

**KESKUSTELUALOITTEITA  
DISCUSSION PAPERS**

---

Tarja Heinonen

**FOREIGN MANUFACTURING SUBSIDIARIES  
OPERATING IN FINLAND IN 1970 – 1982**

24.4.1985  
VP 2/85

**Suomen Pankin  
Valuuttapolitiikan osasto**

**Bank of Finland  
Exchange Policy Department**

FOREIGN MANUFACTURING SUBSIDIARIES  
OPERATING IN FINLAND IN 1970 - 1982

Their Role in the Business Concern  
and in Finnish Economy

Helsinki School of Economics

Department of Economics

Pro Gradu Report  
March 1985

By Tarja Heinonen



Pro Gradu Report  
Tarja Heinonen

FOREIGN MANUFACTURING SUBSIDIARIES OPERATING IN FINLAND IN 1970 - 1982  
Their Role in the Business Concern and in Finnish Economy

The objectives of the study

The objective of this study was to form a descriptive-analytical framework for foreign direct investment in Finland. The role of foreign-owned companies was surveyed from different angles.

Sources

The study was based on foreign and Finnish literature concerning direct investments, and on different statistics. The information of enterprises originated from a questionnaire sent to a sample of companies, and some additional information was gained from the annual reports of these firms.

Approach

Theoretical background was given for the empirical data which concerned Finland as a host country and foreign-owned companies here. The role of the subsidiary in the concern was surveyed from the point of view of autonomy versus various dependences.

Results

The role of foreign-owned companies in Finland was rather modest throughout the period. The subsidiaries' role in the concern was autonomous but the subsidiaries became increasingly dependent on the concern's know how. Financially the subsidiaries are an integrated part of Finnish economy.

Key words

Direct investment, subsidiary

CONTENTS		Page
1	INTRODUCTION	1
	1.1 Objectives and limitations of the study	
	1.2 Outline of the study	2
	1.3 Definitions	4
2	THEORIES OF FOREIGN DIRECT INVESTMENT	9
	2.1 Theories before the 1950s	10
	2.1.1 Heckscher-Ohlin theory	11
	2.1.2 The theory of capital movements	14
	2.2 Theories in the 1950s and the 1960s	15
	2.2.1 Portfolio choice theory	16
	2.2.2 Location, industrial organisation and monopolistic advantage theories	17
	2.2.3 Product cycle theory	20
	2.3 Theories in the 1970s	22
	2.3.1 Industrial organisation approach	22
	2.3.2 Finance approach	23
	2.3.3 Towards integration of theories	26
	2.3.3.1 The theory of Kojima	26
	2.3.3.2 The eclectic approach	27
	2.3.3.3 General theory of internationalization	28
3	FINLAND AS A HOST COUNTRY	32
	3.1 Economic aspects	33
	3.1.1 Raw materials	35
	3.1.2 Labour force	36
	3.1.3 Capital	38
	3.2 Cultural and legal aspects	38
	3.2.1 Education	38
	3.2.2 Research and development	39
	3.2.3 Attitudes	41
	3.2.4 Legal aspects	42
	3.3 Motives for direct investments	44
4	FOREIGN DIRECT INVESTMENT FLOWS IN FINLAND IN 1970 - 1982	47
	4.1 Foreign manufacturing companies in Finland in 1970 - 1982	51
5	FOREIGN SUBSIDIARIES AS A PART OF THE CONCERN	54
6	CASES	59
	6.1 Suomen Tupakka Oy	61
	6.2 Hoechst Fennica	65
	6.3 Oy Aga Ab	68
	6.4 Siemens Oy	71
7	SUMMARY	73
8	SOURCES	75
9	APPENDICES	
	9.1 Questionnaire	81
	9.2 Finland's gross long-term foreign debt in 1980	89
	9.3 The shares of foreign-owned com-	

	panies in manufacturing industry in some industrialised countries	89
9.4	Foreign-owned companies in Finland by sector	90
	Direct investment in 1980 by branch- es of industry	91
9.5	The number of foreign manufacturing subsidiaries in Finland by the country of the investor	92
9.6	Economic grouping of the major investor country	93

## LIST OF THE FIGURES

1	Factor abundance defined in terms of factor prices	12
2	Factor-price equalization	13 - 14
3	An investor trades increasing risk for increased return	16
4a, 4b	Agglomeration is/is not profitable	18
5	The compensation of disadvantages	19
6	Product cycle	21
7	Probability distribution of expected gains	24
8	Risk aversion and risk neutrality	25
9	The choice of international operations	29
10	The links between country-specific and firm- specific advantages	32
11	Percentage share of tariffs in Finnish imports	34
12	The relative productivity of Finnish manu- facturing industry by branches in 1981	37
13	R & D expenditure in manufacturing in rela- tion to value added in selected countries	40
14	Indirect establishment	54
15	Resource-based and functional dependence	58
16	The division of the company's financing	58
17	Cycle model of an international company	61

## LIST OF THE TABLES

1	Determinants of international production	28
2	Foreign direct investment in Finland	51



## 1 INTRODUCTION

One of the remarkable phenomena of the last twenty years has been the growing importance of international investment. Since World War II, the largest component of the capital flows has been direct investment, but there are great differences in the flows between different countries. The bulk of international direct investment is still accounted by a relatively small number of countries, but the structure has diversified gradually. The spread of direct investment country-wise has led to smaller companies taking part in the process. Direct investment has been a phenomenon in the process of the integration of a world economic system where the separateness of individual economies has diminished. The special character of direct investment as compared with other capital flows is reflected by the fact that the control of direct investment tends to be stricter than the control on the whole. Only six OECD countries do not control officially direct investments. These countries are the United States, England, Federal Republic of Germany, Italy and the Netherlands.

In Finland the outflow of capital for direct investment clearly exceeds the inflow, but the importance of inward investment should not be underestimated. For one thing, the subsidiaries of foreign companies are of greater importance than the portion of imported capital would suggest because they form a more stable factor in the Finnish economy than other forms of capital imports. In other words, direct investments tend to have more long lasting effects than do loans or portfolio investments. Secondly, the figures concerning foreign outward and inward investment as a stock are based on book value which is much below the actual market value of the real assets because of inflation. Finally, the overall economic impact of subsidiaries goes beyond the direct transfer of capital since the subsidiaries also raise loans in the host country and from third countries. Therefore the share of total resources they affect can be much larger than the recorded direct investment flow.



The effects - both positive and negative - of direct investment are extremely difficult to estimate due to their partly intangible nature. They are determined by the motives of the investment and by the position of the subsidiary within the internal market of the concern. Host country specific factors - especially the legal framework for the activities of foreign-owned companies - have naturally a strong influence on the operations of the subsidiaries and, therefore, they play an important role in the costs and benefits associated with direct investment.

Due to the complicated nature of direct investment, there is not even a generally accepted theory that would explain the different aspects of the phenomenon. Circumstances in different time periods and countries vary and the emphasis laid on various aspects changes and it makes generalisations difficult to draw. The problems in creating a specific theory for the explanation of direct investment suggest that several theories must be combined to form a comprehensive theoretical framework for the analysis of this field. The activity which must be explained by the synthesized theory is the economic rationale for foreign direct investment.

### 1.1 Objectives and limitations of the study

The objective of this study is to form a descriptive-analytical framework for direct inward investment in Finland. The study is based on the theories of direct investment but there is some empirical material to find out how the theories can be applied in company cases. The aim is to study the role of foreign-owned companies in Finland from different angles. One aspect is the position of a subsidiary within an international concern. Other aspects are the role of the foreign-owned company sector in Finnish economy and the role of individual companies in the branch of industry. In other words, the approach varies from micro to macro level.

The research problem is of such a nature that it cannot be for-

malised to a complete model. Various intangible and partly subjective aspects of the direct investment make mathematical methods unpractical in handling the phenomenon. Therefore the target of the author of this study was to test different propositions of the theories of foreign direct investment by empirical findings. Due to the difficulties in getting sufficient empirical material, various aspects of the investments are dealt with partly on the base of existing literature, statistics, and earlier studies, and partly on the base of a limited number of company cases.

As the study is limited to one country level, a lot of attention has been paid on factors specific to Finland. The micro approach of some of the chapters requires some background information of industry-specific and company-specific factors. The period under review is 1970 - 1982 because of difficulties to get information before that period. As the role of the subsidiary is not likely to change very rapidly, only years 1970, 1975, 1980, and 1982 are examined in the micro part. The study is restricted to manufacturing subsidiaries because it is assumed that the motives to establish a manufacturing unit are more versatile than in the case of sales offices or service subsidiaries. It seems likely that these motives are reflected in the role of the subsidiary.

As no single theory proved to be at the same time general enough to explain the dynamism of direct investments and specific enough to be applicable as a theoretical framework for empirical material, this study is not limited to any particular theory. Most of the concepts used in the study originate from Dunning's eclectic theory since they seemed to be well-formed and more descriptive than the concepts used in many other theories. The grounds of foreign direct investment are found in the idea of comparative advantage and internalization approach. That is why the Heckscher - Ohlin theory and the theory of internalization are introduced more thoroughly than other theories in this study.



## 1.2 Outline of the study

Chapter two of this study consists of a survey of the most important theories explaining why foreign investment is made and why it takes the form of direct investment instead of some other form of operation. The theories are not described in great detail, only the aspects which are relevant for the framework of the study were sought and analysed. As the theories should be assessed paying attention to the circumstances in which they were created, a short description of the characteristics of various time periods are included in the chapter.

The features of Finland as a host country are surveyed from two angles. First there is the 'objective' point of view, it deals with economic, cultural and legal aspects as they are presented in statistics and in other official material. Another way to handle certain country specific factors is to study the motives to establish a subsidiary in Finland. The most usual motives are presented in the end of the third chapter.

Chapter four deals with foreign direct investment flows in Finland in the period 1970 - 1982. This chapter is mainly based on the statistics and other material obtained from the Bank of Finland. Some earlier studies have also been used to get an idea of the structure of the direct investment. Due to insufficiently specified material, one part of the chapter deals with direct inward investment as a whole and not only manufacturing subsidiaries as the name of the study would suggest.

Chapter five is a theoretical survey of those aspects that affect the subsidiary's role as a part of a concern. Attention is paid to various relationships between different units of the concern. As a special point of interest would have been the financial flows within the internal market of the concern, but as this aspect was difficult to apply to empirical material ( because the companies were reluctant to give information of financial questions ), this aspect of the relationship is not handled as thoroughly as the original intention of the author was.

Another original intention of the author was to have a wide empirical part in the end of the study as was explained in the previous chapter. A questionnaire was formed and sent to 50 foreign owned companies operating in Finland to make clear the role in the concern and in Finnish economy ( Appendix 1 ). The companies were selected from the group of the largest foreign owned companies for the first, because it was very difficult to find any names of foreign owned companies at all. The Bank of Finland and the Central Statistical Office in Finland have a register of the companies but they are not quite accurate and, above all, they are not public. Therefore the names were sought in the register of the Ministry of Trade and Industry and in the book " Who Owns Whom". Secondly, it was assumed that large companies are more prepared to answer these kinds of questions. This assumption was based on the fact that the growth is often associated with success and, therefore, big companies may be more open towards public than smaller ones. Thirdly, it was known from the basis of earlier studies that the role of small foreign owned companies in Finnish economy and separate branches of industry is very modest and, therefore, it is not a relevant object to study. It might be relevant in a less aggregated level, e. g. when only the companies in a certain administrative district ( lääni ) are examined.

However, since most companies did not send back the questionnaire, and many companies answered only a small part of the questions, another approach was chosen. The companies that had filled in the questionnaire carefully were used as case companies to animate the study. The industry in which each case company is classified is analysed both in the general level and in Finland to make clear the aspects of the branch of industry that generate foreign direct investment. It was thought more relevant to analyse the position of an individual company within a certain category of industry than in the whole Finnish industry.

### 1.3 Definitions

In statistics foreign direct investment is regarded as a part of



a country's long term foreign debt ( in the case of inward investment ) or assets ( foreign outward investment ) although the nature of direct investment differs from that of other types of foreign net debt ( Appendix 2 ). However, the definition of foreign direct investment developed by each country reflects the method of collecting the data and that is why individual countries' statistics are not generally comparable. Therefore it is important to make clear some basic definitions of this field.

### 1.3.1 Foreign direct investment

The International Monetary Fund ( IMF ) has defined foreign direct investment as "an investment that is made to acquire a lasting interest in an enterprise operating in an economy other than that of the investor, the investor's purpose being to have an effective voice in the management of the enterprise."<sup>1</sup>

A lasting economic interest and the effective voice are formed from the basis of the owner's share of the equity capital, long lasting capital transfers and other relationships between the parent company and the subsidiary or affiliate. Effective voice in the management only implies that the direct investor is able to influence or participate in the management of an enterprise but it does not mean that the investor has to have absolute control. Now the OECD recommends a limit of 10 per cent or more of the ordinary shares or voting power of an incorporated enterprise or the equivalent of an unincorporated enterprise for statistical purposes.<sup>2</sup> However, even a smaller percentage is enough if the foreign investor has otherwise an effective voice in the management of the enterprise.

A foreign investor is an individual, an incorporated or unincorporated public or private enterprise, a government, or a group

1 International Monetary Fund 1977, p 136

2 OECD 1983, p 7

of related individuals of enterprises which has a direct investment enterprise operating in a country other than the home country or countries of the direct investment investor or investors.<sup>1</sup>

Direct investment enterprise is either a subsidiary or an affiliated company but in this study only " subsidiary " is used for simplicity and convenience. As these definitions are quite new, most of the existing Finnish statistics have been formed from the basis of the definition that a direct investment enterprise, i.e. a foreign-owned company is a firm in which foreign ownership accounts for more than 20 per cent of the nominal value of base capital. The 20 per cent limit has been applied because it is in keeping with the so-called " foreigner's clause " incorporated in Finnish legislation.

Home country refers to the country of residence of the investor, that is, to the source country. Host country is the country where the direct investment enterprise is located. In other words it is a country which has received direct investment from abroad<sup>1</sup>. Cross-hauling means that investor in country X undertakes foreign direct investment in country Y, while the investors in country Y establish subsidiaries in country X. Gross investment capital flows into both directions at the same time.

The investor can undertake a foreign direct investment by establishing a subsidiary ( green-field investment ) or by overtaking control of an existing company abroad. Takeover is a measure through which an independent enterprise is integrated to an economic unit with the buying enterprise. The enterprise which has been bought still remains juridically as a separate unit<sup>2</sup>.

Foreign direct investment can also take place in the form of equity joint venture in which case a direct investment enterprise is established together with a local public or private investor. The direct investment enterprise can be<sup>3</sup>

1 OECD 1983, p 7

2 Hovers J. 1974, p 3

3 Baldauf S. and Kulkki S. 1981, p 113



- marketing and sales promotion unit
- assembling unit
- manufacturing unit
- maintenance and storing unit
- service unit
- research unit

Foreign direct investment is not only a transfer of capital but a package of real capital and human resources together with financial capital which is transferred across national boundaries within the same enterprise<sup>1</sup>. The package may include informal managerial or technical guidance; or it may incorporate the dissemination of valuable knowledge, in the form of technical or marketing know how<sup>2</sup>. These inputs may have an even greater impact on the host country's production capability than the capital flows especially if the country of the investor is economically much more developed than the host country.

### 1.3.2 Portfolio investment

Another type of long term foreign investment is portfolio investment. It means investment in foreign stocks and shares. The difference between direct investment and portfolio investment is that portfolio investors do not have significant influence over the operations of the enterprises in which they have invested. In that sense portfolio investment is passive in nature, it is simply a vehicle for transferring savings between independent lenders and borrowers. The investor is only concerned about the safety of the investment, the likelihood of an appreciation in its value, and the expected return on the investment. As the difference between direct and portfolio investment thus basically depends on the motives of the investor, it is difficult to establish a stable line to set direct investment apart from portfolio investment in practice.

1 Lundgren in Wilson and Scheffer 1974, p 183

2 Dunning J. 1972, p 11 - 12

### 1.3.3 Business concern

Business concern is composed of related incorporated enterprises. A parent company controls more than a half of the shareholders' or members' voting power in a subsidiary or otherwise has an effective voice in the management of it. It means that a parent company is the highest administrative unit in a business concern.

A business concern which has units operating in more than one country is called in this study an international corporation. If an industrial enterprise has own production at least in six countries outside the country of the parent company or a non-industrial enterprise that has a subsidiary at least in six countries outside the country of the parent country, it is called a multinational company (Harvard criteria). Typical of the multinational company is thus that it operates worldwide and its activities are planned from the global basis<sup>1</sup>.

## 2 THEORIES OF FOREIGN INVESTMENT

Due to the complicated nature of foreign direct investment a good theory concerning it must explain several factors. Among others Aliber<sup>2</sup>, Casson<sup>3</sup>, and Dunning<sup>4</sup> have listed questions which should be answered in the theory. They have found the following ones:

- 1 Why a firm prefers foreign direct investment to producing in a home country and exporting the products?
- 2 How a firm chooses the country in which it manufactures its products?
- 3 How is it possible for foreign owned firms to outcompete indigenous firms in supplying their own markets?

---

1 Luostarinen R. 1968, p 32

2 Aliber in Kindleberger ( ed. ) 1970, p 17

3 Casson in Black and Dunning ( ed. ) 1982, p 23

4 Dunning J. 1979 p 272 - 273



- 4 Why a firm chooses own production instead of licensing?
- 5 Why investors sometimes prefer direct investment to portfolio investment?
- 6 Why the pattern of foreign direct investment differs by industry?
- 7 How to explain cross-hauling?

In addition, a good theory should be dynamic. In other words, it should explain the changes in the choice of international operations.

Since there are so many elements to be explained, it is no wonder that there are so many different theories. Some of them emphasize the investing firm, others location. Some underline the financial point of view while others stress the real aspects. The theories can be divided into groups in many different ways. Chronologically there can be found several strands in the doctrine on international economic involvement<sup>1</sup>. These strands are presented in the following chapters together with some background information of the time when they were popular.

## 2.1 Theories before the 1950s

The importance of foreign investments has been remarkable in the international economy since the latter part of the nineteenth century, but at the beginning most of them were portfolio investments. The years after the second World War meant a real breakthrough for foreign direct investment. Capital, technology and management skills were combined into a closely integrated package of resources and transferred to those markets in which it was needed. A vast majority of foreign direct investment was undertaken by U.S. firms which were the only to have the resources to great expansion abroad. A world shortage of dollars and U.S. tax policies strengthened the trend of increasing U.S. investments overseas, and improved international transport and communication made it possible.<sup>2</sup>

1 Dunning J. 1980, p 21 - 24, Oksanen A. 1981, p 81 - 85

2 Hood and Young 1979, p 10 - 12

Since the phenomenon of foreign direct investment was new and rather unknown, the well-developed Heckscher-Ohlin theory of international trade and a less well-developed theory of capital movements were the only modern theories explaining international operations. Although the Heckscher-Ohlin theory is not a theory of foreign direct investment, it is very important for formation of theories that concern that phenomenon because it deals with comparative advantages. These advantages form a basis to examine foreign direct investments.

### 2.1.1 Heckscher-Ohlin theory

The Heckscher-Ohlin theory is based on the following assumptions:

- 1 There are two countries ( A and B ), two factors of production ( labour L and capital K ), and two products ( clothing C and food F ).
- 2 The products are completely mobile both domestically and internationally. This means that there are neither transport costs nor barriers to trade in the international trade.

$$\text{Thus } PC^A = PC^B$$

$$PF^A = PF^B$$

, P is the symbol for price.

- 3 There is perfect competition in both factor and product markets.
- 4 Production functions are identical, of degree one, in both countries. So, there are no barriers to the diffusion of technology.
- 5 The products have different factor intensities.

With symbols that is

$$\left( \frac{K}{L} \right)_C > \left( \frac{K}{L} \right)_F$$

Clothing is the capital-intensive good and food is the labour-intensive good.

