, when the firm has grown and doing business abroad has become a natural part of its activities, a more rational

and structured internationalization process can be expected. At least a part of the reason why table 6:21 shows no relationship may be that structural characteristics at the firm or industry level play a very limited role at the early stages of the internationalization process. The timing of the first and second subsidiaries is mainly dependent on non-structural characteristics, such as availability of the right kind of people for managing a subsidiary in a certain country, the receipt of large foreign orders requires permanent presence on the customers' national market, an opportunity to acquire a local representative etc.

It is possible to – at least to some extent – avoid the influence of any haphazardness arising from opportunities, opportunistic behaviour etc. in the very first stages of the establishment sequence by letting the dependent variable be the time difference between the first establishment and establishments subsequent to the second one. In table 6:22 the time difference between the first and the third establishment is regressed on the control variables. The results are just as clear-cut as in table 6:21. Although there is a very slight increase in the R^2 values, i.e. the explanatory value of the model, neither the parameters nor the model are significant at any acceptable level.

The failure of the tests in table 6:21 and 6:22 to establish any significant linear or approximately linear relationship between the control variables and the difference in time between foreign subsidiary establishments, does not imply that the influence of these variables on the pace of the subsidiary establishment process can be ruled out. Several factors justify this statement. Firstly, even if the second test is extended to encompass the time difference between the first and the third establishment, it is still an early stage of the establishment sequence that is tested against the control variables. Significant linear relationships might well exist between the control variables and time differences between the first and subsequent establishments, or between time differences of higher order establishments, for example the third and sixth ones. Secondly, as pointed out earlier, it is difficult a priori to have any firm opinions about the direction of the relationships between the control variables and the dependent variable. A high degree of international competition in an industry may on the one hand require firms to build up an extensive international operation rather quickly in order to be competitive, i.e. to reap the necessary economies of scale, enter the key markets etc. On the other hand, international competition may slow down or even stop the internationalization process. A high global concentration ratio in an industry

has the same ambivalent effect on the pace of the establishment process. Furthermore, it is only the pace of the *sales subsidiary* establishment process that is studied in table 6:21 and 6:22. If firms are forced to establish extensive international operations quickly, for example because of competitive pressure, they may well prefer establishment forms (i.e. agents, importers etc.) that require less resources than wholly owned subsidiaries.

Even company size and percentage of exports (i.e. the proxy for experience of international business) are factors with potential effects in both directions. Small niche-type firms with a limited number of buyers in each national market, may well build up their international operations at a pace comparable to large resource intensive firms. Larger firms may even be less impelled to enter new markets than smaller niche-type companies, since the former probably have a greater home market and/or a relatively broader customer base in each country entered. By a slightly different line of reasoning, the percentage of exports also operates in both directions. A high percentage of exports indicates experience of doing business abroad, so that a relatively faster establishment process could be expected. However, a high percentage of exports also indicates that an international customer base is already established and served from Sweden, so that there is less need or pressure to establish wholly owned sales subsidiaries quickly.

Summing up, and bearing in mind that *N* is rather low, particularly in the second test in table 6:22, there are reasons to believe that these variables nevertheless affect the pace of the internationalization process, although these effects are not significant at the early stages of the process and/or at the aggregate level. It is probable that longitudinal in depth studies of the establishment sequences of individual firms are required in order to establish these relationships. Whether size, international competition, concentration ratio, and percentage of exports of a certain order of magnitude, actually tend to slow down or to speed up the establishment sequence, will be dependent on a host of other firm-, industry- and situation-specific factors.

6:2:8 Hypotheses H:9-H:11

These three hypotheses have in common that they concern the "establishment chain", i.e. the following sequence on foreign markets: no regular exports – independent representative – sales subsidiary – manufacturing subsidiaries. However, for reasons previously discussed, it has not been possible to collect the necessary data material for testing any of these hypotheses except one. Some tentative conclusions on this theme are presented, however, in the concluding remarks in chapter 7, in which some of the principal findings from the case studies on the establishment process within a market are discussed and related to the findings at large.

6:2:9 Hypothesis H:12

Hypothesis H:12 predicts that firms over extended periods avoid establishing wholly owned subsidiaries in the home markets of large competitors or in potential host countries with high local concentrations ratios. Instead, one would expect a preference for forms of entry like agents and importers, which requires less resources.

Basically, H:12 focuses on the choice between entry forms of low and high commitment and/or resource intensity. To test the hypothesized relationship between entry form and local concentration ratio – while at the same time using control variables for other key factors like firm size, experience of doing business abroad – we employed a multi-variable test method. Because of the discrete nature of the dependent variable, i.e. basically subsidiary establishment or nonsubsidiary establishment (agent, importer etc.), the logit model is the natural choice. The standard statistical tool in the social sciences – multiple regression – with its linearity assumptions is not applicable in this case, where there is a qualitative dependent variable. Still, however, there are conceptual similarities between the logit model and multiple regression. The logit model, although nonlinear, is similar to a linear regression model in that it establishes the nature and direction of the relationship between a dependent variable and a set of independent variables.

Table 6:23 presents the logit-model results for the choice between wholly owned sales subsidiary and non-internalized local representative in entering foreign markets. Apart from the main explanatory variable – local concentration ratio – four control variables have been included: global concentration ratio, degree of international competition, firm size and experience of doing business abroad. A Common feature of these four variables is that, at least to some extent, they may be expected a priori to influence the choice of entry form. As has been discussed earlier, the global concentration ratio and the degree of international competition both have a propensity to affect the overall pace of the firms' internationalization processes. Where firms are being driven by these forces to seek rapid internationalization, one may infer that they would tend to choose less resource-intensive establishment forms; i.e. non-internalized local representatives. Similarly, where such driving forces are absent, firms may show a greater tendency to establish wholly owned subsidiaries. The same preference for subsidiaries rather than local representatives may be expected among larger firms and firms with experience of doing business abroad (in the model, percentage exports is the proxy for experience). Large firms can "afford" a higher resource commitment in foreign establishments than smaller firms. Experienced firms, because of their familiarity with foreign operations, may to be more prone than less experienced firms to establish wholly owned subsidiaries immediately, thus omitting previous steps in the "establishment chain".

From table 6:23 it is clear that only two variables, local concentration ratio and the degree of international competition, approach any significant degree of association with the dependent variable. The levels of significance for the respective variables are 15.2% and 14.3%.

The negative sign in front of the local-concentration-ratio parameter estimate indicates that the propensity to establish wholly owned sales subsidiaries decreases when the local concentration ratio increases. The positive sign in front of the parameter for the degree of international competition¹ indicates that a high degree of international competition has the same effect on the dependent variable. Wholly

¹The proxy for the degree of international competition is the ICI-index from 0–100. A high figure indicates a high degree of national or domestic competition while a low figure indicate a high degree of international competition. For further details see section 5:4:1:4.

Table 6:23 Logit Model of the Choice Between Local Representative and Wholly Owned Subsidiary. Independent Variables: Local Conc. Ratio, Global Conc. Ratio, Degree of Int. Competition, Turnover and Percentage of Exports.

$y = 0 =$ Local Representative (non-internalized)		
$y = 1 =$ Wholly owned sales subsidiary		
Coefficients for $y = 1$		
Variable	Parameter Estimate	Level of Significance
Local Conc. Ratio	-0.00595200	15.2%
Global Conc. Ratio	0.00264986	62.3%
Degree of Int. Competition	0.00522866	14.3%
Turnover	-0.00000091	75.6%
Percentage of Exports	-0.16521500	75.3%

N = 270

Frequencies of actual v.s predicted outcomes

		Predicted outcome	
		0	1
Actual outcome	270	198	72
	0	147	30
	1	123	42

Percentage of correctly predicted cases: 59%

Goodness-to-fit: Chi-square (4) 3.14

Level of Significance: 53%

Note: Firms with their first foreign subsidiary establishment before 1979 are excluded.

owned subsidiaries become less probable when the degree of international competition increases.

Although two of the variables in the model are significant at the rather modest 15% level, the joint hypotheses that all coefficients in the model are zero, i.e. the so-called goodness-of-fit of the model, could not be rejected at any acceptable level of significance. This might, however, be due to the "noise" created by the three non-significant variables in the model. In order to control the disturbances created by these variables and to highlight the indicated association between the two significant variables in table 6:23, we have excluded the three non-significant variables in a second model presented in table 6:24.

The two-variable model in table 6:24 underscores the findings in table 6:23. Local concentration ratio is significant at the clearly acceptable 2% level, and the degree of international competition is significant at the more modest 16% level. Not very surprisingly, the joint hypotheses that all coefficients in the model are zero can be rejected – and furthermore at the acceptable 9% level. Obviously it can be concluded that the local concentration ratio in particular, but also the degree of international competition, are associated with the dependent variable. However, to what extent these variables actually can explain the choice of establishment form, or more formally, what proportion of the variance is explained by the two exogenous variables, is difficult to establish. The logit model provides no such absolute measure.

