

MULTINATIONAL PRODUCTION AND THE ROLE OF THE GOVERNMENT - WITH SPECIAL REFERENCE TO THE GERMAN CENTRE IN SINGAPORE

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Acronyms and Initials

AHK	German Chamber of Commerce and Industry Abroad
ASEAN	Association of South East Asian Nations
bfai	Bundesstelle für Außenhandelsinformation
DC	Developed country
DIHT	Deutscher Industrie- und Handelstag
EDB	Singapore Economic Development Board
e.g.	for instance
et al.	et alii (and others)
FDI	Foreign direct investment
GATT	General Agreement on Tariffs and Trade
GBA	German Business Association (Singapore)
GC	German Centre
GCIT	German Centre for Industry and Trade Pte Ltd, Singapore
i.a.	inter alia (and others)
i.e.	id est (that is)
JTC	Jurong Town Corporation (Singapore)
LDC	Less developed country
MNE	Multinational Enterprise
NIC	Newly industrialized country
NBER	National Bureau of Economic Research, Inc.
OECD	Organization for Economic Co-operation and Development
PAP	People's Action Party (ruling party in Singapore)
PM	Prime Minister
R&D	Research and development
S\$	Singapore dollar
SME	Small and medium-sized enterprise
TDB	Singapore Trade Development Board
UNCTAD	United Nations Conference on Trade and Development
VDMA	Verband Deutscher Maschinen- und Anlagenbau e. V.
WTO	World Trade Organization

I Introduction

*"Nature's way is to diminish excess and replenish deficiency to ensure a balance.
Society should abide by nature's way to ensure social harmony."
(Lao Zi)¹*

Ever since the successful start of the German Centre in Singapore in 1995, the concept is applied to many more countries, such as China, Mexico and India as well as Indonesia. This relatively new concept of supporting companies in exploring new markets has not been analyzed theoretically which will be the aim of this paper.

The theory of multinational enterprises² (with special emphasis on the government's role) seems to be the pertinent approach to explain the existence of a German Centre and conditions under which it will be successful. I will therefore start my paper with a theoretical treatment of the firm (Chapter II) and the multinational enterprise (Chapter III-V) followed by a description of the government's role in a firm's decision to engage in foreign direct investment (Chapter VI). After the presentation of the German Centre-concept and its realization in Singapore (Chapter VII), I will bring together theory and reality (Chapter VIII).

Due to restrictions in time and space, I am unable to provide a theoretical framework in which the German Centre is incorporated. Instead, I am confined to demonstrate within the existing theories where the German Centre may have an influence. Nevertheless, I strongly believe that the idea of the German Centre needs to be incorporated into existing theories since it has become an important instrument to promote trade and thus strengthens the competitiveness of German companies in the global economy.

I will further restrict my analysis to the host country government. This makes sense since, as will be seen later, the attitude of the host country towards foreign direct investment (FDI) is the one of the most important reasons for a company's decision to engage in transborder activities. In addition, the activities of multinational enterprises will be restricted to initial market-seeking FDI. I am perfectly aware that this is an oversimplification of reality since it implies the negligence of important features such as joint ventures, mergers and acquisitions as well as strategic alliances.

¹ In: Tsai Chi Chung (1996, p. 81)

² Although many authors distinguish between the terms "Multinational Corporation" (MNC), "Multinational Enterprise" (MNE) and "Transnational Corporation" (TNC), I consider them rather interchangeable. For this reason, the term "Multinational Enterprise" (MNE) will be used in this paper.

II The Existence of the "Firm"

"Magrathea is a myth, a fairy story, it's what parents tell their kids about at night if they want them to grow up to become economists ..."(Adams[1996], p. 88)

Ronald Coase's groundbreaking paper "The Nature of the Firm" (1937) sparked off the debate about the existence of firms, although it remained, in Coase's own words, "much cited and little used" for decades. It will be discussed briefly before the chapter will be rounded up with criticism and further developments of his ideas.

II.1 The Nature of the Firm

The question about the existence of firms may surprise many economists, since they are used to take economic units (like households and firms) for granted. These units are assigned to the economic framework for analysis without further explanation. The prevailing neo-classical theory treats the firm as a production function maximizing its profits. The firm is, however, more than a black box transforming inputs into outputs.