The central idea of the Heckscher-Ohlin theory is that under these circumstances a country specialises in the production which uses intensively that factor of production which is in relative abundance in the country in exchange for products which require relatively large inputs of the factor with which it is comparatively poorly endowed. If the abundance is defined in monetary terms, country A is capital-rich compared with country B if capital is relatively cheaper in country A than in country B. The prices reflect the relative physical abundances.

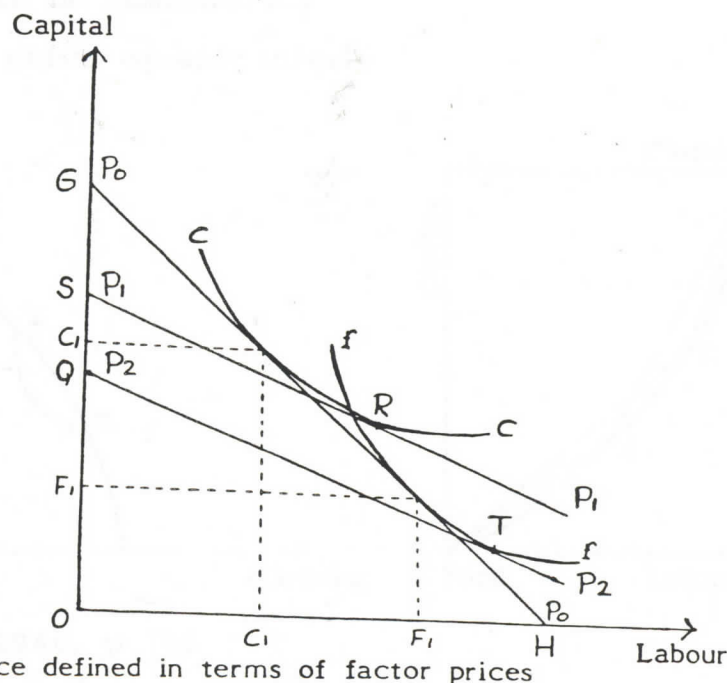
In symbols this can be illustrated as follows:

$$\text{If } \left(\frac{K}{L}\right)_A > \left(\frac{K}{L}\right)_B$$

$$\text{and } \left(\frac{K}{L}\right)_C > \left(\frac{K}{L}\right)_F \quad \text{then } \left(\frac{PC}{PF}\right)_A < \left(\frac{PC}{PF}\right)_B$$

Figure 1 shows how country A will export the capital-intensive good and country B the labour intensive good: (Tastes in both countries are assumed to be homogenous).

Figure 1



Factor abundance defined in terms of factor prices

Source: Södersten p 43 1969

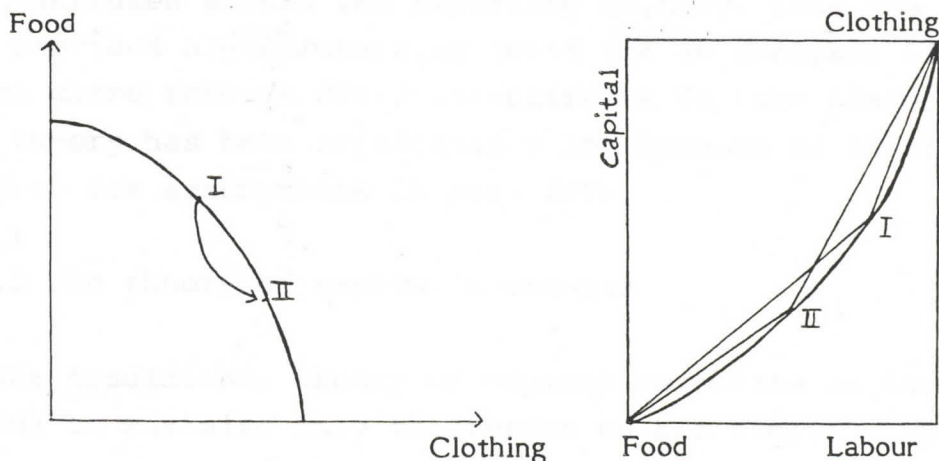


Relative factor prices in country A, where capital is relatively cheap, are given by the line  $P_0P_0$ . The line gives the ratio at which capital and labour can be exchanged for each other.  $GH$  is the budget line, it gives the production costs measured in capital or labour.

A factor-price line in country B is  $P_1P_1$ , which is tangential to the  $CC$  isoquant at  $R$ . A parallel line  $P_2P_2$ , which is tangential to the  $ff$  isoquant at  $T$ , lies below  $P_1P_1$ . Thus the cost of producing one unit of clothing in country B is  $OS$  measured in capital. The cost of producing one unit of food measured in capital is  $OQ$ . therefore in country B it is more expensive to produce a given amount of clothing than it is to produce the same amount of food. As it is relatively cheap to produce clothing in country A and relatively cheap to produce food in country B, country A will export clothing and country B will export food.

From the direct investments point of view factor-price equalization is essential. With perfect competition free mobility of products is at least a partial substitution for factor mobility and will lead to an equalization of the factor prices in both countries<sup>1</sup>. This phenomenon is shown in the following geometrical illustration ( Figure 2 ). The illustration describes the situation where factors are fully employed. Tastes in both countries are assumed to be homogenous.

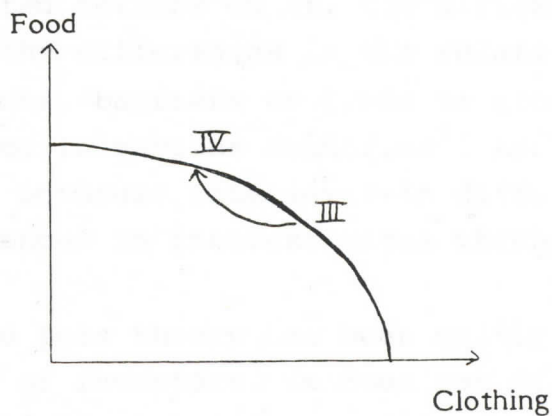
Figure 2 Factor-price equalization  
Country A



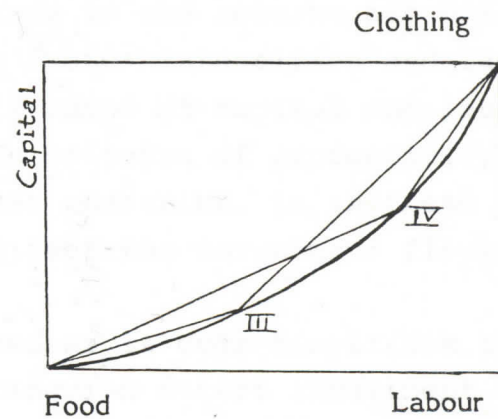
<sup>1</sup> Samuelson 1948, p 165



Country B



A change in the production of goods

A change in the intensities  
and factor prices

When international trade is opened up, country A starts to export clothing, and country B starts exporting food as was explained above. To increase the production of clothing, country A has to move its factors of production from food production to clothing manufacturing. As the clothing industry is the capital-intensive industry, to produce more of clothing, more capital is needed. Therefore, the price of capital is bid up. In an analogous way, the relative price for what used to be the cheap factor in country B, namely labour, rises when the two countries start to trade with each other. The process continues until the factor prices are the same in both countries.

In this kind of world a firm does not get an advantage of foreign direct investment and, therefore, production for a foreign country is undertaken within the exporting country. Thus the H-O theory has provided a good starting point for an analysis of the situation where foreign direct investments do take place, although the theory has been criticised a lot because of the inapplicability of its assumptions in real life.

### 2.1.2 The theory of capital movements

In the traditional theory of capital movements an investor is trying to maximise only the return on his capital. Therefore capital moves from one country to another according to the ex-

pected returns on it. The differences in the returns are determined by the differences in the relative factor intensities and factor prices, barriers to trade or growth rates of capital and labour force in various countries<sup>1</sup>. As the criteria of productivity is the interest rate level in different countries, it is these differences in interest rates which direct the investment flows.

Also this theory has been criticised as it over-simplifies the motives of investors. It does not distinguish direct investment from portfolio investment and it fails to explain cross-hauling.<sup>2</sup>

## 2.2 Theories in the 1950s and the 1960s

U.S. firms continued to dominate the field of foreign direct investments but gradually the economic power of Western European and Japanese enterprises grew relatively to them. At the end of the period attitudes towards foreign direct investments started to become more negative in many host countries. Especially multinational enterprises were targets of increasing criticism and more attention was paid to the effects of them above all in developing countries, but also the non-economic effects on the culture of the host country were a great issue in some Western European countries. In these changing patterns of international economy new theories were needed and the improved statistical and other information made their formation possible.

In the late 1950s the theories of international involvement started to develop into two separate directions. One group of theories concentrated on trade flows. More realism was introduced into theories which were based on the Heckscher-Ohlin theory and new theories which were less faithful to the traditional ones were developed. These new theories often rejected the assumption of perfect competition. The other group focused on explaining the growth and composition of foreign direct investment. Typical of the both groups was thus the fact that the new theories were partial analyses<sup>3</sup>.

1 Grubel 1977, p 571

2 Dunning 1979, p 272

3 Oksanen A. 1981, p 81

### 2.2.1 Portfolio choice theory

As the return on investment alone was considered too vague a motive for foreign investments, a more sophisticated approach of portfolio choice theory became popular. This approach is based on the assumption that an investor calculates expected returns and compares them with expected risks. The greater the risks are the bigger return on the investment must be as is visualised in Figure 3. Expected risks depend on the variance of the earlier returns<sup>1</sup>.

$$DI = f(R^*, r^*) ; \quad \frac{\partial DI}{\partial R} > 0 \quad , \quad \frac{\partial DI}{\partial r} < 0$$

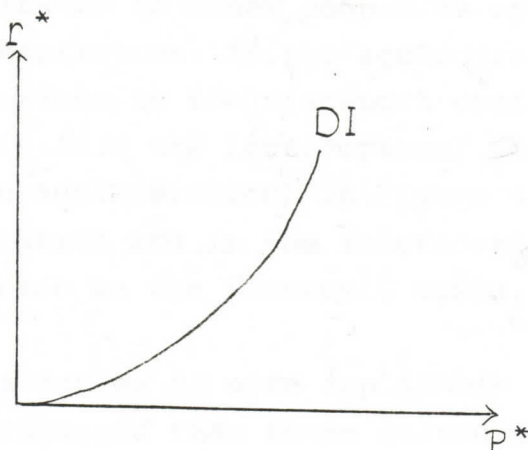
DI = direct investment

$R^*$  = expected return

$r^*$  = expected risk

Figure 3

An investor trades increasing risk for increased return



When risk is considered in the investment decisions, there are international capital movements even if the interest rates are the same everywhere and, therefore, also cross-hauling is a totally understandable phenomenon. Anyhow, the portfolio choice theory fails to explain



foreign direct investments satisfactorily because it can be argued that a portfolio which is planned to reduce the risks does not consist of direct investments, but of rather small shareholdings in a great number of assets<sup>1</sup>.

### 2.2.2 Location, industrial organisation and monopolistic advantage theories

Typical of the location theories is that they try to find an optimal location for the production unit. Attention is paid only to the costs of production. The immobile factors of production have a decisive role as the location of production is determined by the relative availability ( price ) of immobile factors in different countries.

In Weber's<sup>2</sup> location theory, which was developed further by Isard<sup>3,4</sup> there are three units producing the same product under review ( Figure 4 ). In the point  $P_1$  the transport costs are a certain amount (  $v$  ) bigger than the transport costs in the optimal point. The difference between the costs,  $v$ , is on the boundary line of the areas exactly as big as the advantages gained by agglomeration. The advantages are derived from the economies of scale, from the short distance to other companies operating in the same branch, and from urbanisation. If the agglomeration advantages are bigger than the increase in the transport costs when the production is transferred away from the local optimal points, there are economic grounds to the agglomeration. In Figure 4b the advantages gained from agglomeration are in the intersection of the areas bigger than the increase in the transport costs.

The review is more applicable to the real life when even other advantages than those gained from agglomeration are taken into account, but the main weakness of the theory still remains: It

1 Buckley and Casson 1976, p 82

2 Weber 1909

3 Isard 1960, p 393 - 412

4 Isard 1977, p 150 - 177

explains neither why a company chooses own production instead of licensing nor how foreign companies can compete successfully with local ones.

Figure 4a

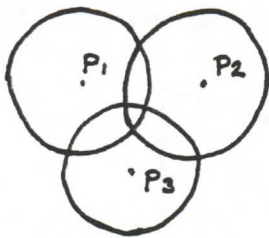
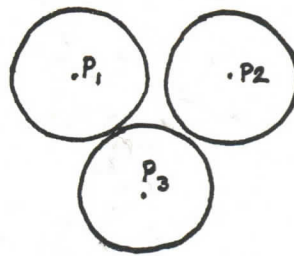


Figure 4b



Agglomeration is profitable

Agglomeration is not profitable

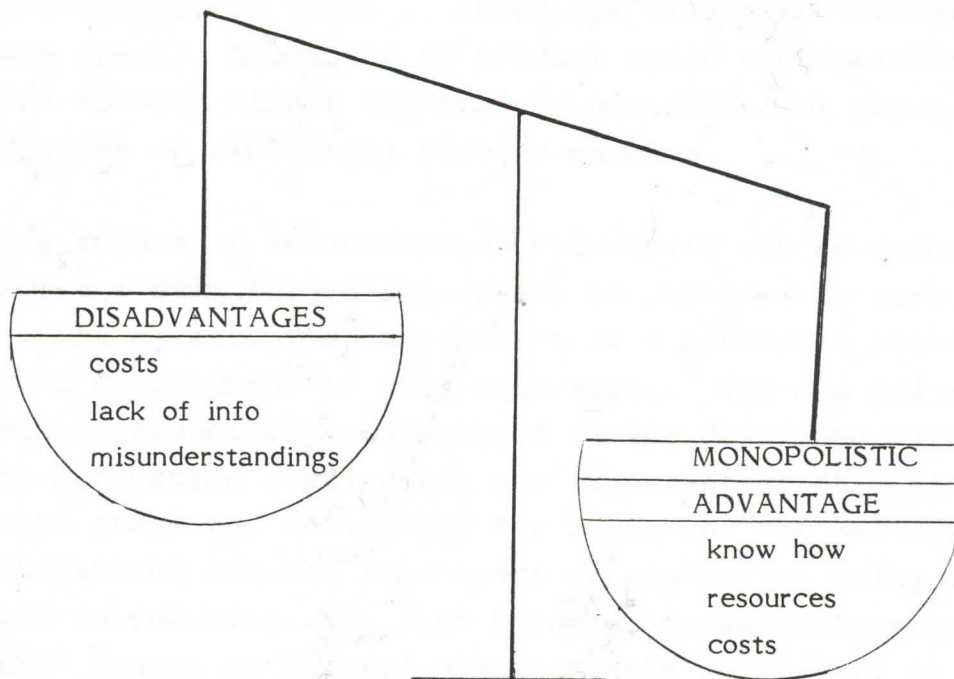
Isard 1977 p 161

The location theory gave soon way to other types of questions in the 1960s. The central problems of the industrial organisation theory are "why firms undertake foreign direct investments" and "how foreign firms outcompete domestic firms". That is, industrial organisation theory tried to filled the gaps in the earlier theories. The explanation to the questions mentioned above is that there must be some advantage within a firm which gives it an edge over its competitors. In foreign markets a firm utilises this advantage. Thus the production function of the firm is  $Q = f(K, L, A)$ , where  $Q$  stands for the output produced,  $K$  for capital,  $L$  for labour, and  $A$  is the symbol of the advantage.

This idea was developed further in the monopolistic advantage theory. Hymer and Kindleberger were the first to explain foreign direct investment from the competition advantage point of view. According to their theory foreign enterprises are in a disadvantageous position in the host economy because they do not know the markets, the legal system, and the institutional framework of business. In addition, the foreign firm incurs extra costs of travel, communication and errors which are caused by misunderstandings.

Therefore, a firm must possess some monopolistic, firm-specific advantage which other firms do not possess. If this advantage more than compensates the disadvantages, it allows the firm to compete on equal terms with indigenous firms.<sup>1</sup> This can be illustrated with the following figure.

Figure 5  
The compensation of disadvantages



Kindleberger has made the following list of the monopolistic advantages<sup>2</sup>: the ownership of brand name, the possession of special marketing skills, access to patented or otherwise protected technology, favoured access to sources of finance, managerial skills, plant economies of scale, and economies of vertical integration. The monopolistic advantages were identified by many economists and specified even more thoroughly in the late 1960s and the early 1970s.

However, no explanation was given to the question how the advantages are generated. Another weakness of these theories is the fact that they do not explain why a firm decides to utilise its advantages just in the form of foreign direct investment. The theory of internali-

1 Buckley and Casson 1976, p 67

2 Kindleberger 1969, p 14



zation, which will be presented later in this study, has expanded the monopolistic advantage theory to cover more thoroughly this question of utilisation.

### 2.2.3 Product cycle theory

Product cycle theory, which was developed by Vernon, has two novelties compared with the earlier theories. First, it is dynamic and second, it tries to integrate trade and foreign investment in one theory. According to product cycle theory international trade and foreign direct investments are different phases in the same process of exploiting foreign markets.

The stages of international operations can be summarised as follows. First a stimulus to innovation is provided by some threat or promise in the market. The home market is a preferred location for the actual development of this innovation.<sup>1</sup> The new and still unstandardised product is manufactured in the developed market because of communication costs which are important at this stage. At the second stage the technology for producing the maturing product has stabilised and the importance of production being close to the market is reducing. The firm becomes increasingly sensitive to production costs. As foreign demand starts to appear, it is first met by exports. Finally it becomes economic to invest abroad because the average cost of producing overseas is less than the sum of the marginal production costs in the home country and marginal transport costs.