Table 6:24 Logit Model of the Choice Between Local Representative and Wholly Owned Subsidiary. Independent Variables: Local Conc. Ratio and Degree of Int. Competition.

y = 0 = Local Representative (non-internalized)		
y = 1 = Wholly owned sales subsidiary		
Coefficients for y = 1		
Variable	Parameter Estimate	Level of Significance
Local Conc. Ratio	-0.00542833	2%
Degree of Int. Competition	0.00414776	16%
N = 270		

Frequencies of actual v.s predicted outcomes

		Predicted outcome	
		0	1
270		197	73
0	147	116	31
1	123	81	42

Percentage of correctly predicted cases: 59%
 Goodness-to-fit: Chi-square (1) 2.80
 Level of Significance: 9%

Note: Firms with their first foreign subsidiary establishment before 1979 are excluded.

The explanatory or predictive power of the model may be highlighted somewhat by comparing the actual choice of establishment form with what the model predicts. (See table 6:23 and 6:24.) From these comparisons one may conclude that the number of correctly predicted cases is 59% in both table 6:23 and 6:24. The net contribution of the three non-significant variables was obviously zero.

Although 59% correctly predicted cases might tempt us to be rather satisfied with the model, there are some obvious problems with this measure (Aldrich and Nelson, 1984). In particular, there is no well-defined base line or null expectation against which to measure this correct prediction rate rather than a hypothesized random distribution of the dependent variable. In addition, an incorrect prediction when the estimated probability is, say, 0.51 may be considered a smaller error than one based on an estimated probability of 0.99. Nonetheless, the measure gives at least some clue to the plausibility of the model, and is of help in establishing the partial contribution in explanatory value of the three non-significant variables.

Taken together, the results support H:12. Firms tend to avoid establishing wholly owned sales subsidiaries in markets of high local concentration ratios. Non-internalized establishment forms seem to be more usual under such circumstances. Furthermore, it seems as if a high degree of international competition would tend to have the same effect on the choice of establishment form, while firm size, experience of doing business abroad and the global concentration ratio seem on the whole to have no clear influence on the choice between wholly owned subsidiary and local representation.

It should be kept in mind, though, that the empirical material includes no data on the establishment of manufacturing subsidiaries. The findings concern only the choice between a wholly owned sales subsidiary and non-internationalized alternatives. However, it may be expected a priori that H:12 is even more valid in the case of manufacturing subsidiaries. Establishing a manufacturing operation implies a new actor adding capacity in a more fundamental way than the establishment of a sales subsidiary. The resource commitment and the risk of retaliation are also higher. In effect, the principles outlined in H:12 would appear to be particularly valid for the establishment of wholly owned manufacturing operations, when it is already obvious from the empirical material that H:12 is valid for sales subsidiaries.

Patterns in the Establishment Mode of Subsidiaries; H:13-H:14

6:2:10 Hypotheses H:13-H:14

The focus of these hypotheses is on the establishment mode, i.e. the choice between greenfield establishment and acquisition for establishing a wholly owned operation on a foreign market. As with H:12, it could be expected that the principles outlined in H:13-H:14 are particularly valid in the case of the establishment of manufacturing operations, since the establishment of sales subsidiaries to a large extent could be expected to follow the same principles. H:13 hypothesizes that acquisitions are preferred in host countries with high local concentration ratios. In H:14 it is proposed that acquisitions are more frequent in industries with high global concentration ratios.

The association between the concentration ratios and the choice of entry mode is tested using a logit model. Because of the dichotomous nature of the dependent variable, the most usual tool for these kinds of tests – multiple regression – is not a viable alternative. With a qualitative dependent variable the linearity assumptions of the regression model might lead to serious misestimates of the magnitude of the effects of the independent variables (Aldrich and Nelson, 1984).

In addition to the two key explanatory variables – local concentration ratio and global concentration ratio – three control variables – degree of international competition, firm size and percentage exports – are included in the model in table 6:25. The degree of international competition, with its propensity to affect the pace of the internationalization process as a whole (see section 6:2:1:1), may affect the choice of establishment mode. Acquisitions are generally considered to be a somewhat faster entry mode than greenfield establishments. Firm size may also affect the choice of entry mode. However, as with the degree of international competition, it is not clear *how* size actually affects the choice. On the one hand, large resource-intensive firms, *ceteris paribus*, have the financial and managerial capacity to follow the acquisition route. On the other hand, smaller firms, lacking the financial – but above all the managerial – capability for large foreign acquisitions, may have considerably stronger reasons to grow rapidly through acquisitions: for example, a small home market, high fixed development costs, competitive considerations etc. Furthermore, a lack of managerial resources may actually lead a company to prefer

Table 6:25 Logit Model of the Choice Between Greenfield Establishment and Acquisition.
Independent Variables: Local Conc. Ratio, Global Conc. Ratio, Degree of Int. Competition, Turnover and Percentage of Exports.

y = 0 = Greenfield Establishment		
y = 1 = Acquisition		
Coefficients for y = 1		
Variable	Parameter Estimate	Level of Significance
Local Conc. Ratio	-0.0160573	2%
Global Conc. Ratio	0.0058787	50%
Degree of Int. Competition	-0.0104711	6%
Turnover	-0.00000024	63%
Percentage of Exports	1.3751100	8%

N = 120

Frequencies of actual v.s predicted outcomes

		Predicted outcome	
		0	1
Actual outcome	120	102	18
	0	79	71
	1	41	31

Percentage of correctly predicted cases: 68%

Goodness-to-fit: Chi-square (4) 5.11

Level of Significance: 27%

Note: Firms with their first foreign subsidiary establishment before 1979 are excluded.

acquisitions rather than greenfield establishments. Acquiring a going concern with an established administration and existing relationships with the local environment requires less human resources from HQ than a greenfield establishment. It is equally difficult to have any firm a priori opinions about the effects of experience in doing business abroad (measured in table 6:25 as the percentage of exports) on the entry mode. On the one hand experienced firms may be expected to have the knowledge and competence for greenfield establishments and often tend to prefer them to acquisitions. On the other, experienced firms can proceed faster with their internationalization and may therefore tend to choose acquisitions over greenfield investments.

Out of the five independent variables used in the model in table 6:25, three have parameter estimates that are significant at the 10%-level or higher. One of the key variables – the global concentration ratio – and one of the control variables – firm size – appear to have no significant association with the choice of establishment mode.

The absence of any discernible relationship between firm size and establishment mode is consistent with what we would expect. Although size is clearly important at the single-firm level, firm-, industry- and situation specific factors must be controlled if we are to discern this relationship at the aggregate level. More surprisingly, the global concentration ratio within industries has no significant influence on the establishment mode. Insufficiencies in the global-concentration-ratio measure (see section 5:4:1:3) may of course be one possible explanation. The respondents' "guesstimates" of the top four firms' combined global market share, may diverge so greatly from actual circumstances that the measure is practically useless. However, even if this measure is crude, it has still shown some explanatory power in the tests of H:1 and H:2. Hence, most probably there are empirical rather than methodological explanations for the non-significance of the global concentration ratio. A probable explanation is that very few firms enter the international arena in head-on competition (see hypotheses H:14) with the established global actors. Very few *de novo* entrants on the international arena are likely to have the firm-specific advantages, the managerial and financial resources etc. to challenge the established actors in global industries. Direct competition with the industry giants is avoided in favour of a focus on very well defined industry or market segments. In effect, there is less of a need – at least for competitive reasons – to rapidly establish worldwide operations and quickly reach global scale. Hence, the lack of any significant relationship between global concentration ratio and entry mode may well be an effect of new entrants' propensity to enter well defined and protected segments of their industries, where the structural characteristics – for example, the concentration ratio – are somewhat more favourable.

However, even if three of the variables in table 6:25 appear to be significantly associated with establishment mode and the percentage of correctly predicted cases is as high as 68%, the joint hypotheses that all parameters equal zero (i.e. the goodness-to-fit of the model) could not be rejected at any satisfactory level of significance. A probable reason for this is the very low significance of two of the independ-

ent variables. When these two variables are removed (see table 6:26) the goodness-to-fit is significant at the more satisfactory 11%-level. Furthermore, at the 2% level the three remaining variables are all significant and the number of correctly predicted cases rises to 69%.

From table 6:26 it is obvious that there is a rather strong association between establishment mode of foreign sales subsidiaries and the local concentration ratio, the degree of international competition within an industry and the experience of doing business abroad, i.e. the percentage of exports. Nevertheless, H:13 must be rejected. The relationship between local concentration ratio and the propensity to acquire is in fact the opposite of what is suggested in H:13. From table 6:26 it is clear that the higher the local concentration ratio the lower the propensity to acquire rather than to establish greenfield. A possible explanation for this relationship may be that the more concentrated the local industry structure, the fewer acquisition candidates there are. Basically the arguments in favour of H:13 (see section 4:2) may still hold true; i.e. with the perceived uncertainty under oligopolistic conditions, acquisitions are the preferred solution to the establishment-mode problem. However, the actual lack of acquisition candidates in concentrated industries would appear to override the uncertainty-avoidance argument supporting the acquisition route.