Coase's starting point is an economy marked by division of labor, in which individual decisions must be coordinated. In traditional economic theory, this is done by the price mechanism that brings into accord all individual decisions. There are, however, circumstances in which the price mechanism fails (market failure).

According to Coase, the main reason for the existence of firms is that the use of the price mechanism involves some costs, which are today called "transaction costs". These arise from the transfer of ownership and include search costs to find out about the relevant prices and exchange partners as well as costs of negotiating and concluding contracts for each and every transaction carried out on the market.

In addition, he shows that because of the uncertain future, it may be desirable to conclude long-term "incomplete" contracts¹ with production factors. The notion of uncertainty is confirmed by Arrow (1974, p. 34): "There is one particular failure of the price system to which I want to stress, one that is absolutely central to the understanding of organizations. I refer to the presence of uncertainty."

¹ The advantage of such "incomplete" contracts is that they do not specify all activities by the employee in every possible circumstance. Instead, these contracts give the entrepreneur discretion to exercise power over the employee in return for financial compensation.

To sum it up, we conclude that the market does not operate costlessly. The existence of these transaction costs gives rise to an alternative way of directing resources - the firm. This means coordination by command rather than by price. The choice between the market and the firm depends on their relative efficiency properties.

Coase emphasizes, however, that there are organizational limits to the growth of the firm. As more and more transactions are coordinated within a firm, the costs of organizing an additional transaction rise (decreasing returns to the entrepreneur function). Secondly, the entrepreneur may not be able to direct resources to their best use as the number of transactions rises (entrepreneurial misjudgements). These marginal costs of organizing an extra transaction will rise with the spatial expansion of the firm and the greater diversity of the transactions involved.

To sum it up, Coase developed the formula "substitution at the margin" (1937, p. 387) defining the point of transition from the firm to the market or vice versa:

"At the margin, the costs of organizing within the firm will be equal either to the costs of organising in another firm or to the costs involved in leaving the transaction to be "organised" by the price mechanism." (1937, p. 404)

II.2 Criticism and further Developments

Although it is indisputable that Coase's paper initiated a new chapter in economics by opening the black box "firm", it is not without shortcomings and further developments. A brief discussion will follow below. For more details, I refer the interested reader to Williamson's comprehensive article on the modern corporation (1981b) as well as a compendium of recent contributions edited by Groenewegen (1996).

Alchian and Demsetz (1972) agree with Coase but consider his findings to be tautological. As long as the level of the transaction costs respectively their underlying factors are not identified, the formula "substitution at the margin" is without substance, i.e. it is unsuitable for predictive statements. Two of these factors have been identified as opportunism (due to asymmetric information) and bounded rationality. As a consequence, Williamson (1981a, p. 676) draws the conclusion that "[n]onmarket forms of organization thus arise in efforts to economize on bounded rationality while simultaneously safeguarding the transactions in question from moral hazards of opportunism."

Another objection raised against Coase's work is that he oversimplified reality by neglecting different forms of coordination such as partnerships or long-term contracts that go beyond the supply of goods and services. Additionally, other reasons may explain the evolution of the firm, such as the quest for monopoly power.

Williamson identifies three developments being central for the evolution of the modern corporation: multidivisional organization², conglomerates and multinational enterprises. He shows that the rise of MNEs is inseparably linked to the evolution of the M-form which can be explained by the transaction cost approach (1981b, p. 1561-1563).

II.3 Conclusion

This chapter was aimed at explaining the existence of firms. Although nobody would disagree that the firm is a very important and complex socio-economic institution, there is widespread disagreement on the underlying factors for its evolution.

Coase sparked off the debate about the "Nature of the Firm" with his ground-breaking paper providing the base for all subsequent developments. He was among the first to recognize that the use of the open market is costly. One way of economizing on such costly market transactions is the establishment of firms. Recent developments center around these "transaction costs":

"The general strategy out of which TCE³ works can be summarized as follows: After having characterized the transaction, the potential governance structures are discussed in terms of transaction cost minimizing capabilities" (Groenewegen [1996], p. 1).

² M-form means that a firm is comprised of a central office and semi-autonomous operating divisions. The former's task is strategic planning, allocating resources to and monitoring of these semi-autonomous operating divisions.