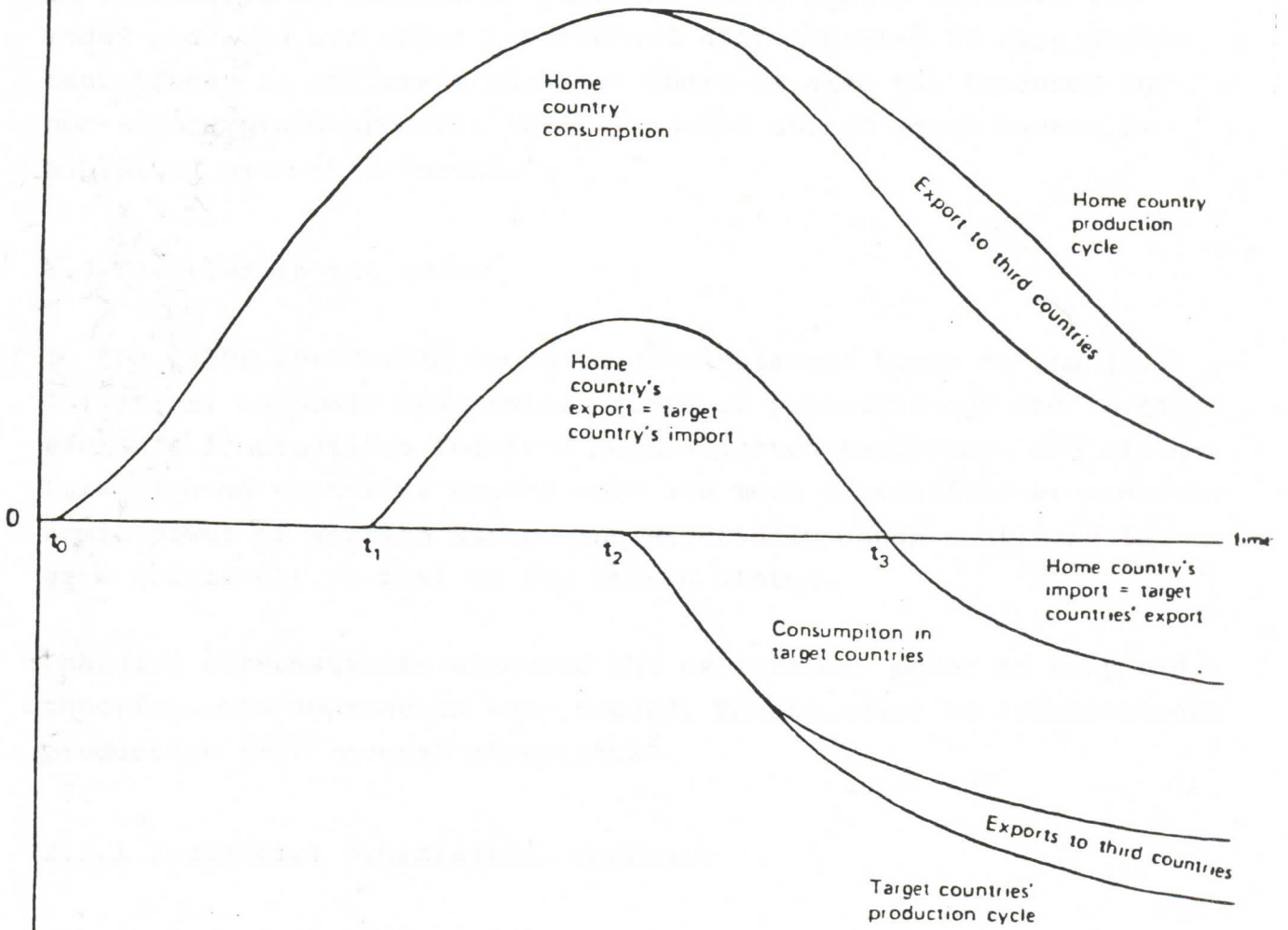
$$AC_{\text{abroad}} < (MC + MC_{\text{transport}})_{\text{home}}$$

Investment is usually undertaken in a country where labour costs are relatively low but where demand patterns resemble those of the investing country. At the final stage the product is completely standardised and the price of production is the decisive factor in competition. The most labour-intensive stages of production are trans-

<sup>1</sup> Vernon 1979, p 255

Home country production

Growth phase	Maturity phase	Phase of declining demand in home country
Monopoly stage	Oligopoly stage	Polyopoly stage
New, unstandardized special product phase	Phase of differentiated products	Standard product phase



Production in target countries

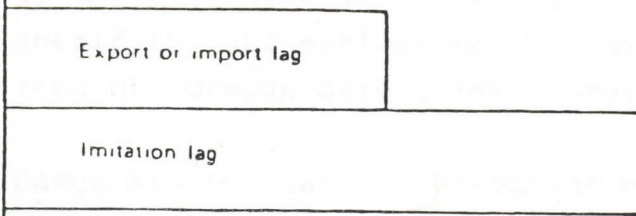


Figure 6  
Product cycle  
Luostarinen 1968

ferred to countries where labour costs are low, i.e. to developing countries. The phases of the cycle are presented in Figure 6.

Despite many virtues of product cycle theory, some recent trends in international production patterns have partly outdated it. Today products are often planned and differentiated to suit different tastes in different markets. There is also the tendency for non-standardised products to be produced abroad which cannot be explained with this theory.<sup>1</sup>

### 2.3 Theories in the 1970s

In the 1970s world-wide economic circumstances began to change. Inflation, economic depression, fears of protectionism and foreign exchange fluctuations required sophisticated responses. The structure of home countries became more and more diversified as the economic power of Western Europe and especially Japan continued to grow relatively to that of the United States.

Changing circumstances weakened the explanatory power of many old theories. New approaches were needed. The theories of international production took several directions<sup>2</sup>.

#### 2.3.1 Industrial organisation approach

Extensions of the industrial organisation approach were dominating at the beginning of the 1970s. These approaches concentrated on specifying and evaluating the advantages that may explain the pattern of foreign direct investments.

Caves argued that the advantage of international corporations is in their capability to differentiate products. According to him a firm which produces a differentiated product successfully in the home market gains know how. It learns through experience; by doing. The know how within an enterprise can be interpreted as a factor

<sup>1</sup> Buckley and Casson 1976, p 76

<sup>2</sup> Dunning 1979, p 237



of production with which this enterprise can increase or maintain the productivity of one or several other productive resources and/or increase the enterprise's sales. Therefore know how represents the amount of technical, marketing and management knowledge, the reserves of immaterial capital<sup>1</sup>. In this analysis Caves referred mainly to technological know how which concerns product, production method and the ability to develop new products.

The know how must be decisive for the production of a profitable good, and the return on investment must be bigger than the returns which a corporation would get from the utilisation of other forms of operations. The corporation can use this know how in other markets with small costs or without any cost at all. This is why a corporation can undertake horizontal investments.<sup>2</sup>

A vertical integration is motivated by the desire of the corporation to reduce uncertainty and to form barriers to entry. To ensure the continuous flow of raw materials or semifinal products and bigger flexibility to set prices on products corporations have to undertake direct investments.

A more behavioural perspective to ownership advantages was taken by Vernon and his colleagues, the best-known of whom was Knickerbocker. Knickerbocker suggested that foreign direct investments are a response to an oligopolistic market structure. Oligopolists follow each other into new markets in order to negate the advantages that the first investor might gain. However, the investment behaviour of the initiating corporation is not interpreted.

### 2.3.2 Finance approach

Second direction was taken towards financial aspects of the foreign involvement of corporations. These aspects are emphasized in theories which can broadly be divided into two groups. One of them stresses

1 Hietala K. 1982, p 160

2 Caves 1974, p 8

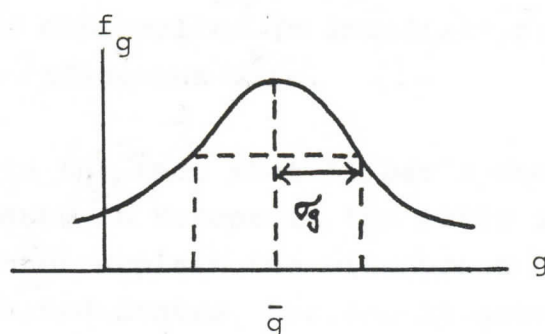
the imperfections of foreign exchange and capital markets, and the other is based on the portfolio choice theory.

Aliber is the best-known advocate of the former approach. He searches for an advantage of the foreign-owned firm over its local competitors, but, unlike Hymer and Kindleberger Aliber argues that the advantage is not firm-specific.<sup>1</sup> According to him all firms located in a particular currency area possess that advantage. To understand his argument the concepts of currency premium and risk aversion must be explained first.

In the international capital market the holder of debt bears a risk that the currency in which the debt is denominated depreciates relative to other currencies. If investors are averse to risk, the rate of interest is higher than it would be if investors were neutral to risk. The debt is said to bear a premium to compensate the investor for exchange risk.<sup>2</sup>

There is a probability  $f_g$  attached to each possible value of capital gain  $g$ . The expected gain,  $\bar{g}$ , is an average value of an implicit distribution of gains. The measure of risk is the standard deviation,  $\sigma_g$ , of the probability distribution of capital gains.

Figure 7 Propability distribution of expected gains



Branson 1979, p 251

The preferences of an investor can be illustrated by indifference curves. The shape of the curve is determined by the nature of the

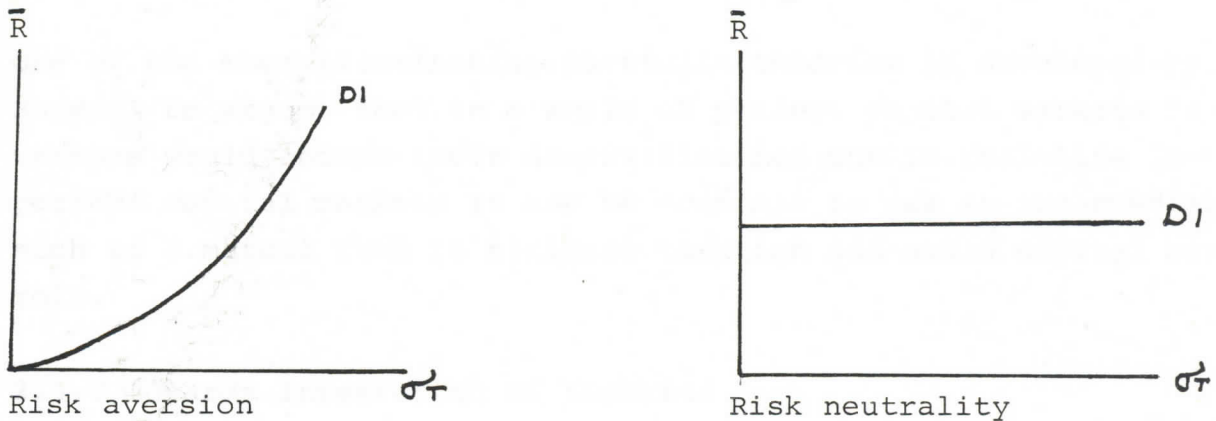
1 Aliber in Kindleberger 1970, p 17 - 34

2 Buckley and Casson 1976, p 70



investor's trade-off between risk and return. The indifference curve with a positive slope indicates that the investor demands more expected return to take more risk. He is risk averse. For a risk neutral investor the indifference curve is a straight line.

Figure 8 Risk aversion and risk neutrality



According to Aliber portfolio investors assume that the foreign investment of a source country firm, which is a multinational company, are all in the same area as the parent firm. Therefore the multinational company has to charge interest on borrowings as if its total operation was in a domestic base. Since the currencies of capital exporting countries are relatively strong, the multinational company can often borrow at a lower rate of interest than a domestic company to finance any form of capital expenditure in a host country. One implication of this is that multinational companies can realise an immediate profit by financing the takeover of an indigenous firm.

Despite the fact that Aliber's theory explains well the U.S. investments in Europe in the 1950s and 1960s it has some weaknesses. It cannot explain the widespread cross-hauling between Europe and the United States. Nor can it account for either the capital flows within currency areas or multinational investment in developing countries where capital markets may be nonexistent or strongly regulated.<sup>1</sup> Finally, it does not explain why corporations build new units instead of taking over going companies.

The other group of theories concentrating on financial aspects of

<sup>1</sup> Hood and Young 1979, p 51



the foreign investment process are modifications of the portfolio choice theory. According to this approach foreign direct investments and international diversification are means of reducing risk. The stability of earnings can be ensured by overseas investment in countries where economic fluctuations differ from those in the home country.

One of the most illuminating portfolio theories is developed by Rugman. He argues that in a world of perfect capital markets investors would choose their diversification but in real-life imperfect capital markets it may be economic to use an intermediary, such as a mutual fund to minimize taxation and avoid capital controls.<sup>1</sup>

### 2.3.3 Towards integration of theories

The dissatisfaction with partial explanations and the observation that formally separate theories of trade and production were partly overlapping each other made economists favour more integrated approaches. Attempts to view trade and direct investments at the same time were made already in the product cycle theory. On the other hand firm-specific and country-specific factors were linked together more and more often. An example of this latter integration is the theory of Kojima, who used the modified Heckscher-Ohlin theory as a basis for his approach.

#### 2.3.3.1 The theory of Kojima

Kojima developed a model of "Japanese-type" of foreign direct investment.<sup>2</sup> The core of this model is that comparative costs in home country ( Japan ) and host countries are decisive. Japan should undertake foreign direct investment in an industry which is becoming comparatively advantageous in the host country. If an industry of the host country really becomes an industry of comparative advantage, it will start to export and upgrade the industrial structure of the

1 Casson in Black and Dunning ( ed. ) 1982, p 53

2 Kojima 1975, p 15

country. At the same time Japan can specialize in those industries in which it has comparative advantage and develop its own industrial structure in this way. Trade and direct investments can under these circumstances complete each other. This theory can be used mainly in the case of direct investment from an industrialised country to a developing country.

#### 2.3.3.2 The eclectic approach

Dunning has tried to develop an "eclectic approach" to international involvement. This approach aims at explaining the ability and willingness of companies to serve markets, and the reason why they prefer foreign production to domestic production, exports or portfolio resource flows<sup>1</sup>.

To explain all these aspects Dunning linked together the industrial organisation theory, the theory of the firm and trade theory. The eclectic theory suggests that all forms of international production can be explained by a reference to the following conditions which must be satisfied before a firm will engage in foreign direct investment<sup>2</sup>:

- 1 The firm possesses net ownership advantages over firms of other nationalities in serving certain markets. This means that the firm possesses or can acquire assets which its competitors do not possess.
- 2 It must benefit the firm possessing these advantages to internalize their use, i.e. to use them itself rather than sell or lease them to firms located in other countries.
- 3 It must be profitable for the corporation to utilise these advantages in conjunction with at least some factor inputs outside its home country.

It is assumed that the greater the ownership advantages of firms

1 Dunning 1979, p 275

2 Dunning 1972, p 9



are the greater the inducement to internalize them. In the same way the likelihood of foreign direct investment increases if the attractions of a foreign production base are wider than those of a domestic one. Therefore Government measures can also have an influence on the generation of ownership advantages and economic relationship between investing and target countries.

Table 1 Determinants of international production

Ownership advantages	-	The "why" of direct investment
Location advantages	-	The "where" of direct investment
Internalization advantages	-	The "how" of direct investment

To summarise, the essence of the eclectic approach is as follows. A national firm has several ways to grow: It can diversify horizontally or vertically in domestic market or it can expand overseas, it can acquire existing enterprises or establish new ones. If it is profitable for a firm it becomes an international corporation. In order to be able to compete with indigenous firms in their own markets, a corporation must possess enough ownership advantages to outweigh the costs of acting in an unfamiliar and often distant area. The possession of ownership advantages is decisive in the question which firms will service certain foreign markets while local-specific factors, local endowments, explain whether the firm exports to the markets or starts local production. The basic incentives to internalize ownership endowments are market imperfections.

Although the eclectic approach is very extensive and thoroughgoing it has some weaknesses. It is not very dynamic. The development of direct investment flows over time is not covered satisfactorily. Another weakness from the utilisation point of view is that many terms are so abstract that it is difficult to operationalise them.

### 2.3.3.3 General theory of internalization

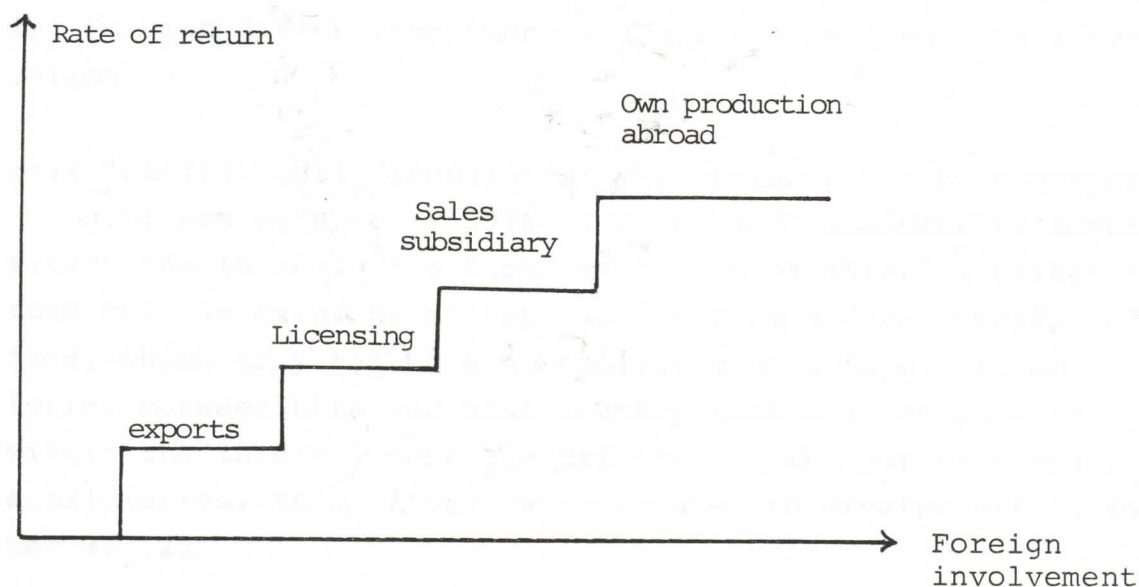
The internalization theory concentrates on the choice of foreign



operations of a firm. A firm can service foreign markets in three different ways. The options open to it are to export, to sell a license or to engage in foreign direct investment. In general, exporting is chosen when there are no barriers to free trade. Licensing involves great risks, since the licensor loses control of its firm-specific advantage once it sells a license. Therefore licensing can be used successfully only when foreign markets are fully segmented and dissipation can be avoided<sup>1</sup>. A direct investment can also be an alternative to buying a license in the case where the objective of the takeover is to get know how that the host country enterprise possesses.

Direct international operations take place because of imperfections in the goods and factor markets. Firms are organizations to solve certain coordination problems in the economy. This aspect is relevant especially when the production process involves heterogeneous factors of production and final goods. As the heterogeneity is growing, the portion of aggregate economic activity is increasing.<sup>2</sup> The home country specific advantage which leads to trade becomes gradually less important and it is replaced by firm-specific advantage leading to foreign direct investment.<sup>3</sup>

Figure 9 The choice of international operations



1 Rugman I 1980, p 28

2 SOU 1975:50, p 305

3 Rugman II 1980, p 367

As firm-specific advantages are best exploited by the process of internalization, that is, via own production, it can be argued that the theories of the phenomenon of foreign direct investment are basically sub-sets of the general theory of internalization.<sup>1</sup> Internalization approach was thus originally advanced by Coase ( 1937 ) mainly in a domestic context. The basis of the Coasian theory of the firm is that economies of independent activities lead a firm to internalize them. In other words, if an activity ( production ) can be done within a firm with smaller costs than through the market, the firm internalizes this activity ( starts own production ). Thus avoidance of transaction costs may lead to integration. However, the creation of an internal market is not costless either and that is why it is important for a firm to be able to set internal ( transfer ) prices to get a return for doing internalization. The benefits of internalization are that the firm-specific advantages can be controlled, monitored and metered within a firm.

According to Penrose ( 1958 ) firm-specific know how is a decisive element in the growth of a firm. Companies try to exploit their resources completely. If a utilisation rate of firm-specific know how is too low, the firm grows to be able to increase the utilisation. Growth to other countries is response to the utilisation rate of those know how resources that can be transferred internationally. Foreign direct investment is just a consequence of internalization.

This international dimension of the approach has been emphasized among others by Hymer ( 1976 ). Hymer and Kindleberger identified situations in which the firm can create an internal market to substitute for the external market. If there is a firm-specific advantage, which they called a monopolistic advantage, it can be transferred between home and host country within a company, that is, within the internal market consisting of the parent company and its subsidiaries. This theory was presented in greater detail in chapter 2.2.2.

<sup>1</sup> Rugman II 1980, p 365



Especially interesting is the internal market for intermediate products such as research, information, and knowledge. The possession of the internal market means that the information advantage a firm has gained through costly research can be used within the organisation, and the firm is able to get a fair return on it.<sup>1</sup> The firm exploits its advantage in all markets and recoups its initial expenditures on knowledge generation. Production and sales by wholly-owned subsidiaries are preferred in order to prevent leakages of information. Whenever the utilization of these intermediate products with the help of internal coordination is superior to the market's coordination, the activities can be spread inside an international company across huge geographic areas, thanks to today's communication technology<sup>2</sup>.

Direct investments should be studied as a dynamic process because often companies internationalise gradually as their advantages change.<sup>3</sup> The internalization theory is dynamic in the sense that international corporations must constantly renew their advantages and transfer knowledge to all parts of the business concern to maintain a lead over their competitors. It means that they must search for and exploit new production and generate market knowledge. The process of a corporation's renewal of its advantages can be called its "advantage cycle"<sup>4</sup>.

As the internalization theory emphasizes the links between a parent company and its subsidiaries, it seems to be applicable in those studies which try to clarify the position of a subsidiary in an international corporation. The contribution of a subsidiary to the activities of the whole business concern may be small, but it is big enough to make the corporation choose internalization instead of other operations open to it.