From table 6:26 it is also clear that acquisitions tend to become more probable the higher the degree of international competition in an industry. If the actors within an industry are highly internationalized, it is quite likely that there are competitive advantages, in terms of either lower costs or increased differentiation, to be gained from operating internationally rather than domestically. A *de novo* entrant in such industries must quickly reach what could be called a "minimum efficient degree of internationalization" in order to be competitive, and acquisitions tend to be a faster route than greenfield establishments.

The third and last strong association established in table 6:25 and 6:26, i.e. between a high percentage of exports and the entry mode, is more difficult to interpret. The percentage of exports is a proxy for experience of doing business abroad. However, since the export percentages are 1986 figures, it is difficult to have any firm opinion on what the observed association really means. On the one hand, it may mean that firms become increasingly prone to establish through acquisitions as they gain experience of doing business abroad – that is, the higher

their export percentage. On the other hand, the observed relationship may indicate that the higher the propensity to establish through acquisitions the higher the percentage exports by 1986. A priori, both these explanations, or any combination thereof, are equally plausible. In order to establish which of them is the more nearly correct, we need to know to what extent the percentage of exports in 1986 reflects the *actual* export percentage at the time of the various establishments during the period 1979–1986. However, it was not possible to collect these figures in this research project; we found that the respondents were generally not able to provide much historical data. From a theoretical point of view it is tempting to believe that the higher the propensity to acquire the higher the export percentage in 1986, but as pointed out earlier, there is no theoretical basis for any unambiguous correlation between experience of doing business abroad and establishment mode.

Taken together both H:13 and H:14 must be rejected. Moreover, it was not possible to find any positive relationship between local concentration ratio and the propensity to establish foreign sales subsidiaries through acquisitions, nor any significant association between the global concentration ratio and the establishment mode. The choice of establishment mode does seem to be associated with the local concentration ratio, the degree of international competition and the export percentage in 1986. The lower the local concentration ratio, the higher the degree of international competition and the higher the percentage of exports in 1986 – the higher the probability that firms establish foreign sales subsidiaries through acquisitions rather than greenfield investments.

Table 6:26 Logit Model of the choice between Greenfield Establishment and Acquisition.
Independent variables: Local Conc. Ratio, Degree of Int. Competition and Percentage of Exports.

y = 0 = Greenfield Establishment		
y = 1 = Acquisition		
Coefficients for y = 1		
Variable	Parameter Estimate	Level of Significance
Local Conc. Ratio	-0.0133520	2%
Degree of Int. Competition	-0.0115683	2%
Percentage Exports	-1.61023	2%

N = 120

Frequencies of actual v.s predicted outcomes

		Predicted outcome	
		0	1
Actual outcome	120	104	16
	0	79	6
	1	41	10

Percentage of correctly predicted cases: 69%

Goodness-to-fit: Chi-square (4) 4.45

Level of Significance: 11%

Note: Firms with their first foreign subsidiary establishment before 1979 are excluded.

7 Summarizing the Study

7:1 Introduction

This research project was initiated against the background of a host of casual observations of new patterns in the internationalization process of firms. The first step in this dissertation was to theoretically address the question of what forces and factors might have made Swedish manufacturing firms follow a process of internationalization different from that predicted by traditional models. A review of the major theories of the MNC, foreign direct investment theory and the established models of the internationalization process provided some interesting answers. A general move towards a more homogenous world, quicker and easier access to information about foreign markets and the emergence of firms that manage their activities as if the world was one large homogenous entity, had severely undermined the key assumption of a heterogenous world behind the traditional models.

To become further acquainted with contemporary conditions for Swedish firms establishing abroad, and to gain a better understanding of the process of internationalization, two case studies were conducted. From the case studies and the literature review, a conceptual model of the firm's internationalization process emerged, incorporating three fundamental blocks of factors that were expected to determine the pace and pattern of the process.

To identify changes in the process as compared to earlier findings, and to statistically evaluate the explanatory power of some of the key determinants in the proposed model, a set of testable hypotheses was formulated. Eleven of these were subsequently tested on a larger body of empirical material.

The purpose of this final chapter is to synthesize the findings of this study. The findings on the various patterns in the internationalization process and their possible determinants will be briefly summarized and related to earlier research. The conclusions from the tests will emerge into a discussion of what these clear but partial patterns taken together might indicate about the multidimensional and complex phenomenon of the internationalization process of the firm.

7:2 Findings and Conclusions

This study has focused on the patterns in, and determinants of, three manifest dimensions of the internationalization process. In this section the findings relating to each of these three dimensions will be summarized. A subsequent concluding discussion will highlight what these partial findings indicate about the internationalization process as a whole. The chapter will conclude with a brief discussion of the implications of the observed patterns and some comments on possible avenues for future research.

7:2:1 Observed Patterns in the Sequence of Foreign Markets Entered

The observed average sequence in the establishment of foreign sales subsidiaries does not support the notion of a Nordic "home" region that is penetrated before the rest of Europe. Instead it can be concluded that the average establishment sequence of Swedish manufacturing firms in 1986 is still very similar to that observed by Hörnell, Vahlne and Wiedersheim-Paul 1973. Although the ranking of particular national markets has changed somewhat, seven of the top ten markets in terms of mean establishment rank are the same as in 1973. Furthermore, European markets – and particularly Northern European ones – still dominate the picture. All of the top ten markets but one – the U.S. – are still European in 1986.

The most striking change since 1973, in terms of regions or markets penetrated in the early stages of the internationalization process, is that the U.S. has been growing in importance as a host country for early foreign establishments of Swedish manufacturing firms. The U.S. has a higher ranking in terms of MR (mean establishment rank) than either Denmark or Finland, and the absolute number of first, second and third establishments is of the same order of magnitude as for these two neighbouring countries. Although the growing importance of the U.S. for Swedish export industry has been observed by several researchers (cf Swedenborg et al 1988; Ågren, 1990; Lindquist, 1990), the large number of early establishments, particularly first establishments, is strikingly high. This phenomenon can probably be explained by several factors: an increase in the relative attractiveness of the U.S. market in terms of size, growth, purchasing power, advanced customers, competitive environment and a favourable

exchange rate. These in turn have offered not only potential short-term earnings but also advantages in terms of knowledge/technology development and global competitive positioning. In addition, a certain general decrease in psychic distances has probably been a contributing cause.

Contrary to expectations, small and large firms seem to follow the same pattern. Neither in the particular case of the U.S., nor in general, are there any significant differences in the establishment pattern of small and large firms.

These indications taken together, the *first overall conclusion* is that the average foreign establishment sequence of Swedish manufacturing firms by 1986 has changed somewhat since 1973, but that psychic distance factors still seem to play a role. However, the notion of market potential as the single most important explanatory factor receives rather strong support in the tests conducted. At the same time there are signs that psychic distance factors play a more limited role than earlier research has indicated. The very limited spread in the measure used for ranking the various national markets, and the fact that markets like West Germany, England and the U.S. on the average are entered before neighbouring countries like Finland and Denmark, certainly point in the direction of a certain levelling out of differences in psychic distance – or at least its effect on the location decisions of firms.

A second conclusion is that the observed changes in the establishment sequence appear to be a rather late phenomenon. The average establishment pattern of firms with their first foreign subsidiary establishment before 1977 is almost identical to what was observed in the 1973 study. Only after 1977 does the traditional pattern begin to dissolve.

Thirdly, it can be concluded that international industry characteristics are significantly associated with patterns in the foreign establishment sequence, whereas there is no support for the notion of avoidance of local markets with high local concentration ratios. Within industries of high global concentration ratios and within industries with a high degree of international competition, the traditional establishment sequence has eroded. Non-Nordic countries account for about 70 % of the first, second and third establishments within industries with these characteristics. The converse is true in industries with a low global concentration ratios and in industries with a low degree of

international competition. The bulk of the early establishments (2/3 of the first, second and third establishments) are made in the Nordic countries, and there is no sign of any erosion of the traditional establishment sequence.

The changes noted above are also reflected in the timing of foreign subsidiary establishments. A *fourth major conclusion* is that the average time between two consecutive foreign subsidiary establishments has decreased significantly compared to that observed in earlier studies of Swedish manufacturing firms (cf Hörnell, Vahlne, Wiedersheim-Paul, 1973). Obviously firms in general need, or are forced to spend less time than ever on consolidating the latest step and planning the next one in the foreign establishment sequence. An interesting observation in this context is that this phenomenon seems to be general. None of the firm characteristics or industry characteristics studied, seem to significantly influence the pace of the sequence.

7:2:2 Observed Patterns in the Establishment Process within a Market

Although a set of hypotheses remains untested, due to lack of some key data on the establishment process within markets, some preliminary findings from the case illustrations, as well as some conclusions from an empirical test of the choice of channel in foreign markets, are at hand.

First, both of the case firms studied tend to "leap-frog" stages in the traditional "establishment chain" (Johanson and Wiedersheim-Paul, 1974) – exports – independent representative – sales subsidiary – manufacturing subsidiary – historically followed by Swedish manufacturing firms. Particularly the second stage – independent representative – tends to be "leap-frogged". If this is also true at the aggregate level, some interesting conclusions can be drawn. One may be that the necessary information and experience required before making a greater commitment within a market can be gathered faster than before and without going through certain steps. Another may be that the need to gather information and experience is overruled by other, more pressing considerations, such as competitive pressures.