³ TCE = Transaction Cost Economics

III The Multinational Enterprise - An Empirical Assessment

*"Was die Weltwirtschaft angeht, so ist sie verflochten."
(Kurt Tucholsky [1960])*

"It fiddles its accounts. It avoids or evades its taxes. [...] It is run by foreigners, from decision centres thousands of miles away. [...] It overpays. It underpays. [...] It exports jobs from rich countries. It is an instrument of rich countries' imperialism. [...] Nobody can control it. [...] Let it bloody well go home." (The Economist [1976], p. 68)

"It" is, of course, the multinational enterprise. The goal of this and the following chapter is to "de-mystify" the phenomenon "MNE". For this reason, two main questions need to be answered: What facilitated the enormous rise of the MNE? What motives underlie the MNE-activities (FDI)?

III.1 Facts and Figures

The post-World War II world trade system is best described by the often misused catchword "globalization". The multinational enterprises and the process of globalization are inseparably linked to each other which will be demonstrated in this section.

III.1.1 Globalization

The world economy has undergone major changes, especially in the last 30 years. While the developed countries' industrial output increased by an annual average of 9%, their exports grew by 12% over the same period of time. The global integration received an extra boost in the 1980s when foreign direct investment increased by 30% annually.¹

In addition, on the societal and cultural level, a global orientation evolved manifesting itself in the rise of tourism, increased access to information from all over the world and the "natural" presence and use of foreign goods and services at home.

This comprehensive change towards an integrated world economy was made possible by major developments in the fields of transportation (such as the mass production of passenger planes) and communications (such as internet, e-mail, ISDN). These technological developments have led to a significant reduction of transportation costs for people, goods and services as well as money and information. As one consequence, global

¹ Source: Sherman (1996), p. 3

financial transactions were made possible which in turn led to a network of financial centers (New York, London, Frankfurt, Hong Kong, Singapore and Tokyo).

Additionally, reductions of trade restrictions internationally (e.g. GATT/WTO) and nationally (de-regulation of markets and privatization of firms²) have accelerated the process of integration.

As a consequence, the world has become a village where distances no longer play a role and the flow of goods and services around the globe takes place with no major restrictions. Ultimately, this leads to increasing competition in all sectors of the economy.

The process is usually referred to as "globalization" which the OECD (1992, pp. 210-211) defines as "the stage now reached and the forms taken to what is known as "international production" [...], namely value-adding activities owned or controlled by a firm (or group of firms) outside its (or their) national boundaries. It pertains to a set of conditions in which an increasing fraction of value and wealth is produced and distributed world-wide through a system of interlinking private networks. Large multinational firms (MNEs) operating within concentrated world supply structures and capable of taking full advantage of financial globalisation are the center of this process".

The definition provides several attributes of the globalization process including:

1. the evolution of networks and the rise of intra-firm trade,
2. the rise of MNEs,
3. evolution of oligopolistic market structures dominated by MNEs,
4. internationalization of firm strategies and
5. competition among countries for FDI

of which only the second attribute will be subject to further discussion.

To sum it up, the last 30 years brought about a shift from the primacy of politics over economics to the primacy of economics over politics. This means that the national and international institutional and political structures have not kept up with the pace of change in the world economic system.³

² The major privatizations in Germany in 1997 were Lufthansa and Telekom. By January 1, 1998, the telecommunication market in Germany is de-regulated.

³ The consequences are not subject of this paper.

III.1.2 The Rise of Multinational Enterprises

The previous section indicated that MNEs are part of the globalization process. This section will show that they are not only part of but also the driving force behind it. Despite their massive spreading during the last 30 years, it must be made clear that they have been around much longer. "Even in the late nineteenth century there were hundreds of TNCs in the manufacturing sector, while international business activities involving foreign direct investment (FDI) can be traced back to the Middle Ages in Europe" (Jones [1996], p. 3).