1 Rugman III 1980, p 78

2 SOU 1975:50, p 305

3 SOU 1981:33, p 8

4 Wohlert 1981, p 356

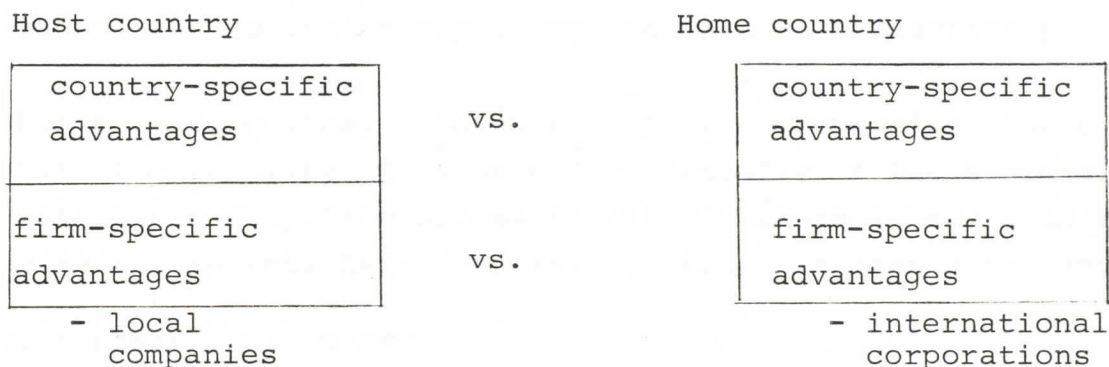


### 3 FINLAND AS A HOST COUNTRY

The location of direct investment enterprise is determined by country-specific factors. In this study the factors which are considered to be of the greatest importance are divided into two groups: 1) economic and 2) cultural and legal aspects. Purely economic long-term prospects of the profitability of the investment, "hardware", are naturally important but also the "software", the attitudes and policies of the host country's Government may influence the level of foreign participation in the economy. The number of disinvestments would suggest that either a foreign investor has had a wrong idea of the circumstances in the host country or there has been changes in the circumstances. Therefore, it is necessary to review some host country specific factors both objectively and from the investors point of view. These factors create a background for the survey of the structure of direct investment flows.

Economic aspects include the production and market structure, which is determined by the factors of production and their relative abundances in the host country. In the production process a company has to combine in different proportions labour, capital, energy and raw materials. The country-specific factors contribute to the creation of firm-specific advantages. The advantages are important in the competition in the local market against indigenous companies ( Figure 10 ).

Figure 10 The links between country-specific and firm-specific advantages



Legal aspects refer to all kinds of laws and regulations in the host country, which may have an influence on foreign direct investment. The stress in the study is on the differences between the treatment of foreign-owned companies and that of local companies.

Cultural aspects deal with the level of education as well as research and development activities. Also attitudes towards foreign-owned companies can be included in this category. Taking as a whole cultural aspects also consist of ethical valuations<sup>1</sup>, but such controversial issues are outside the scope of this study. On the whole, cultural structure tends to be emphasized more in the articles of direct investments from industrialized countries to developing countries.

### 3.1 Economic aspects

The emphasis of this chapter is laid on those factors which have proved to be critical in the decision making process of an international enterprise. The results of several studies<sup>2</sup> have proved that the size of the market in the host country is an important criterion for foreign direct investment. The Finnish market measured by the gross national product or the number of potential customers is small compared to most other industrialized countries. On the other hand, despite that the Finnish population is 1/1000 of the population in the world, the income level is fairly high. Economic growth of Finland in recent decades has been rapid and at the end of the 1970s, GNP per capital was above the average for the European members of the OECD. This growth has been attributed to the widening of the industrial base, to the abundant supply of labour and to the fairly large increase in productivity.

For a small economy maintenance of an economically-viable manufacturing capability often depends critically on the scale advantages obtainable only from access to other markets in addition to the domestic market. Expanding foreign trade is then a prerequisite

1 Wohlert 1981, p 3

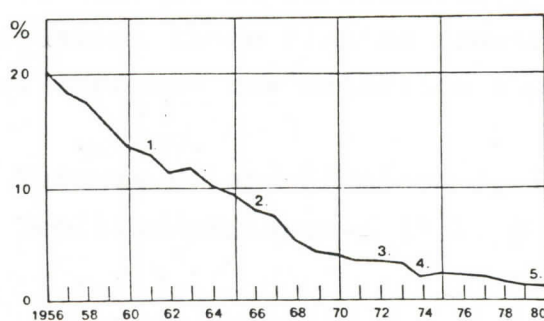
2 see e.g. Kääriäinen etc., Luostarinen, Tammisto



for steady economic growth. Theoretically Finland could be used as a host country of a headquarter for an international corporation to service all Nordic countries but, in practice, this is seldom the case. Especially multinational companies operating in the Nordic countries tend to concentrate their direct investments on oil-producing Norway and populous and wealthy Sweden while Finland is largely the domain of regional corporations with only limited foreign operations<sup>1</sup>. Even Denmark is more attractive to investors with its membership in European Community<sup>2</sup>. Exports to the Soviet Union are hampered by the requirement that only maximum 20 per cent of the export price may originate from foreign countries. This requirement makes it difficult for subsidiaries manufacturing half-fabricated products to get an access to the Soviet market. In addition, Finland's role as a bridge to the Eastern market is unstable due to the fact that exports may be limited from time to time if the bilateral trade with the Soviet Union is not in balance.

Another disincentive for direct investment in Finland is the openness of the market. The growth of foreign trade has been fostered by a relaxation of import restrictions. Since 1950 Finland has taken part in the global removal of barriers to trade under the General Agreement on Tariffs and Trade ( GATT ). Today most favoured nation treatment is accorded to 150 states. Finland's decision to sign the association agreement with the European Free Trade Association ( EFTA ) in 1961 and an agreement on tariffs with the European Economic Community in 1974 have provided a remarkable impetus to the opening the economy. Similar agreements on tariffs with the Comecon countries have contributed to this trend. The development towards free trade has exposed industrial firms to hardening competition with imports in the domestic market.

Figure 11 Percentage share of tariffs in Finnish imports



source: Board of Customs

1. Agreements with EFTA and the USSR
2. GATT - Kennedy round
3. Generalized System of Preferences
4. EEC and Keypso agreements
5. GATT - Tokyo round

1 Knudsen 1980, p 214

2 Forum 12/1983, p 13



The competition in the host country market is caused by exports to that country and local production. The role of competition in Finland varies from industry to industry. There are nearly 15 000 industrial firms, the majority of which belong to the category of small enterprises. It means that they employ less than 100 people<sup>1</sup>. By international standards, the share of small enterprises is large. There is little room for companies of efficient size but attempts to benefit from economies of scale and increasingly capital-intensive techniques produce a tendency towards larger enterprises. The role of state-owned companies has grown in domains where private investment has been hampered by the insufficiency of venture capital. Consequently, the number of monopolies is fairly large. With few exceptions, such as cartel-offer practices, restrictive agreements limiting competition are not forbidden. The authorities survey such agreements and interfere if the restrictions to competition are deemed to lead to detrimental effects.

### 3.1.1 Raw materials

In the traditional industrial branches, i.e. forest industries and mechanical engineering industry, the supply of domestic renewable raw material resources is relatively abundant. Other important available raw materials include chromium, cobalt, copper, nickel, vanadium, and zinc. Taking as a whole, however, domestic non-renewable raw materials are scarce and rapidly being depleted. Companies producing in Finland have to rely on imports: about one third of the raw materials is imported<sup>2</sup>, and in recent decades, the most vigorous growth in industrial production has been in those branches in which imported raw materials play an important role.

Owing to the long distances from economic centres of Europe, transportation costs are high. In addition, the orders of Finnish companies tend to be of relatively small size. These factors result in a situation where Finnish industry often has to pay much higher prices for imported raw materials than the competitors in Central Europe. If

1 Tulokas H. and Nieminen J. 1982, p 4 - 5

2 Teollisuustilasto I 1982, p 8

a foreign-owned company can utilize the specialization and internal trade within the concern, it may get an important advantage over its local competitors in Finland.

### 3.1.2 Labour force

Labour has traditionally been a more abundant factor of production than capital in Finland<sup>1</sup>. The participation of women in working life is at a high level by international standards. It has been estimated that the potential supply of labour will increase by about 122 000 people in the 1980s<sup>2</sup> but despite this growth, labour inputs measured in working hours is declining. In addition, the industrial sector as a whole faces certain structural problems: there are unfilled vacancies and relatively many unemployed persons at the same time. Low mobility of labour force has been an important determinant in the vacancies/unemployment ratio. At the same as there has been from time to time even shortage of skilled manpower in the labour district of Helsinki, the unemployment rates in Northern Finland have been above 10 % since the mid-1970s.

The relative abundance of labour has contributed to labour intensity in production. In recent years the increase in labour costs has been faster than the increase in the costs of capital inputs and real wages have risen somewhat faster than real national income. The annual increase in hourly earnings of employees in industrial sector was in the period 1967 - 1972 in Finland 11.8 % while the corresponding figure in Sweden was 9.9 %, in Norway 10.4 %, and in Denmark 12.4 %. The rises in consumer prices in these countries varied from 5 % ( in Sweden ) to 6.2 % ( in Denmark ).<sup>3</sup> This means a significant rise in real wages. The annual increase in wages and salaries in the period from 1972 to 1982 was in Finland, Denmark and Norway slightly smaller than in the previous period but it was still higher than in the economically most important OECD countries.

1 Tulokas H. and Nieminen J. 1982, p 5

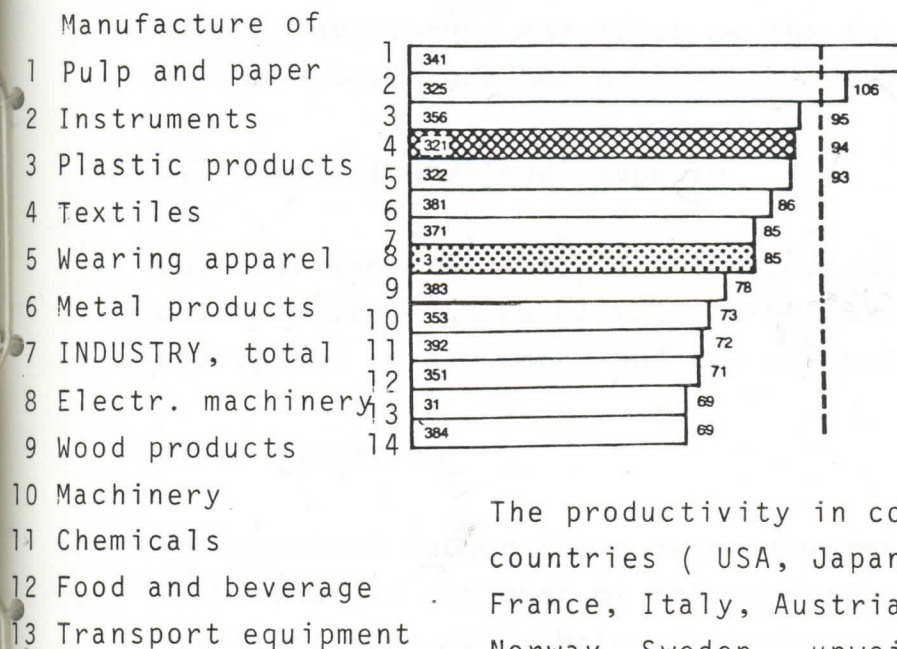
2 OECD Economic Surveys 1973 - 1983

3 OECD 1982, p 35



However, the Swedish Employer Federation has estimated that Finnish hourly manufacturing labour costs were in 1980 among the lowest in the 14 OECD countries surveyed<sup>1</sup>. The weakness of this study was the fact that it did not take account of differences in productivity levels. The level of labour costs alone is not necessarily decisive for the decision making process of direct investment in manufacturing sector. To be informative the level of costs must be compared to productivity. In Finland productivity is lower than in the major competing countries. This fact has been explained by referring to the scarcity of capital. In the capital deepening process which is going on in Finnish industry productivity has been increasing. Relative unit labour costs, which reflect both productivity and labour-cost development, rose sharply in the four years to 1976. In 1981 they rose again by around 5 per cent<sup>2</sup>.

Figure 12 The relative productivity of Finnish manufacturing industry by branches in 1981, value added/employee



The productivity in competing countries ( USA, Japan, West Germany, England, France, Italy, Austria, Switzerland, the Netherlands, Norway, Sweden - unweighed average ).

Source: OECD, Industrial Structure Statistics 1983



### 3.1.3 Capital

Until recently capital stock has been relatively scarce in Finland. According to some estimates, the value of fixed assets per employee was more than 80 % smaller in Finnish industry than in Swedish industry in the early 1970s . However, there were large differences in relative factor intensities of various categories of industry. The relative capital intensity of certain branches is dictated by Finland's natural resource endowments.

Liberal depreciation allowances for fixed investment and stocks have contributed to the accumulation of capital in recent years, and fixed investment investment as a percentage of GNP has lately been high as compared with other industrialized countries. Owing to sizeable investment, the capital stock is in an increasing number of branches technologically fairly up-to-date, and therefore competitive, but on the whole Finland is still mainly an importer of technology. Thus the firm-specific advantage, which is a prerequisite in a foreign direct investment, may often be the foreign-owned company's superior technological know how as compared with Finnish companies.

## 3.2 Cultural and legal aspects

Cultural aspects, which are interesting from the direct investment's point of view can be classified under three headings: education, research and development, and the attitudes towards foreign investors.

### 3.2.1 Education

Well-trained labour force is an important competitive asset. In Finland about 40 per cent of the population in working age have vocational qualifications. The share of students studying commercial and office programmes as well as trade, craft, engineering and natural sciences was in 1982 around 64 per cent of all students in vocational education. The number of university students has increased from 58 701 in the academic year 1970 - 1971 to 86 026 in 1981 - 1982. There are six uni-

versities and 16 other institutions of higher education at the university level<sup>1</sup>.

### 3.2.2 Research and development

Research and development directed toward manufacturing involves on one hand the process of applied research which aims at making an invention, and on the other hand the developing of the invention into a marketable product. The whole process can be called innovation.<sup>2</sup> R & D is expensive as only a small part of inventions leads to marketable products. Effective R & D requires therefore from an enterprise certain minimum size. Large countries and enterprises, that can spread research risks over a large number of efforts, will have a more predictable payout in any finite period than smaller units with their scarce resources and less specialized structure of labour. Therefore large companies have a clear advantage over smaller ones.

R & D must be carried out continuously as the competition in the market makes products rapidly obsolete. The original technology-based position of the producer in any given product begins to be eroded fast. The competition, which requires research-intensity, is especially characteristic of oligopolistic market, which is also the typical market structure for direct investment. In such a market the maintaining of a market share can be expected to enter most strongly into the decisions on R & D efforts and foreign production. The number of enterprises does not increase significantly in the oligopolistic market as the high level of know how required keeps new competitors from entering the market rapidly. Thus there is a two-way relationship between the structure of a certain branch and research-intensity.

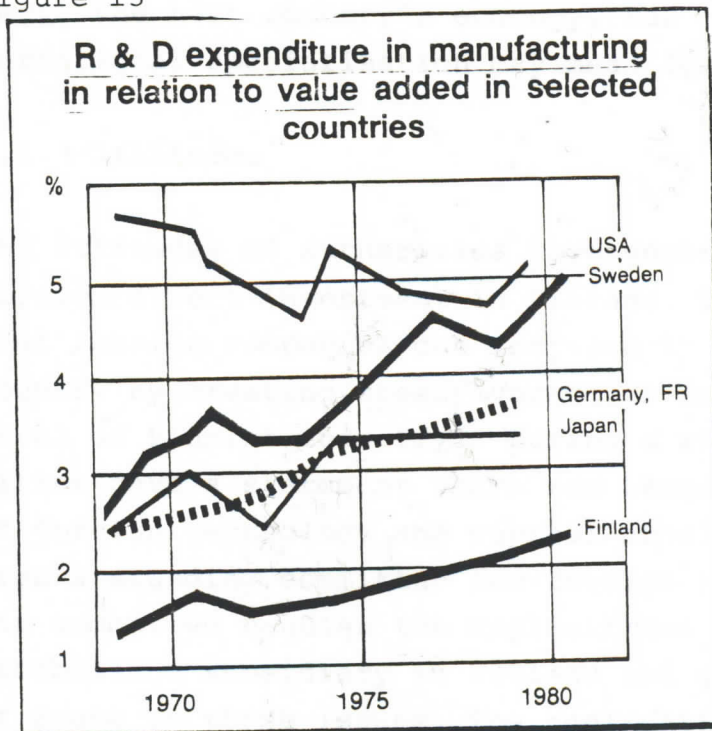
Sales and prices received through direct investment are largely determined by the differences in the level of know how of the investing enterprise as compared with the level in the host country. In Finland the resources devoted to R & D activities have been relati-

1 Statistical Yearbook of Finland 1983

2 Hietala K. 1982, p 162



Figure 13



Source: Finnish Business Report 1. Jan 1985, p 6

should give an idea of the situation in Finland. In Denmark the share of R & D expenditure of GDP at market price was in 1981 smaller than in Finland ( slightly over one per cent ). In Norway the share increased from nearly one per cent in 1971 to 1.42 % in 1977 but since that year it has declined markedly. Sweden, which is economically and from the direct investment's point of view the most important of Nordic countries, has the largest percentage. In 1971 the expenditure in relationship to GDP was already 1.47 and it has increased rapidly each year. The figure for 1981 ( 2.34 % ) is not quite comparable with the earlier figures as the estimation method was changed and the coverage increased in that year.<sup>2</sup>

Despite that in this comparison Finland's position is not alarming, the resources devoted to research are very scarce here. As a single multinational company can spend more money on R & D in one separate branch than the Finnish economy in the whole industry, the company can easily outcompete domestic enterprises. Nevertheless, the superiority of large international companies is not necessarily a

tively modest although more attention has been paid to them in the last few years ( Figure 13 ). In 1971 R & D expenditure was 0.89 per cent of GDP and in 1981 it had been raised to 1.17 per cent<sup>1</sup>.

It has been argued that because of structural and institutional differences international comparisons may be misleading. However, at least the Nordic countries are relatively homogenous, and therefore a comparison between them

negative fact, however, since the innovations may diffuse and benefit the host country's economy. For consumers this kind of international specialisation may mean lower prices.

### 3.2.3 Attitudes

The attitudes of authorities have generally been positive towards foreign direct investment in Finland. The authorities have realised that foreign companies can increase the economic welfare of the country by creating steady vacancies and improving the technological level of Finnish industry<sup>1</sup>. During a recession in 1967 Finnish authorities gave a statement which was based on the idea that the import of foreign technology and capital should be increased. At the same time a standing committee for foreign investment was established. The committee handles the applications of foreigners who want to establish a subsidiary in Finland and gives a statement to the Council of State on these issues. The applications are rejected extremely seldom.

As the number of foreign-owned companies has remained small, local companies consider competition with imported products more threatening than the production of these subsidiaries. The possibility to act as subcontractors for foreign-owned companies is remembered. The effect of transfer of technology through these companies is considered small but in some branches it is regarded as important.<sup>2</sup>

Most negative attitudes towards foreign investors and above all towards multinational companies have been expressed by the representatives of the mass media. This was especially true in the late 1960s and early 1970s. It was thought that multinational companies try to exploit Finland and a stricter control for foreigners was demanded. The debate was often flavoured by patriotic or political considerations. Since those days the stress of discussion concerning direct investment has been mainly on the outward foreign direct investments of Finnish companies and the effects of these investments on Finnish economy.

1 Kauppalehti 8.12.1978 , p 5

2 Tekniikka 1974:13, p 41



### 3.2.4 Legal aspects

Important legal aspects are those which concern import restrictions of capital flows, incentives of investment, taxation and some labour costs, and the general control of foreign owned companies. It was already mentioned in this study that there are few restrictions to imports. Therefore barriers to trade are hardly a reason to internalize Finnish market instead of serving it from abroad. An excise tax must generally be paid on the importation of certain processed products such as tobacco, sweets, some foods etc.