Second, there are indications of a more conservative establishment pattern, similar to the traditional "establishment chain", within home

markets of key competitors or within markets with tight oligopolistic structures. It is possible that the increased uncertainty in the face of stiff local competition is partly handled by adhering to a slow and gradual step-by-step establishment process. There is strong empirical support in the tests that firms over extended periods avoid establishing wholly owned sales subsidiaries in host countries with high local concentration ratios; rather, they tend to prefer independent representatives.

Third, it can be established that the degree of international competition within industries significantly affects the choice between wholly owned sales operations and independent representatives, whereas neither global concentration ratio nor the firm's size and experience of doing business abroad could be proven to have any significant influence. Wholly owned operations are significantly less probable than independent representatives in industries with a high degree of international competition. The trend towards a rapid, and in terms of number of markets, broad internationalization process in highly internationalized industries is reflected in this finding. Given resource constraints, forms of establishment like independent representatives – which generally require less capital and management (but are in many cases also less efficient) – seem to be chosen in order to keep up the pace and broaden the coverage of internationalization.

7:2:3 Observed Patterns in the Mode of Establishing Sales Subsidiaries

Given the decision to enter a market in the form of direct investments, it remains to be decided whether to enter by a greenfield investment or by acquiring a local going concern. Out of the 399 wholly owned foreign operations included in this study, 26% were established through acquisitions. As with any other dimension or pattern of the internationalization process, a host of factors affects this decision at the single-firm level. However, at the aggregate or average level, only a handful of factors have an influence that is strong, general and unambiguous enough to be discernible and significant.

First, it is clear that the propensity to choose acquisitions over greenfield entry is negatively correlated with the local concentration ratio. The higher the concentration ratio within a host country, the lower the probability that the acquisition route is chosen. This is contrary to

what several earlier writers have concluded and proposed (cf Dubin, 1976; Buckley, 1981; Sölvell, 1988 and Ågren, 1990). It is argued that acquisitions – particularly of manufacturing units – within oligopolistic structures have the advantage of not adding capacity to an industry and therefore cause less violent reactions from industry incumbents. At the same time, though, it should be clear that there are fewer suitable and reasonably priced operations for sale, the tighter and more concentrated the industry structure – particularly from the perspective of less than gigantic firms (like the ones in this study) considering an entry. Earlier research has mainly focused on the acquisitions of manufacturing operations and on the choice of entry mode by very large established multinational corporations. It is interesting to note, however, that Dubin (1976), using data on U.S. Fortune 500 corporations, observes a weak negative correlation between concentration ratio and acquisitions of manufacturing operations even among large firms, but attributes it mainly to methodological shortcomings.

It seems plausible that smaller firms with rather limited resources in the beginning of their internationalization process would have an even stronger propensity to abstain from acquisitions the higher the local concentration ratio, given that the potential acquisition candidates become fewer and larger. Although this study has focused on the choice of entry mode of Swedish medium-sized firms foreign non-manufacturing operations, there is a priori reason to believe that the same principle, *ceteris paribus*, would also be valid in the case of foreign manufacturing operations.

Second, it can be established that the worldwide or global concentration ratio within an industry has no significant effect on the mode of establishing sales subsidiaries. As pointed out in the background discussions concerning the hypotheses, a rapid internationalization process, manifested for example in a strong propensity to acquire rather than to establish greenfield, could be expected in industries with high global concentration ratios, given that the firm is competing head-on against the established global players. The same kind of fast action is not required if the *de novo* entrants focus on well-defined and to a certain extent protected niches of the industry. A plausible interpretation of the observed non-significance of the global concentration ratio is that many of the firms studied operate in product/market niches or segments of their respective industry that to a large extent are protected from the established global actors.

Third, it can be concluded that the higher the degree of international competition within an industry, the more probable the acquisition route becomes. The strong link between competitive advantage and degree of internationalization within highly internationalized industry structures can be expected to force industry incumbents to reach rather quickly what could be called a "minimum efficient degree of internationalization" in order to be competitive. The strong propensity to prefer acquisitions over greenfield investments in industries with a high degree of international competition reflects this strong tendency towards internationally competitive market coverage.

Apart from industry-structure variables, two firm variables – firm size and experience of doing business abroad – were tested for influence on the choice of entry mode, this in spite of validity problems. Firm size appeared to have no significant influence on the average choice of entry mode, whereas experience of international business tended to increase the probability of choosing acquisitions rather than greenfield investments. These indications deviate to some extent from conclusions by other researchers. Two recent major empirical studies of choice of entry mode (Caves and Mehra, 1986, Kogut and Singh, 1988), found support for the notion that firm size tends to affect positively the choice of acquisitions over greenfield investments. One of the studies (Caves and Mehra *ibid*) also confirmed an increased acquisition propensity among internationally experienced firms, while the other, using almost the same definitions but focusing on another population, could establish no such relationship.

Disregarding the validity problems and assuming that the indications in this study correctly reflect reality, major differences in the populations studied are probably the main reason why the findings point in different directions. Both of the earlier studies focus on the choice of entry mode by large established multinationals. Only major entries are included. Kogut and Singh (*ibid*), for example, exclude acquisitions valued less than USD 10 million. Furthermore, both studies include the establishment of manufacturing as well as sales operations. It is the choice of entry mode by smaller non-established firms with *no* foreign manufacturing operations that has been at focus in this study.

7:2:4 Concluding Remarks on the Internationalization Process of the Firm

A multitude of theoretical approaches (see chapter two for a complete overview) ranging from neoclassical trade theory, theories of oligopolistic competition, location theory, product-life-cycle theory, and transaction-cost theory to behavioral theories of the firm have over time made contributions to understanding and interpreting particular manifest patterns or dimensions of the internationalization process. Still lacking is a unified theory of the internationalization process of the firm.

Although this study has had no ambition to develop the ultimate general framework of the internationalization process, it takes a small step towards a more integrated view. The internationalization process is seen as one single complex growth and development process. Any manifest pattern in this process has to be understood and explained in light of firm, industry and host country characteristics.

If the three manifest dimensions focused on in this study are viewed as indicators of the same underlying growth and development process, some additional conclusions could be drawn about the internationalization process in general.

First, the pace of internationalization by firms appears to be generally more rapid than ever. Almost every aspect of the process studied points in this direction. The time between two consecutive subsidiary establishments is shorter than earlier research has indicated. Stages in the establishment chain are being leapfrogged, and there is a great use of fast entry modes – particularly in highly internationalized industries. Contemporary research by Lindquist (1990) on related matters in small firms shows a similar tendency towards an increased pace.

Second, although it has not been proven, there are indications of a certain trade-off between the pace of the foreign establishment process and the degree of commitment on particular national markets. The strongest indications of rapid internationalization are to be found in highly internationalized industries. Here there is also the lowest propensity to establish wholly owned operations rather than to use independent representatives. Scarce resources like capital and management are thus used for covering a larger number of markets

rather than for entering a few markets in a way that would call for more resources on each of them.

Third, the tests conducted indicate that there is still some tendency to make incrementally stronger commitments along various dimensions of the internationalization process. This tendency is attributable to perceived uncertainty and resource constraints. However, and more importantly, the material provides strong support for the conclusion that market potential and industry structure in particular, but also other firm characteristics, besides experience of doing business abroad, play an even more important role in shaping this process. Market potential and industry structure (cf Sölvell, 1988) seem to override the forces promoting incrementalism.

Although this study has focused on a very particular population, it is plausible to believe that the overall conclusions about the process are general. *If* the observed changes in the process are due to general and fundamental socio-economic changes, any indicator, for example the timing of the establishment of manufacturing operations, in any large population could be expected to reflect a more rapid internationalization process shaped first and foremost by market potential and industry structure.

7:2:5 The Internationalization Process of the Firm in a New Perspective

It should always be kept in mind – particularly when reading studies like this one – that the internationalization of a business firm is basically a simple concept. In the process of exploiting its firm-specific advantages, a company happens to cross a boundary. Whether it is the Stockholm city limit or the border between Sweden and Denmark or some other national frontier, does not change the basic fact: a firm enters new geographical areas in order to exploit and/or to some extent to create new (Nordström and Vahlne, 1987) proprietary advantage. How and at what pace it does so is a function of firm, industry and demand characteristics.

Whether international borders are crossed does not matter. The key determinants of the exploitation process are the same. The only possible difference is between the industry and demand characteristics of the home and host countries as has also been the case even within countries.

Given a complete absence of any constraints at the firm and industry level, the location, demand and cost of serving customers would determine and explain the exploitation process on a worldwide basis. However, in reality managerial, organizational, knowledge and other constraints at the firm level, as well as competitive constraints at the industry level at home and abroad "disturb" this basic and straightforward process. In effect, the process by which a particular company exploits its firm specific advantages for example, by expansion (or non-expansion for that matter) outside the home market, becomes a complex web of firm, industry and demand characteristics.