Foreign exchange policy determines the attitudes towards capital flows. In Finland foreign exchange is regulated under the Law Concerning Foreign Exchange and the Decision of the Council of State on the Execution of the Law. The regulations do not make any difference between local companies and foreign-owned firms. The regulations are applied liberally and preliminary for the verification purpose. In practice it means that most current payments and certain capital transfers can be transmitted across the frontier without a special permission of the Bank of Finland. Permission is required for example for the following capital movements:<sup>1</sup>

- receiving investment funds from abroad
- subsidiary-company loans
- obtaining of stocks, shares, bonds and the like from abroad
- transfer of profits and
- repatriation of capital upon the relinquishing of an investment.

There are no restrictions on the transfer of profits or the repatriation of the net share of investment, but the permission is required for verification.

The Government incentives of investment are the same for domestic companies and for companies in which there is foreign ownership. There are incentives granted for those firms which are being set up in the development areas in Finland. The assistance to such companies includes loans, subsidies and tax-relief. In order to assist the ex-

<sup>1</sup> Ulkomaisten investointien neuvottelukunta 1981, p 19 - 20

port marketing of the companies residing in Finland, the Ministry of Trade and Industry grants assistance for certain activities. These activities include for example marketing-research, printing of brochures for foreign markets and participation in trade fairs which are held abroad. Some Government incentives are granted for the support of the research and development work made in companies, research institutes and universities.<sup>1</sup> On the whole, Finland can be classified as a country which does not have attractive incentives to foreign direct investors but certain incentives may be a contributing factor in the decision to establish a subsidiary here.

The state income tax rate for corporations is 43 per cent. In addition there is an income tax averaging about 16 % for the municipalities. A foreign parent company is subject of limited tax liability in Finland. Double taxation can be avoided if the parent company is residing in one of those about 30 countries with which Finland has double taxation conventions in force.

The taxation of dividends is determined on the basis of the source tax. Normally a foreign lender is not taxable in Finland on income from interest received from Finland. The expenses and losses caused by the acquisition and maintaining of income are deductible, and the provisions regarding the evaluation of current assets are fairly liberal. In calculation the capital tax the deductions are excluded from the taxable assets.

Indirect labour costs based on provisions in the law are an important factor for the profitability of production in modern welfare societies. In Finland these costs amounted to over 50 % of the annual worktime wages in the early 1980s.<sup>2</sup> In addition there are several kinds of 'voluntary' payments which are considered necessary for the labour satisfaction of employees. The latter payments include for example housing, eating at work-place and health care.

Despite the generally positive attitude of the authorities towards foreign direct investment in Finland, there is a number of sectors where foreign-owned or controlled companies are not normally autho-

1 Ulkomaisten inv. neuvottelukunta 1981, p 27

2 Ibid, p 23



rised to engage in, or are allowed limited participation. This group includes among other activities forestry and forest industries, mining, professional trading in real estate, agriculture, trading in securities, and shipping. In addition private foreign investment is not allowed in public monopolies, which exist for example in the areas of telecommunication, rail transport, broadcasting and alcoholic beverages to mention just a few. The persons in charge and directors of companies operating in Finland as well as their deputies have to be nationals of Finland in a normal case.

Foreign-owned or controlled companies must have a permission from the Council of State to own real property in Finland, or to possess such property more than two years. This requirement is also applied to those Finnish limited companies which do not restrict the share of ownership of foreigners to at most 20 per cent of the share capital of the company and 20 per cent of the votes which are provided by the ownership of the company's shares. In practice, the permission is granted liberally if the real property is needed for the production process of a foreign-owned company.

### 3.3 Motives for direct investments

It is not relevant to make very strong generalisations about the motives for direct investment in an international level as the theories of this field are not quite satisfactory and empirical findings reveal that the motives are of various nature. They are determined by the country and firm-specific factors and the situation<sup>1</sup>. However, there are some foreign studies<sup>2</sup> classifying the most usual motives which confirm the results derived from Finnish empirical studies<sup>3</sup>. The representatives of the subsidiaries in Finland have given the material for the latter studies and, in this way, it has been second-hand information.

In one country level the motives for direct investment may be more relevant, and some conclusions drawn in these studies in the general

1 Fogelholm M. 1971, p 56

2 See e.g. Behrman J. (1962), Stonehill A. (1965), Barlow & Wender (1955) SOU (1982), IFO (1983)

3 See e.g. Kääriäinen (1970), Luostarinen (1970), Holmberg & Kauste (1983)

level can be applied to this one country case. All in all these studies reveal that usually there are several factors which together influence the decision making process. The motives can basically be classified into two groups: A company expands abroad, if 1) it is profitable to produce in more than one country or 2) it is profitable to internalize certain transactions connected with production. In a more concrete level these groups overlap.

Nearness to market often tops the list of factors evaluated. Especially in the situation where competition is intense, it may be essential to have more and deeper contacts with customers in order to learn their needs and wants concerning the applications of products, quality, deliveries and prices, and to be able to react rapidly to these needs. In this way local production is a phase in a marketing process.

In the long run the increase in profits is a natural target of a direct investment, but in the short run direct investments are seldom profitable especially if they are greenfield investments. However, multinational companies do not necessarily consider subsidiaries as separate units, which can be set on their own feet. The subsidiaries contribute to the results of the whole concern and should be evaluated according to this contribution. A subsidiary may even be allowed to incur losses if it prevents a competitor from earning profits<sup>1</sup>. A usual reason for a take-over is the expectation that the investor can make better business than the original owners.

The profit-making motive is in close connection with the utilization of low labour or raw material costs. Low production costs are important host country specific factors. Motives special to Swedish-owned manufacturing companies operating in Finland in labour-intensive branches are the labour costs which in Finland used to be relatively low compared to Swedish labour costs. After all economic changes in the past few years the difference has diminished, and if the production is meant for Swedish market, it is in some cases cheaper to manufacture on the spot and disinvest in Finland.

1 Tugendhat C. 1972, p 20 - 21



Several companies have mentioned the need to maintain or develop Finland as an export market. Only fairly few companies had the intention to utilize Finland as a basis for trade with the European centrally-planned economies. The demand that only maximum 20 per cent of export price in the product marketed to the Soviet Union may originate from other countries makes it difficult for subsidiaries to utilize this channel if only a part of the production process is in Finland. Sometimes the demand is even stricter. To get a license for an export to the Soviet Union, shoes must be 60 per cent of Finnish origin. As a Danish manufacturer of soles could not sell enough soles due to this requirement, he established a subsidiary in Finland<sup>1</sup>. In this way barriers to trade can affect investment decisions. Austria seems to be used as a bridge of east-west trade especially when it comes to small Comecon countries.

Sometimes the subsidiary is the final phase in a gradual process of growth in the Finnish market. First a foreign concern has an agent or importer here but, in the longer run, it finds direct operations and the internalization of production more satisfactory solutions. The concern may have considered the agent unefficient, or the agent is substituted for a subsidiary because of the concern's tendency to co-ordinate its distribution channels through international take-overs and amalgamations. The likelihood that an agent or agent is substituted is also determined by product-specific factors. If a product is of high technological quality, must be applied to the special needs of customers, and requires a lot of maintenance or other service, the subsidiary is often a preferred form of operation. However, if the demand fluctuates a lot and the selection of goods does not smooth these fluctuations, the incentive to make a direct investment, which always brings about a relatively large amount of fixed costs, is small.<sup>2</sup>

Access to raw materials is a motive which has seldom been mentioned as a motive for establishing a subsidiary in Finland. The reason for the small number of firms mentioning this motive is obvious: the relatively abundant natural resource, wood, is practically restricted

1 Talouselämä 30:1984, p 14

2 Holmberg and Kauste 1983, p235 -236

to domestic producers, and the local competition would in any case be extremely intense as Finnish companies have gained know how, which gives them a firm-specific advantage.

There are few other motives mentioned in the studies. Some motives cannot be interpreted quite literally. For example in the study of Kääriäinen etc. four foreign-owned companies had given "Nordic cooperation" as a reason to establish a subsidiary in Finland. The answer should be interpreted from the point of view of marketing. A subsidiary which has many positive effects to the host country's economy means a lot to the public relations of the company. By stressing the relations to the other Nordic countries, which are traditionally important for the Finnish trade, a company gets a positive image in Finland. Cooperation as such is not likely to be as important for private companies as for the authorities.

#### 4 FOREIGN DIRECT INVESTMENT FLOWS IN FINLAND IN 1970 - 1982

In this chapter foreign direct investments are regarded simply as international capital flows, that is, attention is paid to the financing package dimension of direct investments only. The figures of the chapter are based on the internal statistics and reports of the Bank of Finland unless some other source is mentioned. Thus foreign-owned companies refer to enterprises owned directly or through holding companies, in which the foreign ownership accounts for more than 20 per cent of the nominal value of the share capital or the equal base capital.

"Direct investment capital flows include those that create or dissolve the investment and those that maintain, expand, or reduce it."<sup>1</sup> Direct investment in gross terms means placement of own capital or similar basic capital and loans to associated companies made by the parents of foreign enterprises in Finland. Direct investment, in net terms, consists of the following items: Equity capital, in net terms, which includes the share capital, the cooperative capital or

1 IMF 1977, p 139



similar basic capital less repatriations of capital. Bonus issues are regarded as simultaneous inflow and outflow of capital and therefore the impact of bonus issues on net capital flows is quite neutral. Loans to associated companies, which in net terms include loans granted by the parent company to subsidiaries or associated companies less redemptions of loans.

To get the net import effect, the dividends and interest payments transferred by subsidiaries in Finland to their foreign parent companies must be subtracted from the total amount. It should be noticed that in statistics the net import effect does not take into account transfers of royalties and for example administrative charges.

Foreign direct investment in gross terms:		Foreign direct investment in net terms:
Investment in equity capital	- repatriations	= Investment in equity capital in net terms
+		+
Loan drawings of subsidiaries	- redemptions of loans	= Loan drawings of subsidiaries, in net terms
		<hr/>
		Foreign direct investment in net terms
		-
		dividends paid
		+
		interest expences
		=
		NET IMPORT EFFECT

It seems that foreign companies do not usually find it profitable to internalise their activities in small countries like Finland. These small markets are mainly serviced by exports while especially American companies, which are the biggest foreign investors in the world have mainly concentrated their direct investment operations

in the more populous and central market of the European Community<sup>1</sup>.

According to the data obtained by the Bank of Finland the import of capital for direct investment accounted for about three per cent of all long-term capital flows in the period 1970 - 1982. Capital flows to Finland largely took the form of credits rather than direct equity investment. The relatively small amounts involved in Finland's investment capital flows can be seen in the fact that single big transactions sometimes have a considerable effect on the flows<sup>2</sup>.

For example in 1973 the net inward capital flow declined as compared with the previous year. The most important reason for the low figure for 1973 was the repatriation of 72 million marks in investment capital. However, the repatriation flow was so large due to only a couple of big repatriations. And, in 1982 when foreign direct investment in Finland showed a net outflow, the reversal in the direction of the flow was attributable to the relinquishment of some exceptionally large investments.

There seems to be no reason to believe that foreign direct investments will increase very much in the future either. Most of the foreign companies which might be interested in Finland as a host country have already established a subsidiary here and the annual increase in the number of foreign-owned companies has stabilized at the level of about six per cent per annum.<sup>3</sup> The investments in the 1970s were mainly increases in the share capital and funds to construct the existing subsidiaries in Finland. The investments caused by the increases in the share capital are likely to be stable in the 1980s as well, since the subsidiaries must have a reasonable ratio between own capital and loans.<sup>4</sup>

The inflow of investment capital declined in the period examined. As direct outward investment of Finnish enterprises has since 1977 con-

1 Iger 1976, p 49

2 Laurila J. 1982, p 52

3 Laurila J. 1982, p 53, Luostarinen R 1981, p 227

4 Talouselämä 1980:28, p 41



siderably exceeded direct inward investment in Finland, it means according to the eclectic approach that the firm-specific advantages of Finnish enterprises have increased and/or the country specific advantages of Finland have declined. The decline in the import of direct investment capital is also attributed to the fact that foreign-owned firms operating in Finland have, to an increasing extent, obtained financing for investment projects from Finnish sources<sup>1</sup> which means that they have become financially more independent from the concern. Above all the growth in the dividends paid has led to the situation where the direct investment in Finland have contributed to the increasing capital outflow from Finland to other countries<sup>2</sup>. In other words the monetary flows in the internal market of the concern have changed their direction and financial resources have been transferred to those places where the return on investment has been higher than in Finland.

The importance of the Finnish capital market for the capital flows of direct investments in Finland was seen in the mid-1970s. The tightness of the domestic capital market was reflected in the amount of capital inflow especially in 1975. Direct investment in gross terms more than doubled against the previous year. There was a considerable increase of 95 million marks even in the net inflow of investment capital in that year. External financial market had to be replaced by internal financing because of restrictions exogenous to the concern. The overall pattern of financing of the subsidiary is influenced by the host country's interest rate, foreign exchange rate and taxation.

After the mid-1970s till 1981 the net annual inflow of investment capital fell on average by nearly 18 per cent. In 1982 the net inflow of direct investment capital was for the first time negative. Since repatriations were 216 million marks and redemptions of parent loans 79 million marks, the result was a net outflow of 67 million marks. When exceptionally large dividend payments, 301 million marks, and interest expenses, 28 million marks, are included, the net import effect was 396 million marks. Anyhow, even if the net import effect on the balance of payments is negative, it does not necessarily imply

1 Kulkki S. 1981, p 2

2 Aintila H. & Boldt P.J., 1984, p 3

that the investments are detrimental to the host country. As long as the positive effect on the economic growth exceeds the negative effect on the balance of payments, direct investment has been beneficial to it.

Table 2

FOREIGN DIRECT INVESTMENT IN FINLAND  
IN NET TERMS, MILJ. FIM

YEAR	EQUITY CAPITAL	LOANS TO ASSOCIATED COMPANIES	TOTAL
1970	61	13	74
-71	96	7	103
-72	113	18	131
-73	-3	63	60
-74	101	55	156
1975	144	107	251
-76	153	70	223
-77	108	80	188
-78	126	15	141
-79	186	-80	106
1980	145	-41	104
-81	150	-75	75
1982	-24	-43	-67

SOURCES: BOF MONTHLY BULLETINS

#### 4.1 Foreign manufacturing companies in Finland in 1970 - 1982

Beneficial economic effects of foreign direct investments are generally accrued mainly from manufacturing subsidiaries. In Finland about 20 per cent of the foreign-owned companies were engaged in production in the period examined. The share has declined from 21 per cent in the early 1970s to 20 per cent by the end of 1982. This seems to reflect the diminishing country specific advantages of Finland. Especially



the historic comparative advantage of Finland in the production of textiles seems to have eroded with the passage of time. According to product cycle theory many branches of industry in an industrialised country like Finland have reached the phase where ordinary production has to be transferred to those newly industrialised countries, which have a comparative advantage in that kind of production, and innovations are needed to ensure competitiveness in specialised production in the original producer country.

The share of foreign-owned companies in manufacturing industry is distinctly low compared to that of most other industrialised countries. In 1977 the share of foreign-owned manufacturing industry of industrial work force was slightly over three per cent and the share of industrial production 2.7 per cent. The fact that the Government participates actively in industry has been considered one reason why the contribution of foreign companies to industrial output has remained small in Finland<sup>1</sup>. ( Appendix 3)

According to the data collected by the Bank of Finland, in 1972 the total value added of foreign industrial enterprises was five per cent of the total value added of Finnish industry.<sup>2</sup> In 1974 the percentage was estimated to be 6.1 per cent.<sup>3</sup> Total value added is the best indicator if the interest lies on the amount of real resources used under foreign management\*. Value added is the share of gross national product resulting from the company's operation. Many studies have revealed that the total sales of several multinational companies exceed the gross national product of many industrialised countries. That kind of comparison is not relevant: what should be compared is value added by the company and the GNP of a nation<sup>4</sup>.

\* Value added is calculated as follows:

Gross profit

+ Rents

+ Staff expenditure

= Value added

( As the calculation of the value added is that complicated and time consuming, the figures given by firms may be inaccurate. )

1 Tulokas & Nieminen 1982, p 5

2 Suomen Pankki BoFMB 1976, p 25

3 Tilastotiedotus 1975:7

Examined by industrial category, foreign subsidiaries in Finland concentrate heavily on metal and engineering industry, non-metallic mineral products and chemical production as well as the manufacture of textile, wearings apparel and leather ( See appendix 4 ). The manufacture of metal products and machinery as well as the textile and wearing apparel industry have been classified as branches which are more labour-intensive than the industry on average<sup>1</sup>.

It is noteworthy that metal industry and the chemical industries on the whole play in Finland a distinctively lesser role than in the Western market economies on average. The fairly modest role has been explained by the lack of diversity in natural resources, the small size of the home market and the lack of sufficient industrial experience in many branches<sup>2</sup>. Therefore international corporations with their better know how resources and internal markets seem to have had comparative firm-specific advantages over Finnish companies. This appears to be especially significant in the chemicals industry, since over 11 per cent of all industrial enterprises operating in the branch were foreign-owned in 1974<sup>3</sup>.

The shifts in the structure of manufacturing of foreign-owned companies go partly into the opposite direction than the shifts in the total Finnish industry. The share of the traditional areas of operation of foreigners ( metal, engineering, chemicals ) is declining whereas for domestic producers these are the fields of growth. The trend can be interpreted as a sign of the growing firm-specific advantages of Finnish firms as they gain know how through experience. As the competition gets harder and the sales margins decrease in these industries, foreign competitors do not find it profitable to internalize their activities in Finland but use other operations instead.

In a breakdown of foreign manufacturing subsidiaries in Finland by the country of the parent company, there can be seen the general development of the internationalisation process of the firm. First the

1 Tulokas & Nieminen 1982, p 5 - 6

2 Ibid , p 3

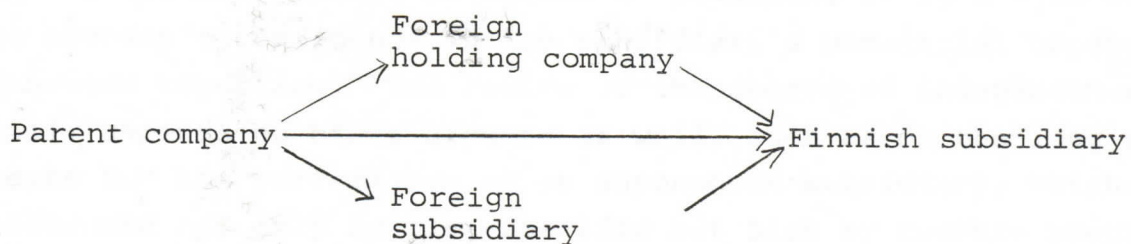
3 Tekniikka 13:1974, p 37



markets which are near the company are internalized and as the company has gained experience and know how and has reached the point where further growth in that market is not possible within the limits of reasonable costs, it has to expand to yet another market. Most of the investment capital to Finland comes from EFTA countries. Of the total 204 production subsidiaries in Finland at the end of 1982, 68 per cent originated from these countries. Sweden has been the most important investor country throughout the period examined but today Swedish international companies are concentrating on the more distant markets. At the end of 1982 Swedish-owned companies accounted for over a half ( 54 % ) of all foreign-owned manufacturing companies in Finland.

However, this figure is not quite precise as the direct investor may itself be a subsidiary of another company and the investment capital may, therefore, originate from a third country through the internal market via this subsidiary to Finland. This kind of direct investment is called indirect establishment.

Figure 14 Indirect establishment



Source: Luostarinen R. 1981, p 51 ( modified )

When the origin of direct investment was traced back to the ultimate parent companies in the study of the Bank of Finland in 1972, it could be seen that the share of Switzerland, Luxemburg and Sweden were smaller than in the breakdown of immediate ownership, whereas the shares of the United States and the Federal Republic of Germany were larger. ( Appendicies 5 and 6 )

Subsidiaries' role can be assessed from different points of view but the final target of the assessment is to study the interdependence of the units of a business concern. The transfer of resources within the internal market of a concern is not only a vertical movement from the parent to the subsidiaries, but the input flows can also go to the opposite direction or be horizontal. Subsidiaries can specialise and have totally own contribution in the international activities of the business concern.

Nevertheless, observations show that at least in multinational companies research and development, product selection, and most strategic marketing decisions are usually better carried out by the parent company and, therefore, these activities are not very often delegated to subsidiaries.<sup>1</sup> A common pattern seems to be hierarchic: the parent is responsible for the strategic activities while the more operational level is left to the subsidiaries. Thus the distribution of activities resembles that of the decision making process.

If a subsidiary is permitted to operate autonomously and it functions as a worldwide or regional centre for the R & D, manufacturing, and sales of a certain product or series of products, it is a sign of the parent company's confidence in the subsidiary's managerial capability and unbiased reporting.<sup>2</sup> The choice of the degree of independence naturally depends on other aspects as well, such as on the long run prospects for the performance of an autonomous subsidiary, which can be influenced not only by firm-specific but also by country specific factors. For example R & D programmes are typically restricted to large subsidiaries in industrialised countries if they are delegated at all. This is because of the minimum-size threshold for establishing a laboratory and scientific staff<sup>3</sup>.

The relative independence of a subsidiary is likely to affect the profits of the whole concern and that is why it is important to assess how loose the connections inside the internal market are.<sup>4</sup> One way

1 Poynter and Rugman 1981, p 56 - 60

2 Ibid p 56 - 58

3 Eiteman and Stonehill 1980, p 239 - 241

4 Iger 1976, p 49



to examine the interdependence of the units of the concern is to divide it to functional and resource-based dependence, although clearly in practice no hard line can be drawn between these types of dependences.

Functional dependence is important especially in connection with horizontal investments. It means the importance of the activities of one member of the group as compared with those of the whole group. Functional dependence is usually partly hidden, it affects the other units indirectly. If one subsidiary is closed down, it may have an effect on the remaining subsidiaries through the alterations in the whole business concern's long run plans. Increasing pressures can be set on the remaining units as they have to fill the gap left by the closed unit. This kind of change would also affect the profits of the concern. All in all, functional dependence refers to the contribution of a subsidiary to the total figures of the international company and to the whole field of activities instead of intermediate inputs. The stress of the examination of functional dependence is on the concern on the whole and on its output. It tries to make clear how the activities of the concern are organised.

The net sales of a subsidiary as compared to those of the whole business concern is an example of functional dependence, but in practice both figures can be influenced by strategic decisions of the parent company. The number of employees of a subsidiary as compared with the total number of employees in an international company is another example of functional dependence, as this figure reflects the business volume of the subsidiary. Nevertheless, also qualitative aspects must be taken into account. Even a subsidiary with a relatively low business volume can, in principle, be in a key position if some crucial activity is left to it. This aspect is partly linked with the concept of resource-based dependence.

Resource-based dependence refers to the input flows of resources needed by a subsidiary or the parent firm. The dependence is reflected in the physical and financial transactions between the units of an international company: the flows in the internal market. The stress of examination of resource-based dependence is on each sepa-

rate unit and the main question is whether it is profitable to use internal markets instead of regular markets to get the needed resources. Resource-based dependence means access to knowledge and expertise, in excess of that which an independent company of the same size could acquire from external markets, and access to centralized facilities, for example technical, administrative and managerial, provided by the concern. Therefore dependence is also a positive factor for the subsidiary.

In backward vertical investments the dependence is clear. A subsidiary delivers important raw materials or components to the other units of an international company. Even final goods are made in low-cost countries and marketed elsewhere. In the same way research results go inside the internal market from some specialised units to the less research-intensive ones. As the activities are often organised utilizing the different resources in different countries, that is, the comparative advantages of various countries, the gains of resource-based dependence for the subsidiary derive from it being a part of a foreign firm. It means that the ownership effect is emphasized<sup>1</sup>.

The dependence on the financial resources of a parent company is an important form of resource-based dependence. If the parent of an international enterprise went bankrupt, the dependent subsidiaries, which were only links in the chain, would be helpless and in need of support of the host countries' authorities<sup>2</sup>. This dependence is especially strong at the initial stage of foreign direct investment, but even later the major source of financing of foreign subsidiaries is expected to be internal cash flow consisting of reinvested earnings and provisions for depreciation<sup>3</sup>. It should be noticed that it is not always self-evident that the subsidiary can keep the money it has earned through its sales because the money may be needed e.g. for investment in another subsidiary.

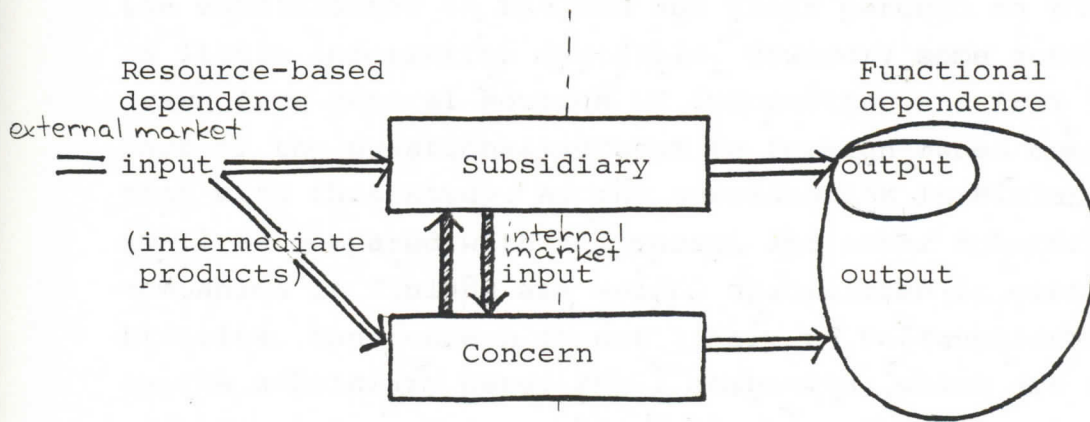
1 Dunning J. 1979, p 186

2 Tugendhat C. 1972, p 121

3 OECD 1981, p 28



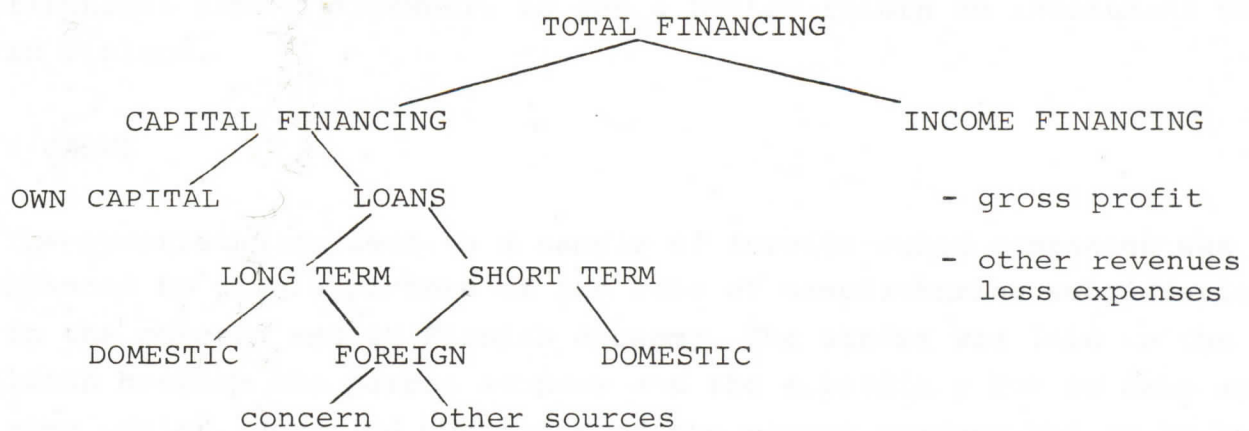
Figure 15 Resource-based and functional dependence



To give an idea of the sources of finance available, they can be divided as shown in Figure 16. Each of the sources may be important, especially in a country like Finland where inflation is persistent and makes the use of internal financing ( which is usually common in large international companies ) problematic. In such countries international companies usually aim at a financial structure whereby nominal assets are financed with at least an equal amount of local credits. If this financial policy is not possible these companies prefer borrowing from foreign sources to financing nominal assets with equity capital.<sup>1</sup>

Figure 16

The division of the company's financing



1 Koning in Wilson and Scheffer ( ed. ) 1974, p 55

When it comes to functional and resource-based dependence between the subsidiaries in Finland and their parents on the whole, there is little information available. However, some conclusions can be drawn from general sources of information and from the modest feedback of the questionnaire sent to foreign-owned companies in connection with this study. As the subsidiaries in Finland are usually small as compared with the parent and other subsidiaries, and the companies in Finland are seldom specialised in certain crucial activities, the concern is not likely to be functionally dependent on the subsidiary here. Small companies, which are in the beginning of the process of internationalisation may be exceptions to this generalisation. The subsidiaries of these companies are often rather small wholly-owned enterprises operating in labour-intensive industries. The ownership-specific advantages of the parent companies are weak.

Subsidiaries in Finland are not particularly research-intensive and therefore they need know how developed by other members of the concern. Internal trade with intermediate products or final goods is usually not of any great significance, but the imports from the other members of the concern are more important than the exports to them. Financially subsidiaries in Finland have become more and more autonomous. The increasing repatriations of investment capital and dividends from Finland would suggest that Finnish market has in some branches become 'mature' and the concern prefers to transfer financial inputs elsewhere to get a better return on investment than in Finland.

## 6 CASES

The questionnaire sent to a sample of foreign-owned companies was planned to give a picture of the role of manufacturing subsidiaries in the concern and in Finnish economy. The stress was laid on the links between the parent company and the subsidiary but to make answering easier, detailed questions of the parent company had to be avoided.

To analyse the relationship between the members of the concern, the motives for direct investment are relevant. As the motives have been



been handled in many earlier studies, direct questions of the motives were left out this time. Instead of them the motives were thought to become implicitly clear of questions 2.3 and 2.4 ( Appendix 1 ) which deal with the activities of the company in the first three years after direct investment. It was assumed that if the subsidiary was established mainly for export purposes or if only a part of the production process was left to it, its position in the concern would be less autonomous than in the case where the subsidiary serves only Finnish market and is responsible for the whole production process. The exports would mean a larger market for the products of the subsidiary and therefore the concern would be functionally more dependent on it, while the role as a chain in the production process would mean resource-interdependence.

The share of the concern's ownership of the subsidiary was also assumed to be reflected in the autonomy of the subsidiary. If the concern's share of the equity capital is large it means, according to the theories, that internalization is important for the concern. This should lead to strong links between the members of the concern.

The operations of the subsidiaries were handled with the questions concerning some decisive economic indicators. These indicators give an idea of the resource use of the subsidiary and, therefore tell about the role of the company in economy. The direct effects on the country's balance of payments are easy to discover through export and import figures of the foreign-owned companies, but various indirect effects caused by for example the transfer of innovations or increased competition are outside the scope of this study.

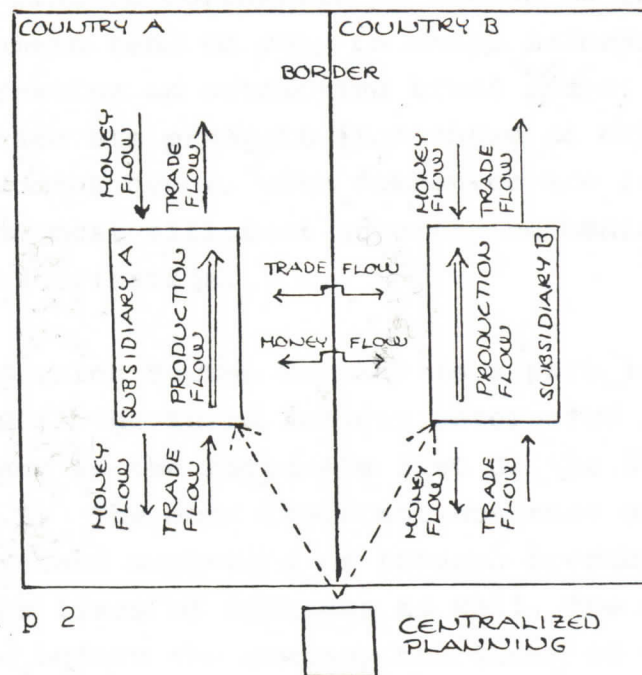
Financial questions are separated from other resource flows as they were originally a field of special interest to the study. The financial strategy of an international company determines what sources of finance are used in a subsidiary and, thus, the effects of these strategic questions. On the other hand the strategy is influenced by the host country's financial resources and economic policy.

Questions concerning know how are in the questionnaire closely linked with financial questions. The interest lies on the research and de-

velopment costs. Also a subjective assessment of the know how resources of the business concern is included, but the evaluation of the amount of the transferred know how is not included. There is already a study dealing with innovation effects of foreign-owned and multinational companies operating in Finland<sup>1</sup>.

All in all the whole evaluation process can be visualised with the help of figure 17, which describes different flows between an international company and its surroundings, and between the different units of an international company.

Figure 17 Cycle model of an international company



Source: Salmi p 2

### 6.1 Suomen Tupakka Oy

Suomen Tupakka is operating in the tobacco industry. This industry is a typical example of the oligopsony<sup>2</sup>: there are few manufacturers of tobacco products but the number of tobacco planters is large. Tobacco products are basically very homogenous and it is easy to find a substitute for a certain brand. Therefore a lot of attention is paid to the quality of the raw materials and to the brand image. Since the detrimental effects of tobacco products have become known, the importance of research and development work has increased. The

1 Baldauf Sari 1979

2 Asikainen and Hirvonen 1979, p 65



manufacturers of tobacco have to make products which meet the requirements of the governments and the preferences of the consumers.

Most products are standardised and same brands are sold in several countries. Licensing and exports are common operation forms, but economies of scale, the wish to exploit technological advantages, oligopolistic competition, and increasing demand in the markets make companies in some cases internalize their production. Trade marks are important determinants of the ownership advantages needed in the competition against local producers because cigarettes are consumer "convenience" goods. Typical of these goods is that consumers do not find it worthwhile to engage in intensive searching of them. Consumers tend to rely on cheap information to guide their choices. By creating an attractive brand image, the manufacturer can differentiate his products from those of other manufacturers. Marketing economies occur, when companies are large enough to be able to use the most efficient advertising media to create worldwide brand identification.

The concern of which Suomen Tupakka is a part is multinational B.A.T. Industries. It is the third largest enterprise in Great Britain and the 17th company in the Fortune's list of the 500 largest industrials outside the U.S. The most important business of the enterprise is the manufacture and marketing of tobacco products but it has diversified to other lines of business as well. The diversification did not take place before the company had grown to the extent that the expansion to other activities was considered necessary for the further growth of the concern.

The original parent company of the concern, British-American Tobacco was established in 1902. The international connections of the United Kingdom gave British firms easy access to raw materials. Also the big home market, which made large scale production possible, contributed the comparative advantage of the country. Country specific advantages generated and sustained ownership-specific advantages of British-American Tobacco, and it started to internationalise. However, the internalization of raw material markets was not considered important as the number of parties to the exchange was large enough

to ensure a well-functioning raw material market. Direct investments made by B.A.T. have been mainly horizontal, the company has expanded into foreign markets to sell existing product lines or a new product line, which has been adapted to the market of the host country. Despite the fact that B.A.T. is today the largest private manufacturer of tobacco products in the world with altogether 120 factories in more than 50 countries, it does not have plantations of its own.

It has been in the interest of the concern to finance the cultivation of tobacco and do intensive research and development work. There are research laboratories concentrated on R & D operations for the whole concern, but some research activities are left to the subsidiaries as well. A lot of attention is paid to marketing in order to create brand images. Most brands are sold in several countries.

Tobacco industry in Finland has long traditions: the growth started in the middle of the 19th century and it culminated in 1900. Then there were 34 manufacturers of tobacco products. Gradually industrial production of cigarettes forced small factories to leave the market. Today the tobacco industry in Finland is clearly oligopolistic. There are only three producers, one of which is Suomen Tupakka Oy.

The share of cigarettes is 90 per cent of the total consumption of the tobacco product. There is practically no import of cigarettes but other tobacco products are imported in addition to own production because the demand for several brands is not sufficient to ensure profitable production here. The general import duty of final products is 24 marks per kilogram while no duty is collected of the unmanufactured tobacco. However, the import of all tobacco products from e.g. the European Community is duty free. The manufacture of tobacco is entirely dependent on imported raw materials.

The fact that the consumption of tobacco products is not likely to increase very much in the future, and the decrease in the sales margins have forced tobacco manufacturers to diversify and to intensify



exporting efforts. Today the exports are fairly important for the industry. In 1981 the Soviet Union was the largest export market of the Finnish tobacco industry with the share of over three quarters of all exports, but in 1982 exports were abruptly stopped because of the imbalances in the bilateral trade.

Suomen Tupakka Oy was established in 1900 to service the local market which in those days was geographically large as Finland was still an autonomous part of Russia. Local production was export substituting. Despite the fact that B.A.T. Industries owns all the shares of the subsidiary, and it was a greenfield establishment, Suomen Tupakka Oy has a lot of decision making power. Of the strategic questions only decisions on investments and the choice of product lines and products are made together with the parent company. This means that among other things all decisions on financing are made in Finland.

The autonomous position in these important matters has also meant that only know how developed within the concern has been of importance in the competition against local manufacturers. Finnish employees may e.g. take part in the training programmes arranged by B.A.T. Industries in England. Internal trade has not been significant and in the tobacco industry brand names are better known than the image of the producing company. However, since the advertising of tobacco products is prohibited, the image of the company has grown in importance.

The market share of Suomen Tupakka's cigarettes production was in 1982 about 22 per cent, that of pipe tobacco 3.6 per cent and the share of cigar production was 23.7 per cent. Because of the consumption habits and the enterprises' inability to advertise their products, rapid changes of the market shares are unlikely. In addition to the manufacture and marketing of tobacco products Suomen Tupakka Oy has interests in sweets marketing. This diversification started in 1977.

The imports of Suomen Tupakka Oy have exceeded exports each year in the period examined, but the ratio has improved from Finland's point of view in the 1970s due to the increased exports. Today Suomen Tu-

pakka Oy is the largest exporter of tobacco products. About 80 per cent of the exports of this industry originate from Suomen Tupakka Oy. The import from other units of the concern has varied from 72 per cent of all imports in 1970 to 53 per cent in 1982. The exports to the other units of the concern have been modest and the importance of internal trade has declined in the period examined.

Profitability is in principle the best measure of international competitive power. Gross profit as compared to net sales is one indicator of the profitability of the company. Gross profit of Suomen Tupakka Oy has remained fairly stable in real terms throughout the period examined although the net sales have fluctuated due to the changes in export figures. Dividends paid have followed these fluctuations. The increase in value added per employee is partly attributable to rationalisation measures. The number of employees has decreased from 480 in 1975 to 386 in 1982. The share of Suomen Tupakka Oy of the total number of employees in the tobacco industry has remained fairly stable ( 27 % ) in the period under review. The relative number of salaried employees as compared with wage earners is above the average of the tobacco industry in Finland<sup>1</sup>.

The total number of of the employees in the concern was in 1982 about 280 000 persons. In other words the employees of Suomen Tupakka Oy accounted for well under one per cent of the total number of the employees of the concern. All in all the concern is not functionally dependent on Suomen Tupakka Oy and the subsidiary has become increasingly autonomous.

## 6.2 Hoechst Fennica

Hoechst Fennica manufactures chemicals. The manufacture of chemicals is divided in industrial statistics as follows:

- 351 Manufacture of industrial chemicals
- 352 Manufacture of other chemical products
- 353 Petroleum refineries
- 354 Miscellaneous products of petroleum and coal

<sup>1</sup> Industrial Statistics I, 1982



355 Manufacture of rubber products

356 Manufacture of plastic products

The output of the chemical industry consists mainly of raw materials for industry, but the field in which Hoechst Fennica is active, that is the manufacture of chemicals and chemical products, produces principally products for final use. Hoechst is best-known as the producer of medicines.