Earlier efforts to explain that part of the exploitation process that has been labeled the internationalization process, have usually focused on very specific aspects, both in terms of *what* is explained and *how* it is explained.

The dominant line of research on firms internationalization process has concentrated on explanatory variables at the firm level. Basically to the exclusion of other factors, the firm's knowledge and experience of doing business abroad has been viewed as the key determinant of various patterns in the internationalization process (cf Carlson, 1975; Hörnell, Vahlne and Wiedersheim-Paul 1973; Johanson and Vahlne 1977; Bilkey and Tesar, 1977; Barrett, 1986; Ford, 1987; Johanson and Nonaka, 1988 etc). Another line of research has focused mainly on industry-structure variables (cf Knickerbocker, 1973; Graham 1974; Vernon, 1979; Caves and Mehra, 1986; Kogut and Sing, 1988; Dubin, 1976 etc). Aside from these partial approaches, Dunning (1977) sets out to explain the extent, form and pattern of international production using an eclectic approach with three sets of explanatory factors at the firm and industry level: ownership-specific, internalization and locational advantages. However, this model focuses solely on international production, assumes perfect information and basically disregards the process aspect of the firm's internationalization.

These different approaches have all contributed to the understanding of patterns in the growth and development process of multinational firms. Furthermore, it is clear that several of the models and findings, in spite of criticism (see Johanson and Vahlne 1990 for an overview), are still valid – at least to some extent – in 1990. The findings of this study indeed indicate that the knowledge and experience aspect, as well as the influence of market potential and industry structure, have

an important simultaneous influence on the internationalization process. At the same time, it seems clear that one aspect sometimes overrules another, and vice versa. Obviously multivariate approaches are called for in order to explain pace and patterns in contemporary internationalization processes. A tendency towards such multivariate approaches could be discerned in some very recent research on Swedish direct investments in the U.S. (Ågren, 1990) and on the process of internationalization of young technology-based firms (Lindquist, 1990).

Although multivariate explanatory approaches will add to our understanding of the firm's internationalization process any great leap forward in our knowledge will probably require redefinition of the variables to be explained. So far, studies of the firm's internationalization – structural as well as more process-oriented approaches – have looked upon internationalization mainly as a matter of production and distribution/sales, with the focus on stocks and flows in the establishment of production and sales activities. This study – although using a multivariate explanatory approach – is obviously no exception.

Foreign production and sales operations are more and more becoming a part of an even larger family of foreign operations within business firms. Historically firms first and foremost exploited a firm-specific advantage by going abroad – today it is not only a matter of exploitation but also creation. Technological development and socio-economic changes – sometimes at a tremendous pace – have enabled firms to move closer to the geocentric ideal (Perlmutter, 1969). It is no longer obvious that firm-specific advantages are created first and foremost at home and then exploited abroad. Various activities within the firm – from human-resource development, procurement, research and development to inbound logistics and financial operations, can be (and in many cases are) located almost wherever in the world it is optimal from a corporate point of view (Porter, 1986; Hedlund, 1986; Bartlett, 1986 etc) rather than in the country of origin. And the purpose is not only to exploit, but also to create and defend, firm-specific advantages.

Although the production/distribution approach of the research on firms' internationalization is still valid to some extent – particularly for small and/or *de novo* entrants in the international arena – a new and broader perspective on the internationalization of the firm is

called for. Future models as well as methods must reflect the fact that internationalization now concerns most activities within the business firm. The first step towards unraveling some aspects of this phenomenon should probably be taken by detailed explorative research on a set of company internationalization processes in the broadest sense. The nature of this task – oriented first and foremost towards description and understanding rather than establishing explanations – would make longitudinal in-depth case studies the most plausible next move in this research area.

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Appendix 1

“Form and Dataguide for Case Description”

Företagens förändrade internationaliseringsbeteende

Form och dataguide för fallbeskrivning

Den form och dataguide som nedan presenteras avser att utgöra en struktur och en standardisering av uppsatsskrivarnas fallstudier. Ambitionen är att göra flera fall jämförbara i en senare större publikation. Jämförbarheten kräver att likartade beskrivningar av de undersökta företagen görs och att fallpresentationerna är av helt deskriptiv karaktär. All analys och alla kommentarer bör således läggas utanför fallbeskrivningen.

Huvudfrågeställningen är i vad mån och på vilket sätt det undersökta företags internationaliseringsförlopp varit/är styrt av konkurrensstrategiska överväganden. Emellertid bör alla faktorer som varit av betydelse för val av marknad, kanal och form i samband med det undersökta företags internationalisering belysas på ett sådant sätt att läsaren har möjlighet att bedöma deras betydelse.

Fallbeskrivningen sönderfaller i tre delar; data kring företaget, branschanalys och en beskrivning av företags överordnade strategi med särskild tonvikt på internationaliseringsförloppet.

Fallbeskrivningen bör totalt omfatta 10-20 sidor.

I. XXXX (företagsnamn)

- Historik
- Hur och när företaget grundades
- Ägarförhållanden
- Produkter/produktionsprocesser
- Omsättningsutveckling/lönsamhet
- FoU
- Kunder

- Leverantörer
- Hur försäljningen går till
- Marknadsföringsaktiviteter
- Prisstrategier
- Finansiella situationen
- Vertikal/horisontell integration
- Övriga intressanta särdrag; t ex intressanta och betydelsefulla personligheter i företaget, stark företagskultur, etc.

Totalt sett bör del I ge en klar bild av företagets framväxt fram till i dag samt en klar och välstrukturerad bild av nuläget.

II. Branschbeskrivning

Branschstrukturen kan utöva ett starkt inflytande på hur branschens spelregler och potentiellt framgångsrika strategier ser ut.

Konkurrensens intensitet i en bransch är varken en fråga om tillfälligheternas spel eller otur. Konkurrensen i en given bransch har snarare sina rötter i dess underliggande ekonomiska struktur. Konkurrensläget i en bransch bestäms i avgörande mån av fem primära konkurrenskrafter. Den samlade styrkan av dessa krafter bestämmer vinstpotentialen i branschen.

Avsnittet branschbeskrivning bör ge en rik och utförlig beskrivning av konkurrenskrafternas styrka och följaktligen branschens lönsamhet.

Branschbeskrivningen bör också vara så extensiv att det är möjligt att förstå konkurrenternas ageranden och vad som driver dem till olika ageranden.

Som arbetsdefinition på begreppet bransch bör användas:

"En grupp företag som producerar produkter vilka är nära substitut för varandra."

Detta medför att det inte finns några bestämda geografiska begränsningar på branschbegreppet. Vissa branscher är nationellt strukturerade i det att "företag som producerar närliggande

substitut för varandra" i de flesta fall är lokala. Andra branscher, som t ex bilindustrin, upplever att producenter av substitut finns och säljer över hela världen.

För att genomföra branschanalysen på ett korrekt och rättvisande sätt bör således det studerade företags bransch placeras in på kontinuumet nationell-regional-global innan vidare beskrivningar görs.

Branschbeskrivningen bör följa följande struktur:

- Nationell-regional-global
- Bakgrund till branschen och dess framväxt
- Produkterna
- + Kunder/kundprofil
- + Leverantörer
- + Substitut
- + Potentiella etablerare/etableringshinder
- + Konkurrens bland existerande företag; med bl a en rik beskrivning av konkurrenternas ageranden och drivkrafter
- Branschens utveckling över tiden
- Framtidsutsikter

De med + markerade punkterna beskrivs lämpligen efter den struktur som finns i Porter (1980). Följ emellertid inte strukturen i absurdum och tänk på att det skall vara möjligt för läsaren att förstå det undersökta företags internationalisering mot bakgrund av beskrivningen av branschen. Vissa av Porters punkter kan således vara mindre intressanta (eller helt ointressanta...) på samma sätt som det kan i det specifika fallet vara påkallat att expandera vissa punkter (eller addera sådana av intresse ...).

III. XXX strategi och internationalisering

Avsnittet bör inledas med en beskrivning av det studerade företags strategi dels i Porters termer (1980), dels i Ansoffs (1965) product/mission termer.

Då företagets internationaliseringsstrategi med nödvändighet bör vara en effekt av den överordnade strategin är det väsentligt att vara klar även över den senare.

Därefter beskrivs lämpligen internationaliseringsförloppet i kronologisk ordning; vilka marknader man etablerat sig på, med agent, säljande eller tillverkande dotterbolag (eventuella andra former som samarbeten, joint ventures, etc bör också beskrivas).

Beskrivningen bör också göra det möjligt att på varje enskild marknad se om agent-säljande db-tillverkande db följts. Vidare bör det framgå i vilka fall det varit fråga om greenfield-etableringar och uppköp.

Lämplig struktur:

- XXXX strategi
- XXXX internationalisering
 - . Marknader
 - . Etableringskedja på respektive marknad
 - . Greenfield eller acquisition på respektive marknad
 - . Joint ventures, samarbeten, etc.