For the manufacture of chemicals and chemical products economies of scale in production have traditionally been considered important. The larger plants result in lower cost per unit of output because of labour specialization and the more effective utilization of resources. The pharmaceutical industry requires large capital inputs and it is very research-intensive. Pharmaceuticals are highly differentiated products. The high costs of production form an effective barrier to entry to new companies and, therefore, the industry is oligopolistic. As the know how gained through costly research and development activities is the important factor, which gives a company firm-specific advantage, the leakages are avoided by preferring wholly-owned subsidiaries as the method to internationalise. Nevertheless, licenses are also common.

In Finland the chemical industry is a relatively new branch, but it has grown strongly in the past two decades. Especially the growth in the manufacture of medicines and various technochemical products has been rapid.<sup>1</sup> A special feature of the manufacture of pharmaceuticals is the strict control of authorities. The control is directed to the quality and the price of pharmaceuticals. Also the factor itself must be extremely hygienic and safe. These requirements increase costs and have an effect on the profitability of the industry.

The producers of pharmaceuticals spend more money on R & D than industrial companies on an average. This expenditure accounts for over 11 per cent of value added and approximately 16 per cent of the gross value of production<sup>2</sup>. Only 10 - 20 per cent of the projects

1 Nermes O. and Virtanen J. 1980, p 5

2 Tutkimustoimintatilasto 1977

of research and development lead to a new medicine and the whole process is estimated to take 5 - 10 years.<sup>1</sup> Thus large scale production is necessary to neutralize the costs. Typical of the industry are large concerns. In Finland there are five concerns and two small factories. Compared internationally, only a small proportion of Finnish pharmaceutical industry is dependent on foreign capital.

The question of patents is very important in this industry. Finnish patents secure a certain method of production but not a new medicine itself. In practice this means that Finnish companies can develop own methods to produce medicine molecules that other companies have invented. International companies have been eager to sell licenses to Finland as they have known that there is the risk that their products will be copied here in any case. So far only one Finnish company has developed a medicine molecule of its own.<sup>2</sup>

Nevertheless, Hoechst Ag, the parent company of Hoechst Fennica, chose to internalize Finnish production instead of selling its know how. Hoechst Ag is a multinational company with a West German headquarter and production in 68 countries. About 40 per cent of the concern's turnover originates from production outside Germany. The concern's principal activity is the worldwide manufacture and marketing of medicines, but it also has substantial interests in other organic and inorganic chemicals.

Hoechst Fennica was originally ( in 1951 ) established in Finland to meet the requirements of Finnish market. Some products were exported but they accounted for much less than one per cent of the turnover. In the period examined the share of exports varied from 0.1 to 2.7 per cent of the turnover. It was mainly internal trade to other members of the concern in other Nordic countries.

The imports of Hoechst Fennica have decreased since the 1970s and the concern's share of the imports has declined. The interests paid were larger the dividends paid and as the loans have been drawn from other sources than from the concern, the financial position of Hoechst is relatively autonomous. The economic support of the company was considered unimportant and the specialisation and internal trade only



somewhat important.

On the other hand the know how of the concern has become more and more important. Especially the technological know how developed in the concern is considered crucial as the technology develops so rapidly in this industry. Marketing know how and the good image of the parent company have increased in importance. Special emphasis has been laid on the improvement of marketing communication.

Despite that Hoechst Fennica is 99,9 per cent owned by the parent company, it is very autonomous. The parent makes only the decisions on investments and R & D alone, whereas most of the other strategic decisions are made in Finland. Both functional and resource-based dependences are weak: for example the share of Hoechst Fennica was in 1982 only 0,2 % of the total number of the employees of the concern.

While there has been a small decline in the number of employees of the concern, the growth in the number of employees in the Finnish subsidiary has been stable. Hoechst Fennica accounted for little over 12,5 per cent of all employees in pharmaceutical industry in Finland. The share of salaried employees as compared with wage-earners was somewhat lower in Hoechst than in the pharmaceutical industry on an average.

Value added has grown fairly rapidly in the period under review and it accounted for about 4 % of the value added of the industry. Hoechst Fennica's turnover has grown significantly and the company has invested actively in real capital and research and development. The investments reflect in the relative indebtedness, but this indicator has remained on a healthy level.

### 6.3 Oy Aga Ab

Gas operations business is clearly oligopolistic. Five big companies - among them Aga Ab, the parent company of Aga Oy - hold about 55 per cent of the world market. There are great barriers to effective entry of new competitors despite the zero cost of the basic raw material, which is air. The barriers are related to the superior ca-

capacity, which is based on large R & D budgets of the existing companies. Development costs in this business are high.<sup>1</sup> Nevertheless, advantages gained from innovations tend to be short-lived due to intense competition. Foreign direct investment is a common form of operation because of the need to come near the customers. The transportation of gases is expensive: for example the temperature of oxygen must be 186 degrees ( Celsius ) below freezing-point so that it can be transported in the liquid form<sup>2</sup>. Since the possession of a superior capacity based on active research and development activities gives a company firm-specific advantage, it is no wonder that the subsidiaries established abroad tend to be wholly-owned. Since the product cycle of a certain innovation is short, it is essential to get to know these innovations in time to be able to utilize them effectively on the market. This need to internalize information contributes to the tendency to choose direct investments instead of other forms of operations.

Aga Aktiebolaget has internationalised briskly. It is a Swedish multinational company. Measured by the number of employees working in the foreign units of the concern, Aga Ab is the 9th biggest of the Swedish multinational companies. In 1978 the total number of the employees in the concern was 15 370 and 61 per cent worked outside Sweden<sup>3</sup>. Since those days the number of employees has decreased slightly. In the Fortune's list of the 500 largest companies outside the United States ranked by sales, Aga Ab was in 1982 number 487, which means that Aga Ab was smaller than the largest Finnish companies like e.g. Nokia, Rauma-Repola and Enso-Gutzeit. The total turnover of the concern was at the end of 1982 about 1 350 million marks.

Aga Ab's basic business has been the manufacture and supply of industrial gases but in the 1950s and 1960s the company diversified strongly the selection of the products it manufactured<sup>4</sup>. However, the results of the diversification were not quite satisfactory as the

1 Euromoney Survey Sept. 1984, p 8

2 Talouselämä 1978:9, p 53

3 SOU 1982:27, p 294

4 Euromoney 1984, p 8



variety of products prevented the company from gaining economies of scale. In 1970 Aga Ab began a process of retrenchment and concentrated again on the business it knows best, that is, on gas operations. To make innovations in this field Aga Ab pays a lot of attention to R & D activities. It spends on these activities 3 per cent of turnover, which is slightly more than the average of this industry.

The internationalisation process of Aga Ab began early: already in the 1910s and it continues still vigorously. Today Aga Ab is working in altogether 23 countries. Through internationalisation Aga ab aims at coming near customers and protecting itself from the effects of business cycles. If it is possible, the investment takes place by acquiring an existing company.

Oy Aga Ab, the Finnish subsidiary, was established in 1917. it was a greenfield investment and the parent company kept all shares by itself. The subsidiary was established to service the Finnish market only. Today Aga Oy has a very strong position in the Finnish gas operations. It manufactures and supplies industrial and medical gases, welding and medical equipment and geothermal systems. In the manufacture of carbon dioxide Aga Ab has a monopoly and in the whole gas operation business Aga Ab has a dominating position. However, despite that as the marketer of gases Aga Oy is the largest in Finland, for example steel factories produce for their own use some industrial gases more than it.

Also financially Oy Aga Ab is clearly stronger than Finnish companies on an average. It has made real investments each year in the period examined and investments in product development in the 1980s, but still all financial ratios have been healthy. Investments have been financed principally by internal cash flow consisting of earnings and provisions for depreciation of the subsidiary. The loans have been drawn from Finnish sources only.

The turnover of Aga Oy has increased fairly steadily, but as the company already has a dominating position in the business in Finland, the growth is not likely to be very fast in the future unless the

company diversifies the production to new applications. The diversification has already started and the exports of the company have increased. In contrary to the other case companies of this study, internal exports to the concern play a relatively bigger role than internal imports. About 25 % of the imports came from the concern throughout the period under review, whereas the exports consisted of internal trade only in the 1970s. At the end of the period the share of the concern had declined to 83 per cent. Nevertheless, the internal trade and the specialisation of the members of the concern were considered unimportant in Aga Oy. Resource-dependence was thus linked almost entirely to know how inputs only.

The technological know how was of great importance in the competition against local producers. Other types of know how were considered fairly significant and their importance had grown in the period examined. The concern seems to transfer actively know how to the subsidiaries to improve their competitiveness.

Aga Oy has a lot of decision making power. The parent company does not make any strategic decisions concerning the Finnish subsidiary alone, but most decisions are made together. Financial matters are handled in Finland only. The financial flows to the parent company from the subsidiary have remained fairly stable during the period under review. As the value added of the 14 factories of Aga Oy in Finland totals ca. 9 per cent of the concern's value added, and Aga Oy's share of the concern's employees amounts to around 5 per cent, there is functional dependence to some degree between Aga Oy and the concern.

#### 6.4 Siemens Oy

Electrical engineering is an industry, which has grown very rapidly in the past two decades. It includes such branches as electrotechnical components, data technology, automation and electronics, which are research-intensive. Of the various metal industry branches, the manufacture of electrical and electronic machinery and equipment tend to spend most on research<sup>1</sup>. The product cycles in the industry

1 Summa T. 1982, p 19



are short and firm-specific advantage based on know how erodes fast. Therefore licensing seems not to be suitable as a form of international operation. The production of standardised products is strongly automatized and the real prices of the products have decreased. This trend of increasing automatization has favoured the centralization of production to large units<sup>1</sup>.

Electronics is a typical example of a branch in which companies internationalise to produce semi-manufactured products in different countries and assemble the components in the framework of the internal market of the concern in some other location.<sup>2</sup> Other usual motives for establishing a foreign subsidiary in the electrical engineering industry have been the need to secure market and increase sales. The producer of technical products has to come near the customer or, at least, have a representative in the market to help the customers in the maintenance of the products. Besides, there are several non-tariff barriers in this industry in many countries. The barriers can be surmounted by starting local production.

Siemens Aktiengesellschaft, the German parent company of Siemens Oy, started foreign production already in the 19th century. In 1982 Siemens concern operated in almost 200 countries and had altogether approximately 320 000 employees. According to the Fortune's list of the international companies Siemens was in 1982 the 9th largest enterprise outside the United States. It has spent on the R & D activities of electrical engineering 7 - 9 per cent of its turnover. It corresponds an amount which is nearly three times as big as the total R & D expenditure of Finnish economy.

Siemens Oy was established in 1898, when electricity was just becoming an important source of power and light for the industry in Finland. The activities of Siemens Oy concentrated in the process of electrifying and construction of electrical power plants. Today Siemens Oy is the fifth largest enterprise in this category of industry measured by the turnover. Measured by the number of employees, Siemens Oy is the largest foreign-owned company in Finland.

The competition in the Finnish market has become more and more intense.

1 Bollman 1981, p 21

2 OECD 1981, p 31

The industry has grown rapidly and the structure of it has changed through the process of centralisation. As the research and development efforts have become increasingly important, the ability to transfer technological know how from other members of the concern has been of great advantage to Siemens Oy. The education in the use of innovations is organised in West Germany, but the technology is applied to local circumstances in Finland. German quality has a good reputation in Finland, and therefore also the image and the name of the parent company are important for Siemens Oy.

The subsidiary considers the possibilities to influence its own position in the concern fairly good. All decisions are made either only in the subsidiary or the subsidiary makes them together with the parent company. The subsidiary is responsible for financial questions, while most of the strategic decisions on marketing are usually made together with the parent company. Despite brisk investments, financial indicators are good and financial flows to the concern have increased to some extent in the period under review. Taxes paid have increased whereas the interests paid have declined. In the 1980s all loans have been drawn in Finland.

The internal trade is considered fairly important. Most of the imports of Siemens Oy come from the concern, but there is no export to it. Siemens Oy has increased exports somewhat in the period, whereas the imports have been stable. The most important markets are West Germany, Norway and the Soviet Union. The position of the wholly-owned subsidiary has remained almost the same in the period: there is hardly any functional dependence while the resource-based dependence is mainly limited to know how inputs.

## 7 SUMMARY

Theories of direct investment are based on the idea of comparative advantage and internalization. Eclectic theory divides the factors which make companies expand abroad into three groups: location-specific factors, ownership-specific factors and the advantages gained from internalization.



Location-specific factors consist of incentives and disincentives for foreign direct investors in a potential host country. In Finland there are relatively few really significant incentives and, indeed, the direct investment in Finland is fairly modest. Ownership-specific advantages, which help the foreign company in the competition against local producers, are often attributable to know how developed in the concern. This was the case with almost all the companies, which had answered the questions concerning the position of the subsidiary in the concern. As it is important to avoid the leakages of know how, production has been internalized. The rapid development and short product cycles in several industries have contributed to this trend.

The role of foreign-owned manufacturing companies as a group is small in Finnish economy, but some companies have gained a strong position in certain industries. The imports of the subsidiaries exceed the exports and the financial flows from Finland are usually greater than capital imports. The position of the subsidiaries in their concerns has been rather autonomous throughout the period examined, and the links to the other members of the concern, which are formed through internal trade and financial support from the parent company to the subsidiary have even decreased. The financial flows to the opposite direction have even been stable and know how flows have become increasingly important. As all the companies in the cases presented were wholly-owned subsidiaries, which were established to serve Finnish market, the assumptions of the effects of these aspects could not be proved right or wrong. All in all foreign-owned companies have become an integrated part of Finnish economy.

## SOURCES:

## LITERATURE

- Asikainen J. and Hirvonen M. Kansantalouden peruskäsitteet  
Kustannuskiila Oy, Kuopio 1977
- Baldauf S. and Kulkki S. Vientimarkkinoinnin luennot  
HKKK:n opetusmonisteita 167,  
Helsinki 1981
- Black and Dunning ( ed. ) International Capital Movements,  
London 1982
- Buckley P.J. and Casson M.C. The Future of the Multinational  
Enterprise, London 1976
- Caves J. International Trade, International  
Investment, and Imperfect Markets,  
Department of Economics, Prince-  
ton University 1974
- Dunning J. International Investment,  
Suffolk 1972
- Eiteman and Stonehill Multinational Business Finance,  
Massachusetts 1980
- Fogelholm M. Om orsakerna till direkta utländs-  
ka investeringar, Helsingfors  
Universitet Pro gradu avhandling,  
Helsingfors 1971
- Grubel H. International Economics, The Irving  
Series in Economics, USA 1977
- Grubel H. International Economics, Illinois  
1981
- Hietala K. A Theoretical Analysis of Direct  
Investments, Helsinki 1982
- Holmberg and Kauste Suomalaiset agentit ja maahantu-  
jat monikansallisten yritysten  
edustajina Suomessa, FIBO 14:22,  
Helsinki 1983



- Hood and Young  
The Economics of Multinational Enterprise, London 1979
- Hovers J.  
Expansion through aquisition  
2nd edition, London 1974
- Iger S.  
Den svenska ekonomins internationalisering. Drivkrafter och utveclingsmönster, Lund 1976
- Ingram J.  
International Economics, USA 1983
- International Monetary Fund  
Balance of Payments Manual 4th Edition, Washington 1977
- Isard W.  
Methods of regional analysis: An introduction to regional science, Cambridge 1960
- Isard W.  
Location theory, agglomeration and the pattern of world trade in Ohlin B. ( ed. ) The international allocation of economic activity, Stockholm 1977
- Kindleberger C.P.  
American Business Abroad, Yale University Press 1969
- Kindleberger C.P. ( ed. )  
The International Corporation. A Symposium, Massachusetts 1970
- Kääriäinen, Relander, Ramm-Schmidt, Sundholm  
Utländska företag i Finland - en kartläggning
- Laurila J.  
Ulkomaiset pääomanliikkeet 1970-luvulla, Suomen Pankki A:54, Helsinki 1982
- Luostarinen R.  
Ulkomaisen tytäryrityksen perustaminen, HKKK:n julkaisuja C:II:1, Helsinki 1968
- Luostarinen R.  
Ulkomaisten monikansallisten yritysten toimintavaihtoehtoista Suomessa, FIBO 16, Helsinki 1981

Nermes O. and Virtanen J.

Teollisuuden toimialojen kannattavuus ja rahoitus Suomessa ja Ruotsissa vuosina 1974 - 1978  
Muiden kemiallisten tuotteiden valmistus, Laskentatoimen pro gradu  
Helsingin kauppakorkeakoulu 1980

Oksanen A.

Ulkomaisten suorien investointien teorialat, Kansantaloustieteen pro gradu, Helsingin kauppakorkeakoulu 1981

Organisation for Economic  
Co-operation and Development

Economic Surveys 1973 - 1983, Paris  
Industrial Structure Statistics,  
Paris 1983

OECD

OECD

Detailed Benchmark Definition of  
Foreign Direct Investment, Paris  
1983

Rajakangas M. and Warmemaa -  
Sandén L.

Suomen ja Ruotsin teollisuus-  
yritysten kannattavuus ja rahoitus  
1974 - 1980 Muun kemian teollisuus,  
Helsingin kauppakorkeakoulu, Laskentatoimen pro gradu,  
1982

Statistical Yearbook of Finland

Central Statistical Office of  
Finland, Helsinki 1983

Sveriges Offentliga Utredningar

Effekter av investeringar utomlands.  
En studie av sex industrier  
1981:33 Stockholm

SOU

Internationella koncerner i industriländer.  
Samhällsekonomiska aspekter,  
1975:50 Stockholm

Södersten Bo

Internationell ekonomi, Stockholm  
1969



- Teollisuustilasto  
Central Statistical Office of  
Finland, Helsinki 1982
- Tugendhat Christopher  
De multinationella, Falköping 1972
- Ulkomaisten investointien neuvotte-  
lukunta  
Yrityksen perustaminen Suomeen,  
Helsinki 1981
- Weber  
Über den Standort der Industrie  
1909
- Wilson J.S.G. and Scheffer C.F.  
Multinational Enterprises, Finan-  
cial and Monetary Aspects,  
Sijthof-Leiden 1974
- Wohlert K.  
Framväxten av svenska multinationio-  
nella företag. En fallstudie mot  
bakgrund av direktinvesterings-  
teorier. Alfa-laval och separa-  
torindustrin 1876 - 1914, Uppsala  
1981
- Yearbook of Nordic Statistics  
Nordic Statistical Secretariat  
Vol. 22, Stockholm 1984
- ARTICLES
- Aintila H. and Boldt P.J.  
Monikansallinen yritystoiminta ja  
Suomi. Työväen Taloudellisen Tut-  
kimusseuran katsaus 1-1984
- Bollman Sven  
Sähkö- ja elektroniikkateollisuus,  
kilpailuvalttina teknologinen ke-  
hitys, Talouselämä 5/1981, p 20-22
- Dunning J.  
Oxford Bulletin of Economics and  
Statistics. Vol 41, 1979
- Forum för ekonomi och teknik  
24.8.1983 Det ekonomiska samar-  
betet behöver stimulans, 12/1983,  
p 12 - 13
- Kauppalehti  
8.12.1978 Ollila houkuttelisi ul-  
komaista pääomaa: vanhentuneet ra-  
joitukset poistettava pikaisesti,  
p 5

- Kauppalehti 9.11.1983 Länsi-Saksa haluaa uudet lääkepatentit, p 4
- Knudsen Olav Foreign Investment and Multinational Corporations in the Nordic countries, Co-operation and Conflict, Vol XV, 1980, p 211 -214
- Kojima International Trade and Foreign Investment: Substitutes or Complements, Hitotsubashi Journal of Economics, 1975
- Kulkki S. Foreign direct investment abroad and foreign direct investment in Finland in 1971-1981, Bank of Finland Monthly Bulletin, July 1981
- Nuortila R. and Jalas K. The Chemical Industry, Finnish Industry, Bank of Finland Monthly Bulletin 1982
- Poynter T.A. and Rugman A.M. World Product Mandates: how will multinationals respond, Business Quarterly Oct. 1982, p 54 - 61
- Rugman A.M. I A new theory of the multinational enterprise: internalization versus internationalisation, Columbia Journal of World Business, Spring 1980, Vol 15:1, p 23 - 29
- Rugman A.M. II Internalization Theory and Corporate International Finance, California Management Review, Winter 1980, Vol 23:2
- Rugman A.M. III Internalization theory and corporate international finance, California Management Review, Winter 1980, Vol 23:2, p 73 - 79
- Samuelson International trade and the equalisation of factor prices,



Suomen Pankki

The Economic Journal, June 1948  
Monthly Bulletin, Helsinki 1976,  
p 25

Summa Timo

The metal and engineering in-  
dustries, Bank of Finland Monthly  
Bulletin, Finnish Industry,  
Helsinki 1982, p 13 - 19

Talouselämä

Tanskalaispohja pysyy Suomessa  
30:1984, p 14

Tekniikka

Teollisuus myönteinen varauksin,  
13:1974, p 40 - 41

Tekniikka

Ulkomainen pääoma Suomessa, 13:  
1974, p 37 - 41

Tulokas H. and Nieminen J.

Finnish Industry: An overview,  
Bank of Finland Monthly Bulletin,  
Helsinki 1982

Vernon

The Product Life Cycle Hypothesis  
in a New International Environ-  
ment, Oxford Bulletin of Econo-  
mics and Statistics, Vol. 41, 1979

#### OTHER SOURCES

Hietala Kari

International operations, series  
of lectures at the Helsinki  
School of Economics, Spring 1982

Questionnaires and Annual Reports of

Oy Aga Ab  
Hoechst Fennica  
Siemens Oy  
Suomen Tupakka Oy

TUTKIMUS ULKOMAISTEN VALMISTUSTYTYTÄRYHTIÖIDEN ASEMESTA KONSERNISSA  
JA SUOMEN TALOUSELÄMÄSSÄ

## 1. TIETOJA KONSERNISTA

1.1 Emoyhtiön nimi

1.2 Emoyhtiön sijaintimaa

1.3 Konsernilla on tuotantolaitoksia (ympyröikää)

A 1 - 5 maassa

B 6 tai useammassa maassa

## 2. TIETOJA YRITYKSESTÄ

2.1 Yrityksen nimi

2.2 Yrityksen omistuksen jakautuminen<sup>1</sup>

Emoyhtiön osuus	_____ %
Muun konsernin osuus	_____ %
Muiden ulkomaisten sijoittajien osuus	_____ %
Suomalaisten sijoittajien osuus	_____ %

2.3 Yritys on ulkomaisen omistajan

A perustama

B aikaisemmalta omistajalta ostama

vuonna \_\_\_\_\_

2.4 Viennin osuus liikevaihdosta oli tuotannon kolmena ensimmäisenä vuonna keskimäärin \_\_\_\_\_ %

2.5 Yrityksen valmistus käsitti tuotannon kolmena ensimmäisenä vuonna

A tuotteiden koko valmistusprosessin

B osia valmistusprosessista

## 3. TIETOJA TOIMINNASTA

3.1 Miten seuraavat yrityksen tunnusluvut ovat kehittyneet

	1000 mk tai 1000 henkilöä			
	1970	1975	1980	1982
Liikevaihto				
Työntekijöiden keskimääräinen lukumäärä				
Toimihenkilöiden keskim. lukumäärä				
Käyttökate				

1 Omistuksella tarkoitetaan sijoittajan suoraa osuutta nimellisarvoisesta osake- tai osuuspääomasta.





- A Ei  
B On, vuonna/vuosina

3.6 Onko yritys suorittanut vuoden 1969 jälkeen tuotekehittelyinvestointeja?

- A Ei  
B On, vuonna/vuosina

3.7 Onko yritys ryhtynyt vuoden 1969 jälkeen valmistamaan uusia tuotelinjoja?

- A Ei  
B On, vuonna/vuosina

3.8 Onko yritys ottanut vuoden 1969 jälkeen valmistusohjelmaansa uusia tuotteita?

- A Ei  
B On, vuonna/vuosina

3.9 Onko yritys aloittanut vuoden 1969 jälkeen viennin uusille markkinoille?

- A Ei  
B On, vuonna/vuosina

3.10 Mitkä ovat kolme liikevaihdolla mitattuna merkittävintä yrityksen ja konsernin toimialaa?

- 1 = merkittävin  
2 = toiseksi merkittävin  
3 = kolmanneksi merkittävin

	Yrityksenne	Muut konserniyhtiöt
Elintarvikkeiden valmistus		
Juomien valmistus		
Tupakkatuotteiden valmistus		
Tekstiilien valmistus		
Vaatteiden valmistus		
Nahan, turkisten, laukku- yms. nahka- teosten valmistus		
Kenkien valmistus		
Puutavaran paitsi puukalusteiden valmistus		
Ei-metallisten kalusteiden valmistus		
Massan, paperin ja paperituotteiden valmistus		
Graafinen tuotanto, kustannustoiminta		





	Hyvin tärkeä	Tärkeä	Melko tärkeä	Vähäinen	Ei merk.
työnjako ja kaupankäynti					
5 Emoyhtiön taloudellinen tuki					
6 Emoyhtiön nimi ja image					

4.2 Miten seuraavien tekijöiden merkitys on muuttunut vuodesta 1970 lähtien?

	Merkitys		
	Kasvanut	Pysynyt ennallaan	Vähentynyt
1 Konsernin tekninen know-how			
2 Konsernin markkinointiknow-how			
3 Konsernin liikkeenjohdollinen know-how			
4 Konsernin jäsenten välinen työnjako ja kaupankäynti			
5 Emoyhtiön taloudellinen tuki			
6 Emoyhtiön nimi ja image			

4.3 Miksi konsernin merkitys yrityksellenne on muuttunut edellä mainittujen tekijöiden suhteen?

- 1
- 2
- 3
- 4
- 5
- 6

4.4 Yrityksen mahdollisuudet vaikuttaa omaan asemaansa konsernissa ovat

- A Suuret
- B Melko suuret
- C Melko vähäiset
- D Vähäiset
- E Yritys ei voi vaikuttaa asemaansa

4.5 Päätökset seuraavissa asioista tekee

	Emoyhtiö	Yrityksenne	Molemmat yhdessä
Laajennusinvestoinnit			
Tuotekehittelyn suuntaaminen			
Investointien rahoitus			
Muun toiminnan rahoitus			



	Emoyhtiö	Yrityksenne	86 Molemmat
Tuotelinjojen valinta			
Tuotteiden valinta			
Tuotantomenetelmät			
Henkilöstön valinta			
Strategiset markkinointipäätökset			

## 5. RAHOITUS

5.1 Rahoituslähteiden suhteelliset osuudet ovat kehittyneet seuraavasti

% kokonaisrahoituksesta

	1970	1975	1980	1982
Tulorahoitus				
Oman pääoman korotukset				
Lainat				
Pitkäaikaiset lainat				
Lyhytaikaiset lainat				

5.2 Pitkäaikaisista lainoista on nostettu

% kaikista nostoista

Suomesta

Ulkomailta

josta konsernista

	1970	1975	1980	1982
Suomesta				
Ulkomailta				
josta konsernista				

5.3 Lyhytaikaisista lainoista on nostettu

% kaikista nostoista

Suomesta

Ulkomailta

josta konsernista

	1970	1975	1980	1982
Suomesta				
Ulkomailta				
josta konsernista				

## 5.4 Yritys maksoi seuraavia maksuja

% liikevaihdosta

Välittömiä veroja

Lisenssi-,patentti-,royalty-ja  
muita know-how maksuja

1970	1975	1980	1982



## Appendix 9.2

*Finland's gross long-term foreign debt in 1980, by type of loan, mill. mk*

	Debt <sup>1</sup> Dec. 31, 1979	Draw- ings <sup>1</sup>	Re- demp- tions <sup>1</sup>	Net draw- ings	Impact of ex- change rates	Debt <sup>1</sup> Dec. 31, 1980	Interest, com- missions, dividends and bonus issues
Financial loans	28 194	4 722	3 246	+ 1 476	+ 60	29 730	2 628
Individual financial loans	12 608	2 686	1 883	+ 803	+ 191	13 602	1 378
Bank of Finland's reserve and oil credits	325	—	—	—	—	325	52
Bonds and debentures	15 586	2 036	1 363	+ 673	- 131	16 128	1 250
Bond issues	10 054	1 492	633	+ 859	- 12	10 901	836
Debenture issues	331	—	—	—	- 2	329	39
Deposit certificate loans	—	263	—	+ 263	+ 6	269	6
Private placement loans	4 943	281	664	- 383	- 120	4 440	354
Loans from the World Bank	258	—	66	- 66	- 3	189	15
Import credits	4 898	461	876	- 415	- 106	4 377	275
Ships and aircraft	1 968	226	425	- 199	- 68	1 701	133
Other import credits	2 930	235	451	- 216	- 38	2 676	142
Leasing credits	116	—	18	- 18	+ 4	102	8
Long-term credits	33 208	5 183	4 140	+ 1 043	- 42	34 209	2 911
Direct investment	1 979	193	89	+ 104	- 8	2 075	250
Equity capital <sup>2</sup>	1 484	165 <sup>3</sup>	20	+ 145	—	1 629	225 <sup>3</sup>
Loans to subsidiaries	495	28	69	- 41	- 8	446	25
Subscriptions <sup>4</sup>	184	96	42	+ 54	—	238	—
Gross long-term debt	35 371	5 472	4 271	+ 1 201	- 50	36 522	3 161

<sup>1</sup> The mark values of debt outstanding have been calculated by using the selling rates prevailing on the same date; drawings and redemptions have been calculated by using the average monthly selling rates.

<sup>2</sup> The direct investment equity debt is the total value of net investment by operating enterprises.

<sup>3</sup> Including bonus issues totalling 44 million marks.

<sup>4</sup> Subscriptions to international financial institutions paid up in the form of bonds.

Source: Unitas 1/1981

## Appendix 9.3

The shares of foreign-owned companies in manufacturing industry in some industrialised countries, per cent

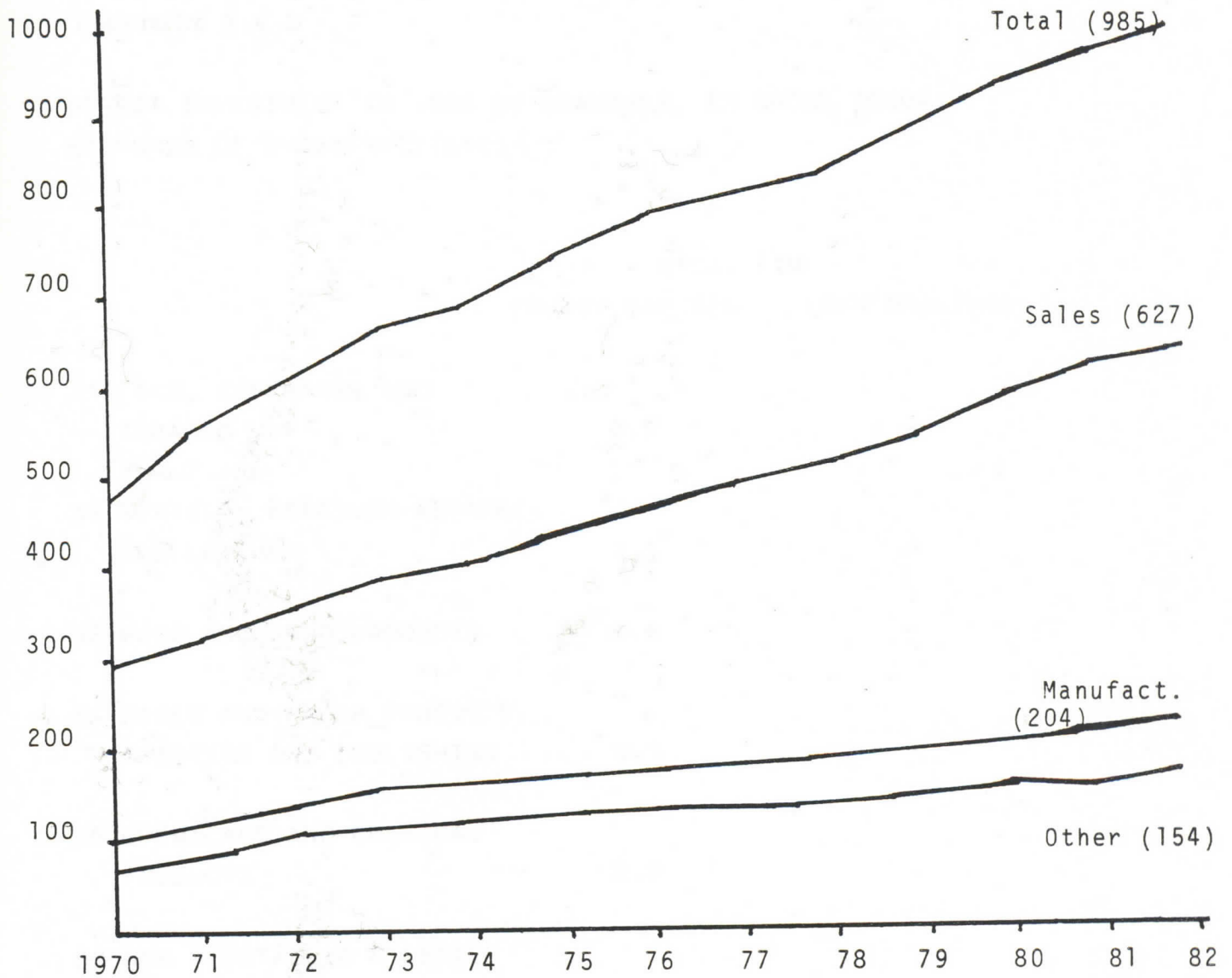
Country	Share of industrial work force	Share of industrial production	Year examined	Used definition (share of capital)
Canada	54,3	56,2	1975	50
Australia	23,6	28,7	1973	50
Austria	21,8	22,7	1976	50
France	19,0	27,8	1975	20
Italy	18,3	23,8 <sup>1</sup>	1977	50
West Germany	16,8	21,7 <sup>1</sup>	1976	25
Great Britain	13,9	21,2	1977	50
Norway	6,7	10,4	1977	50
Spain	-	11,2	1971	50
Sweden	5,4	8,0	1977	50
Denmark	-	8,0 <sup>1</sup>	1976	50
Finland	3,3	2,7	1972	50
Japan	1,8	4,2 <sup>1</sup>	1978	25

1 Turnover

Source SOU 1982:15



Foreign owned companies in Finland by sector



↓  
 Sales subsidiaries 63 %  
 Manufacturing s. 22 %  
 Other s. 15 %

Sales s. 64 %  
 Manuf. s. 21 %  
 Other s. 15 %



## Appendix 9.4 b

DIRECT INVESTMENT IN 1980 BY BRANCHES, IN GROSS TERMS  
BRANCHES OF INDUSTRY (ISIC)

	MILJ. FIM	
	EQUITY CAPITAL	LOAN DRAWINGS
31 FOOD, BEVERAGES AND TOBACCO	0.8	-
32 TEXTILE, WEARINGS APPAREL AND LEATHER	3.1	-
33 WOOD AND WOOD PRODUCTS	0.6	-
34 PAPER AND PAPER PRODUCTS, PRINTING AND PUBLISHING	6.3	-
35 CHEMICALS AND CHEMICAL PRODUCTS	8.2	-
36 NON - METALLIC MINERAL PRODUCTS	18.6	2.6
37 BASIC METAL	0.4	-
38 METAL AND ENGINEERING PRODUCTS	44.7	2.1
3 TOTAL	82.7	4.7



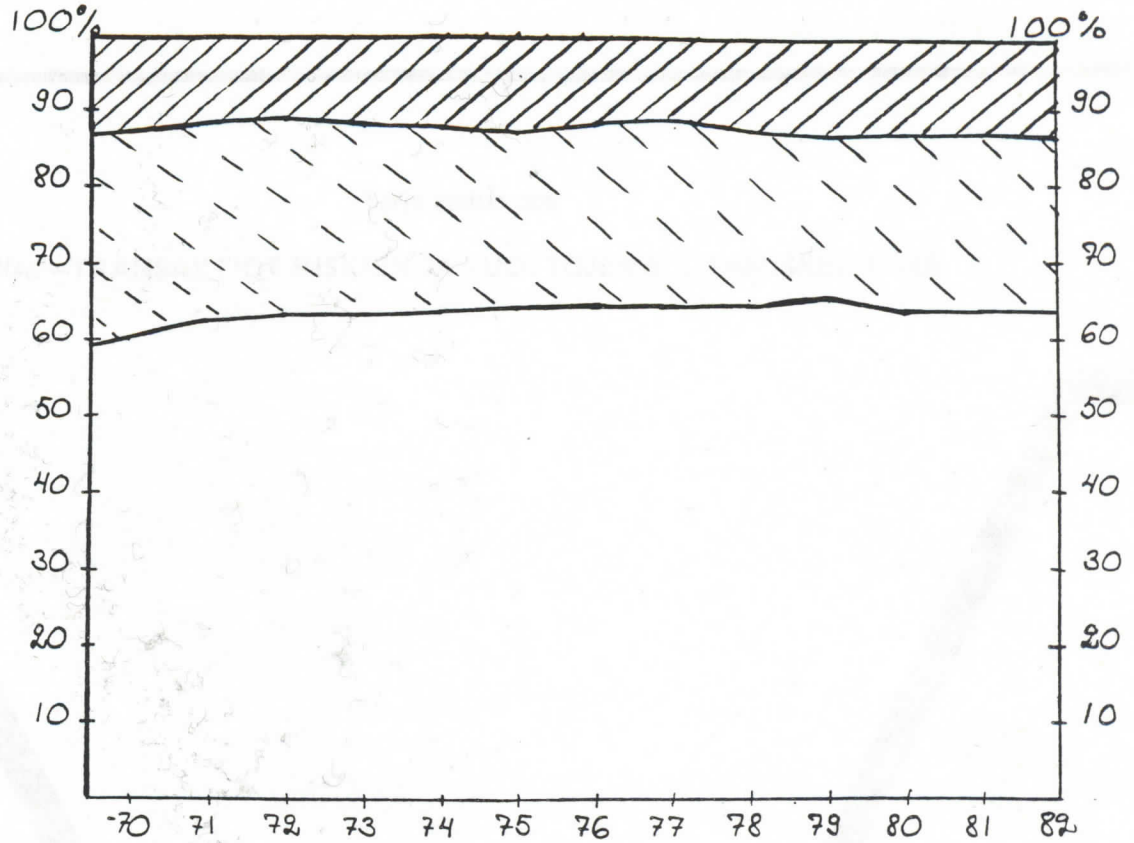
## Appendix 9.5

THE NUMBER OF FOREIGN MANUFACTURINGS SUBSIDIARIES<sup>1)</sup> IN FINLAND  
BY THE COUNTRY OF THE INVESTOR

	1970	1975	1980	1982
EFTA	70	118	133	139
EEC	24	37	46	47
OTHER COUNTRIES	12	13	17	18
TOTAL	106	168	196	204
SWEDEN				112
SWITZERLAND + LIECHTENSTEIN				21
DENMARK				19
USA				13
GREAT BRITAIN				10
FEDERAL REPUBLIC OF GERMANY				7
NORWAY				6
HOLLAND				4
BELGIUM + LUXEMBURG				4
FRANCE				3
OTHER COUNTRIES				5

1) FOREIGN SHARE OVER 20 % OF THE EQUITY CAPITAL

Appendix 9.6



Economic grouping of the major investor country

Source: Notifications of direct investment ( Bank of Finland )