Appendix 2

“The IUI Questionnaire”



INDUSTRIENS UTREDNINGSGRUPP
GREVGATAN 34, 5 TR, 114 53 STOCKHOLM
TELEFON 08 - 783 80 00
REF. GÖRAN JOHANSSON OCH MATS KINNWALL

BLANKETTERNA INSÄNDS FÖRE DEN 27 MAJ 1987

UPPLYSNINGAR OCH ANVISNINGAR ANGÅENDE ENKÄTEN OM SVENSKA INDUSTRIFÖRETAGS VERKSAMHET I UTLANDET

I. Vilka företag skall besvara enkäten?

Institutets undersökning omfattar samtliga **svenska industriföretag** som hade tillgångar i utländska koncernföretag och/eller minoritetsintressen i utländska företag 1986. Dessa företag ombeds lämna uppgifter om såväl den svenska koncerndelen som om utländska koncernföretag och minoritetsägda företag. Intresset koncentreras till de varuproducerande koncernföretagen i utlandet. Rent försäljande och övriga rörelsedrivande dotterföretag, liksom minoritetsägda företag omfattas i mer begränsad utsträckning.

Enkäten sänds i huvudsak till svenska industriföretag som erhållit tillstånd från riksbanken att företa direkta investeringar i utlandet. Företag som erhåller enkäten trots att de ej omfattas av undersökningens urvalskriterier ombeds att i svar ange om tillståndet avsåg utländska intressen av annat slag än sådana som berörs av undersökningen, om ett tidigare utlandsintresse avvecklats före 1986 eller om investeringstillståndet ännu ej utnyttjats detta år.

II. Definitioner

Som **svenskt industriföretag** betraktas företag som är registrerat i Sverige och som inte är dotterföretag till ett utländskt företag samt är verksamt huvudsakligen inom industrin.

Till **producerande företag** räknas här alla företag som utför någon form av varuproduktion, såsom utvinning, tillverkning eller sammansättning av varor. Även företag som huvudsakligen bedriver annan verksamhet, t ex försäljning, men därutöver utför någon produktion räknas i denna undersökning som producerande företag.

Till **försäljningsföretag** räknas här företag som endast ägnar sig åt försäljning, eventuellt kombinerad med installations- och serviceverksamhet. Försäljningen skall i inte obetydlig utsträckning utgöras av koncernens produkter. I de fall då sammansättning eller montering av varor är en så enkel process att den även kan utföras av kunden och av företaget inte betraktas som industriell tillverkning kan detta produktionsled innefattas i försäljningsföretagets verksamhet.

Övriga rörelsedrivande företag är företag som är verksamma inom andra näringsgrenar än industri och handel.

Koncernföretag eller **dotterföretag** och **dotterdotterföretag** utgörs av företag i vilka aktiekapitalet ägs till mer än 50% av ett eller flera koncernföretag. Sådana företag omfattas enligt aktiebolagslagen av koncernredovisningen.

Svenska koncernföretag eller den **svenska koncerndelen** utgörs av moderföretaget och övriga i Sverige belägna koncernföretag.

Utländska koncernföretag eller den **utländska koncerndelen** utgörs av koncernföretag belägna i utlandet.

Utländska minoritetsintressen definieras som företag i utlandet i vilka minst 10% och högst 50% av aktiekapitalet ägs av ett eller flera koncernföretag.

III. Undersökningens syfte

Denna enkät utgör en uppföljning av de enkätundersökningar angående svenska industriföretags direkta investeringar i utlandet som institutet företog 1971, 1975 och 1979. Syftet med föreliggande enkät, liksom med de tidigare, är att kartlägga omfattningen och inriktningen av svenska industriföretags utlandsverksamhet samt därmed sammanhängande betalningsflöden mellan Sverige och utlandet. I huvudsak är 1986 års enkät upplagd på samma sätt som de tidigare, vilket möjliggör detaljerade jämförelser mellan enkätåren 1965, 1970, 1974, 1978 och 1986.

IV. Enkätens utformning

Det företag som ombeds besvara enkäten är moderföretaget i koncernen. Detta innebär att koncernens moderföretag ombeds lämna uppgifter även för indirekt ägda koncernföretag i utlandet. Om det väsentligen skulle underlätta besvarandet av enkäten kan emellertid annat svenskt koncernföretag än moderföretaget besvara enkäten beträffande sina utländska dotterföretag. I dessa fall bör separata frågeformulär ifyllas i tillämpliga delar såväl av koncernens moderföretag som av ifrågavarande dotterföretag, eftersom det är av vikt att vi erhåller uppgifter rörande hela koncernen.

Enkäten består av två formulär. **Blankett A** insänds i ett exemplar och avser uppgifter om företaget/koncernen i Sverige samt vissa uppgifter om dess intressen i utlandet. Företag som äger producerande dotterföretag i utlandet ombeds dessutom att besvara **Blankett B**. Blankett B ifylls i ett exemplar för vart och ett av de producerande utländska koncernföretagen.

Bifogade kopior av blanketterna kan behållas av företagen. Ytterligare exemplar av blanketterna kan erhållas från institutet.

V. Valutaomräkning

Alla belopp bör uttryckas i svenska kronor efter omräkning enligt de valutakurser som använts vid upprättandet av koncernbokslutet 1986.

VI. Räkenskapsår

Uppgifterna bör avse kalenderåret 1986. I regel torde räkenskapsåret sammanfalla med kalenderåret, varför uppgifter direkt kan hämtas ur företagens redovisningshandlingar. Företag med brutet räkenskapsår kan dock i stället lämna uppgifter för det räkenskapsår som närmast sammanfaller med kalenderåret. Vid räkenskapsår 1 juli—30 juni anges uppgifter för räkenskapsåret 1985/86 osv. Om räkenskapsåret ej omfattar 12 månader skall detta anges.

VII. Exakthet i uppgiftslämnandet

En hel del av de begärda uppgifterna finns förhoppningsvis relativt lätt tillgängliga för de flesta företag. När så inte är fallet efterfrågas emellertid inte redovisningsmässig exakthet i svaren utan rimliga uppskattningar. Det är viktigt att sådana uppskattningar i möjligaste mån görs jämförbara mellan olika dotterföretag och länder. Om speciellt stor osäkerhet vidläder en viss uppgift, var god ange detta under punkten "Kompletterande uppgifter" i respektive avdelning.

VIII. Särskilda anvisningar till frågorna

Hänvisning till nedanstående nummer görs i anslutning till den fråga på blanketterna som förklaringen avser.

1. I blanketterna skall anges företagets/koncernens **huvudsakliga branschtillhörighet** enligt nedanstående kodförteckning, som svarar mot 2- och 3-ställig SNI i svensk industristatistik. Om företagets/koncernens verksamhet fördelar sig på mer än en bransch anges således den bransch inom vilken den övervägande delen av verksamheten faller.

Bransch	Branschkod	Bransch	Branschkod
Gruvindustri	01	Järn-, stål- och metallverk	09
Livsmedels-, dryckesvaru- och tobaksindustri	02	Metallvaruindustri	10
Textil- och beklädnadsindustri samt läder- och lädervaruindustri	03	Maskinindustri	11
Trävaruindustri	04	Elektroindustri	12
Massa- och pappersindustri	05	Transportmedelsindustri	13
Grafisk och pappersvaruindustri	06	Varvsindustri	14
Kemisk, plast- och gummivaruindustri	07	Industri för instrument, foto- och optikvaror, ur	15
Jord- och stenvaruindustri	08	Annan tillverkningsindustri	16

2. För de utländska dotterföretag och minoritetsägda företag som inte är i huvudsak producerande skall **verksamhetstypen** anges enligt nedanstående kodförteckning:

1. Handel
2. Jord- och skogsbruk
3. Byggnadsindustri
4. Kraftverk

5. Forsknings- och utvecklingsarbete
6. Koncernledning
7. Transport
8. Övriga tjänster

3. Moderföretagets (i koncernen) **direkta och indirekta** andel av det utländska företagets aktiekapital beräknas på följande sätt: Antag att 80% av aktie- eller andelskapitalet i ett utländskt koncernföretag ägs av ett annat utländskt företag som i sin tur till 60% ägs av det svenska moderbolaget. Moderföretagets direkta och indirekta ägande i dotterdotterföretaget blir då $60\% \times 80\% = 48\%$. De svenska koncernföretagens direkta ägande i dotterdotterföretaget blir noll. Att dotterdotterföretaget klassificeras som koncernföretag bestäms av att det till mer än 50% — här 80% — ägs av ett annat koncernföretag.

4. Med bokfört värde på **eget kapital** avses totalt aktiekapital samt övrigt beskattat eget kapital såsom fonder, reserver, och balanserade vinster.

5. Antalet **anställda i minoritetsägda företag** i utlandet kan vara en svårtillgänglig uppgift. Även en grov uppskattning på denna punkt vore emellertid värdefull.

6. **Exporten** bör om möjligt värderas fob, dvs till det pris som erhålls när varorna lämnar landet. Om någon annan värderingsprincip använts för beräkning av de begärda exportsiffrorna, var god ange hur denna förhåller sig till fob-priserna.

7. Ett exempel kan förtydliga anvisningen för företag med utländska producerande dotterföretag i färre än 6 länder. Antag att ett företag har 3 producerande dotterföretag i utlandet 1978. Ett av dessa ligger i Västtyskland, ett i Storbritannien och ett i Colombia. De två förstnämnda länderna är upptagna separat i länderförteckningen i fråga 14 och företaget ombeds ange koncernens omsättning i och export till dessa länder. Colombia är däremot inte upptaget separat och någon uppgift behöver därför inte lämnas, vare sig för detta land eller för Latinamerika, i vilket det ingår.

8. De flesta företag gör en uppdelning av sin tillverkning och försäljning på divisioner, sektorer, huvudsakliga **produktgrupper** eller produkter. Aggregationsnivån bestäms av företagets egen indelning i huvudsakliga produkter. Grunden för denna indelning kan vara produkternas användningsområden, dvs försäljningsinriktad eller, vilket är vanligare, produktionsmetoder, dvs produktionsmekaniskt bestämd. Här vore det önskvärt att denna indelning kunde ske på grundval av produktionsmetoder eller av i produktionen använda material, dvs motsvara de klassificeringsprinciper som används i SNI och SITC. Vidare är det önskvärt att så långt möjligt samma indelningsgrunder används vid en produktuppdelning av de svenska koncernföretagens produktion och export som vid en produktuppdelning av de utländska dotterföretagens produktion, även om den sistnämnda görs mer finfördelad. Rimliga uppskattningar kan mycket väl godtas, om uppgifterna är svåra att beräkna på grundval av tillgänglig information inom företaget.

9. Om uppgift om **lönebikostnader** i de utländska dotterbolagen saknas ombeds företaget göra ett uppskattat procentuellt påslag på lönesumman.

10. Statistiska centralbyråns (SCB) definition av **forskning och utvecklingsarbete** inom industrin omfattar grundforskning, tillämpad forskning och utvecklingsarbete inom naturvetenskap, teknologi, medicin, lantbruksvetenskap m m, men ej inom samhällsvetenskaplig humanistisk forskning (innefattande marknadsforskning, företagsekonomisk forskning etc). Vidare sägs att i allt arbete som hänförs till FoU skall finnas ett nyhetsmoment. Ett normalt konstruktionsarbete som helt följer utstakade banor och etablerade rutiner skall ej räknas till FoU. Kostnader för FoU omfattar driftskostnader och periodiserade kapitalkostnader för av företaget med egen personal bedrivet FoU-arbete samt utbetalda medel för FoU som på företagets uppdrag utförts av annan. Licensbetalningar bör däremot ej inkluderas som utgift för FoU. Uppgifter om FoU-kostnader bör finnas tillgängliga inom flertalet företag av skälet att företagen uppger FoU-kostnader överstigande 100 tkr till SCB vartannat år.

11. Skillnaden mellan total omsättning och värdet av varor tillverkade eller sammansatta vid dotterföretaget utgörs av varor som endast återförsäljs utan vidare förädling vid företaget. Återförsäljningen kan utgöras av varor som tillverkats vid andra koncernföretag eller av varor som inköpts från utomstående företag.

12. **Dotterbolagens import** värderas fob, dvs till de priser som erhålls när varorna lämnar Sverige. I de fall då de svenska koncernföretagens totala export till landet ifråga går via detta dotterföretag blir uppgifterna under 5) lika med de uppgifter som lämnas för ifrågavarande land under fråga 14) på blankett A.



BLANKETT A
KONFIDENTIELLT

SVENSKA INDUSTRIFÖRETAGS VERKSAMHET I UTLANDET

INDUSTRIENS UTREDNINGSGINSTITUT
GREVGATAN 34, 5 TR, 114 53 STOCKHOLM
TELEFON 08 - 783 80 00

REF. GÖRAN JOHANSSON OCH MATS KINNVALL
BLANKETTEN INSÄNDS FÖRE DEN 27 MAJ 1987 TILL INDUSTRIENS UTREDNINGSGINSTITUT

Blankett A: Uppgifter om företaget/koncernen i Sverige och dess intressen i utlandet

Före ifyllandet av frågeformulären var god se upplysningar och anvisningar angående enkäten och kontrollera noga i vilka avseenden företaget berörs av undersökningen.

AVD 1.

1. Företagets/moderföretagets namn och adress: _____ _____	IUI:s kod (ifylls av IUI)
2. Kontaktperson: _____ Tel. ____/_____ ankn. _____	
3. Företagets/de svenska koncernföretagens huvudsakliga branschtillhörighet Ange i svars-kolumnen branschens siffra enligt bransch-koden i anvisningarna. VIII:1.	

[illegible]

[illegible]

7. Uppgifter angående övriga rörelsedrivande koncernföretag i utlandet 1988

Se anvisningarna, II samt VIII:2, 3 och 4.

[illegible]

8. Uppgifter angående minoritetsägda företag i utlandet 1986

Med minoritetsägda företag menas här att minst 10 och högst 50 % av företagets aktiekapital ägs av ett eller flera koncernföretag.

För utländska produktionsföretag anges branschtillhörigheten nedan enligt branschkode i anvisningarna, VIII:1.

För utländska försäljningsföretag och övriga rörelsedrivande företag anges verksamhetstyp enligt koden i VIII:2.

Se även anvisningarna, II samt VIII:3, 4 och 5.

[illegible]

	1 000 kr, 1986
9. Hela koncernens externa omsättning dvs fakturerad försäljning plus övriga rörelseintäkter. All försäljning inom koncernen skall vara eliminerad.	
10. Den svenska koncerndelens externa omsättning Extern försäljning i Sverige plus total export, dvs extern export plus försäljning till utländska koncernföretag.	
11. (a) Total fakturerad export från den svenska koncerndelen Se anvisningarna VIII:7. varav	
(b) Försäljning till utländska koncernföretag Inklusive försäljning till både försäljningsföretag och producerande företag.	
12. Hela koncernens externa omsättning utomlands (Uppgifterna 9 — 10 + 11 a)	

<p>13. Kompletterande uppgifter.</p>

A:6

AVD II

Nedanstående frågor besvaras endast av koncerner med producerande dotterföretag i utlandet.

14. Hela koncernens externa omsättning utomlands och export från Sverige enligt uppgifterna 12 och 11 (a) ovan, fördelad på länder/länderområden.

Omsättningssiffrorna avser total extern försäljning i respektive land inklusive import till och exklusive export från landet. All försäljning mellan koncernföretag i landet skall elimineras.

Exporten från Sverige avser hela exporten, dvs såväl försäljning till koncernföretag som övrig export till landet ifråga.

Koncerner med producerande koncernföretag i 6 eller flera länder (utom Sverige) ombeds ange omsättning i och export till samtliga nedan uppräknade länder/länderområden.

Övriga företag ombeds lämna dessa uppgifter endast för de av de nedan uppräknade länderna i vilka de har producerande koncernföretag.

Se anvisningarna VIII:7.

Länder/ländergrupper	IUI:s kod (ifylls av IUI)	1 000 kr, 1986	
		Omsätt- ning	Export från Sverige
Belgien			
Frankrike			
Italien			
Nederländerna			
Västtyskland			
Storbritannien			
Spanien			
Portugal			
Grekland			
Danmark			
Norge			
Finland			
Schweiz			
Österrike			
Övriga Västeuropa			
Östeuropa			
USA			
Kanada			
Syd- och Mellanamerika			
varav			
Argentina			
Brasilien			
Mexiko			
Afrika			
varav			
Sydafrika			
Asien			
varav			
Japan			
Indien			
Australien			
Nya Zeeland			
Summa*			

* För koncerner med produktion i 6 eller flera länder (utom Sverige) skall omsättningskolumnen stämma överens med uppgift 12 ovan och exportkolumnen skall stämma överens med uppgift 11 (a) ovan. V g kontrollera detta.

<p>15. De svenska koncernföretagens externa omsättning och export 1986 enligt uppgifterna 10 och 11 (a) ovan fördelade på produktgrupper 1986.</p> <p>Exklusive försäljning inom koncernens svenska delar men inklusive försäljning till utländska dotterföretag. Se anvisningarna VIII:9.</p>			
Produkter/produktgrupper	IUI:s kod (ifylls av IUI)	Andel av omsätt- ningen, %	Andel av exporten, %

<p>16. (a) De svenska koncernföretagens totala intäkter från licenser, patent, royalties, "know-how" och "management fees".</p> <p>Inklusive kostnadstäckande bidrag för FoU-arbete och central administration.</p> <p>Exklusive betalningar mellan svenska koncernföretag</p> <p>varav</p> <p>(b) intäkter från utländska koncernföretag</p> <p>(c) intäkter från utländska minoritetsägda företag</p> <p>(d) intäkter från övriga utländska företag</p>	1 000 kr, 1986
<p>17. (a) Hela koncernens kostnader för licenser, patent, royalties och "know-how"</p> <p>Exklusive betalningar mellan samtliga koncernföretag</p> <p>varav</p> <p>(b) betalningar till andra länder än Sverige</p>	
<p>18. (a) Hela koncernens kostnader för forsknings- och utvecklingsarbete (FoU).</p> <p>Exklusive betalningar mellan koncernföretag. Med kostnader för FoU avses såväl löpande utgifter som avskrivningar på kapitalutrustning för FoU enligt Statistiska centralbyråns definition. Både FoU som utförts vid det egna företaget och det som utförts av annan på uppdrag av företaget skall inkluderas.</p> <p>Se anvisningarna, VIII:10.</p> <p>varav</p> <p>(b) för FoU bedrivet i Sverige</p>	

A:8

19. Värdet av fasta anläggningstillgångar Härmed avses maskiner, inventarier och byggnader	1 000 kr, 1986	
	Koncernen totalt	därav Sverige
(a) bokfört värde Härmed avses planenligt restvärde enligt balansräkningens tillgångssida		
(b) uppskattat återanskaffningsvärde (alternativt brandförsäkringsvärde)		
20. Totalt eget kapital Härmed avses totalt aktiekapital samt övrigt beskattat eget kapital som fonder, reserver och balanserade vinster		
21. Total balansomslutning (bokfört värde)		

22. Investeringar i fasta anläggningstillgångar Härmed avses investeringar i maskiner, inventarier och byggnader		
---	--	--

23. Rörelseresultat före avskrivningar Härmed avses fakturerad omsättning minus tillverknings-, försäljnings- och administrationskostnader		
24. Totala lönekostnader (inklusive lönebikostnader) Se anvisningar VIII:9		

25. Antal anställda Beräknas lämpligen som medelantal anställda under året	Antal, 1986	

25a - b

26. Lönekostnaderna enligt uppgift 24 ovan fördelade på		
(a) tillverkning	%	%
(b) produktutveckling	%	%
(c) försäljning	%	%
(d) administration	%	%
(e) övrigt	%	%

[illegible]

6. (b) Var god ange nedan koncernens tre viktigaste utlandsmarknader (i termer av försäljningsvolym) utöver de som angivits under 6 (a) ovan.		
Land	Koncernens externa försälj- ning i landet 1 000 kr	Lokal represen- tation Ja eller Nej



SVENSKA INDUSTRIFÖRETAGS VERKSAMHET I UTLANDET

INDUSTRIENS UTREDNINGSGENOMFÖRANDE

GREVGATAN 34, 5 TR, 114 53 STOCKHOLM

TELEFON 08 - 783 80 00

REF. GÖRAN JOHANSSON OCH MATS KINNWALL

BLANKETTEN INSÄNDS FÖRE DEN 27 MAJ 1987 TILL INDUSTRIENS UTREDNINGSGENOMFÖRANDE

Blankett B: Uppgifter om det producerande koncernföretaget i utlandet

Före ifyllandet av frågeformulären var god se **upplysningar och anvisningar angående enkäten**. En utförligare förklaring av enskilda frågor ges i anvisningen vars nummer anges i anslutning till frågan.

<p>1. Företagets namn: _____</p> <p>Land: _____</p> <p>Moderföretaget i koncernen: _____</p>	<p>IUI:s kod (ifylls av IUI)</p>
<p>2. (a) Sedan när ingår företaget i koncernen som ett producerande koncernföretag? _____ år</p> <p>(b) Ingick företaget före ovannämnda år i koncernen som försäljningsföretag? ja <input type="checkbox"/> nej <input type="checkbox"/></p> <p>(c) Bedrev företaget före ovannämnda år produktion i annans ägo? ja <input type="checkbox"/> nej <input type="checkbox"/></p>	

	1 000 kr, 1986
3. (a) Total fakturerad omsättning. Omsättning skall anges netto, dvs. efter avdrag för omsättningsskatter, rabatter och returer.	
varav	
(b) varor tillverkade eller sammansatta vid företaget. Se anvisningarna, VIII:11. En rimlig uppskattning kan mycket väl godtas.	
4. (a) Total export av 3 (a) Export skall inkludera försäljning till koncernföretag. Se anvisningarna, VIII:8.	
varav	
(b) till Sverige	
5. (a) Import av varor från de svenska koncernföretagen. Se anvisningarna, VIII:12. Rimliga uppskattningar av posterna nedan kan mycket väl godtas.	
varav	
(b) varor för återförsäljning utan bearbetning vid företaget	
(c) varor för bearbetning vid företaget	
(d) investeringsvaror för användning vid företaget. Med investeringsvaror avses maskiner och inventarier.	

6. Sammansättning av företagets produktion enligt 3 (b) ovan. Ange de huvudsakliga produkter/produktgrupper som produceras av företaget samt deras respektive andel av produktionen. Se anvisningarna, VIII:8.		
Produkter/produktgrupper	IUI:s kod (fylls av IUI)	Andel av total produktion (%)

		1 000 kr, 1986
7.	Värdet av fasta anläggningstillgångar	
(a)	Härmed avses maskiner, inventarier och byggnader bokfört värde Härmed avses planerligt restvärde enligt balansräkningens tillgångssida	
(b)	uppskattat återanskaffningsvärde (alternativt brandförsäkringsvärde)	
8.	(a) Totala skulder (inklusive obeskattade reserver) varav	
(b)	långfristiga skulder till de svenska koncernföretagen	
9.	Totalt eget kapital Härmed avses totalt aktiekapital samt övrigt beskattat eget kapital som fonder, reserver och balanserade vinster	
10.	Total balansomslutning (bokfört värde)	
11.	Andel av aktiekapitalet som ägs	
(a)	direkt och indirekt av moderföretaget i koncernen	%
(b)	direkt av de svenska koncernföretagen Se anvisningarna VIII:3	%
12.	Rörelseresultat före avskrivningar Härmed avses fakturerad omsättning minus tillverknings-, försäljnings- och administrationskostnader	
13.	(a) Redovisad nettovinst varav	
(b)	total beslutad utdelning	
(c)	utdelning remitterad till de svenska koncernföretagen (exkl withholding tax) Härmed avses remittering av 1986 års utdelning oavsett när själva remitteringen ägt rum	
14.	Totala lönekostnader (inklusive lönebikostnader) Se anvisningarna VIII:9	
		Antal, 1986
15.	Antal anställda Beräknas lämpligen som medelantal anställda under året	

B:4

Kompletterande uppgifter.

Appendix 3

“Interview Guide for Telephone Surveys”

Interviewguide

Svenska industriföretags verksamhet i utlandet

Företagets namn : _____

Kontaktperson : _____

IUI-kod : _____

Noter:

Företagets fyra största utlandsmarkn.		Nationalitet på de fyra största konkurrenterna på resp. marknad				Sammanlagd m-andel för de fyra största konk. på resp. marknad
		1	2	3	4	
1						
2						
3						
4						

Sammanlagd marknadsandel för de fyra största företagen i världen i Er bransch?

Appendix 4

“The Psychic Distance Questionnaire”

1894

1894

Mätning av Psykiskt Avstånd

Ålder:

1. Har du eftergymnasial
utbildning ?

Ja.

Ekonomisk

☐

Teknisk

☐

Nej

☐

Övrig

☐

2. Vilken är Din befatt-
ning ?

VD eller Vice VD,
eller motsvarande

☐

Funktionsansvarig

Teknik

☐

Ekonomi

☐

Produktion

☐

Marknadsföring

☐

Övrigt

☐

Övrigt

☐

3. Tillhör Du lednings-
gruppen eller motsvaran-
de ?

Ja

☐

Nej

☐

4. Hur många procent av Ditt företags omsättning är export ? _____ %
5. I hur många länder har Ditt företag agent eller dotterbolag ? _____ st
6. Har Du inom ramen för Din yrkesutövning utlandskontakter ? Ja ☐ Nej ☐
7. Har Du vistats utomlands inom ramen för Din yrkesutövning t ex i samband med mässor, kundbesök, konferenser, utlandsstationering etc ? Ja ☐ Nej ☐
8. Försök uppskatta det genomsnittliga antal dagar per år Du vistats utomlands under Ditt yrkesverksamma liv ? _____ dagar
9. Försök att uppskatta det genomsnittliga antal dagar per år Du vistats utomlands privat ? _____ dagar

Psykiskt Avstånd till 21 länder

- A) Börja med att åsätta det land som Du i termer av psykiskt avstånd upplever ligger närmast Sverige, index 0.
- B) Åsätt sedan det land som Du i termer av psykiskt avstånd upplever mest fjärran från Sverige, index 100.
- C) Åsätt alla övriga länder ett index värde mellan 0 och 100 som Du bedömer speglar det relativa psykiska avståndet till Sverige.

OK, här är länderna

Canada _____

Danmark _____

Brasilien _____

Österrike _____

Turkiet _____

Schweiz _____

Japan _____

Norge _____

Australien _____

Chile _____

England _____

Västtyskland _____

Mexico _____

Frankrike _____

Italien _____

Spanien _____

USA _____

Finland _____

Belgien _____

Argentina _____

Portugal _____

Nederländerna _____