Multinationals have gained much attention during the last 30 years⁴ which is hardly surprising considering Table 1⁵ below:

FDI inflows, by host region and economy, 1984-1995 (Billions of dollars)							
Host region/ economy	1984- 1989 (Annual Average)	1990	1991	1992	1993	1994	1995
Total	115	204	158	168	208	226	315
Developed coun- tries	93	170	114	114	129	133	203
EU	38	97	77	80	74	64	112
Germany	1.8	2.7	4.1	2.4	0.3	-3.0	9.0
UK	14	32	16	15	14	10	30
USA	44	48	22	18	41	50	60
China	2.3	3.5	4.4	11	28	34	38
Singapore	2.2	5.6	4.9	2.4	5.0	5.6	5.3

Table 1: FDI-inflows

The average annual growth rate of FDI-inflows was 24.7% between 1986 and 1990 and 12.7% between 1991 and 1994. The developed countries are both the top investors and recipients of FDI. While (in 1995) 64% of all FDI inflows went to these countries, 85% (207 billion US\$) of FDI outflows can be traced back to the developed countries. Most of the in- and outflows take place between the Triad with 55% (172.5 billion US\$) respectively 79% (249 billion US\$).

According to the UNCTAD, there are 39.000 parent companies (MNEs) with 270.000 foreign affiliates. In 1995, these parent companies invested 2.7 trillion US\$ in their affiliates showing that the trend of going global continues.⁶ Additionally, in 1993,

⁴ In fact, the term "Multinational Enterprise" was not coined until the 1960s.

⁵ Source: UNCTAD (1996b), pp. 227-231; Exchange rate: 1 US\$ = 1,797 DM (January 26, 1998).

⁶ The enormous rise of FDI and MNEs prompted the OECD (1997) to work out guidelines.

intra-firm trade (internal market for member firms) accounted for approximately one third of total world trade (US\$ 1.6 trillion) that is twice as much as a decade ago.⁷

Taking a closer look at the development of Germany's foreign direct investment reveals that German companies have been following the international trend of going multinational. There are approximately 7000 German investors (MNEs) with 21 000 affiliates abroad employing more than 2.6 million people.⁸

In 1985, they invested 15 billion DM⁹ in setting up foreign affiliates or in partnerships with foreign companies. Ten years later, an all-time high (due to some major transactions) of 55 billion DM was reached while in 1996, another 42 billion DM were invested. Germany has remained the fourth largest investor among industrial countries with net investments of US\$ 138 billion between 1990 and 1995. Topping the list are the United States with US\$ 330 billion followed by Japan (US\$ 262 billion) and Great Britain (US\$ 150 billion). The biggest share of German FDI has traditionally been going to fellow industrial countries¹⁰ (about 83% of which 75% go to the EU) followed by the countries of Middle and Eastern Europe (9%) and developing countries (8%). The high-growth region of South East Asia attracts too little German FDI relative to its economic importance (approximately 2%¹¹ of total FDI).¹²

III.2 Motives for Foreign Direct Investment

The rise of MNEs and increased FDI is much debated, especially in Germany. Popular belief is that investing abroad results in an export of jobs. This section aims at shedding some light into the rather emotionally discussed aspect of FDI - the motives.

John Dunning, one of the pioneers in the study of MNEs, identifies four motives for foreign direct investment.¹³ These are natural resource seekers, market seekers, efficiency seekers and strategic asset seekers.¹⁴ Dunning (1993a, p. 56) states that it is "worth noting that in the early 1990s many of the larger MNEs are pursuing pluralistic

⁷ UNCTAD (1995), p. 192-193

⁸ Jungnickel (1996), p. 310

⁹ Source for all subsequent data: Deutsche Bundesbank: Monatsbericht August 1997, pp. 63-82

¹⁰ Derks/Halbach (1996), p. 25

¹¹ VDMA-Maschinenbau Nachrichten (07/97), p. 13

¹² For an excellent study on European companies in Asia, see Schütte (1997).

¹³ Dunning (1993a), p. 54-63

¹⁴ I will restrict my discussion of the motives to market-seeking since this will be further analyzed in later chapters of this paper.

objectives, and most engage in FDI that combines the characteristics of each of the above categories".

Market-seeking is the most important motive for MNE-activities (empirical proof follows below). Such activities are aimed at sustaining the supply of foreign markets with goods and services, exploring and entering new markets. Dunning distinguishes four reasons (apart from market size and growth as obvious ones)¹⁵ why companies engage in market-seeking FDI:

- Bandwagon investment (e.g. suppliers follow their customers abroad)
- Adjustment of the products to local preferences
- Transaction costs of local production may be less than those when exporting from home (e.g. through tariffs/quotas, transportation costs, import restrictions)
- Physical presence in markets also served by their (strongest) competitors

Nevertheless, Dunning (1993a, p. 59) draws the conclusion that "undoubtedly, the single most important reason for market-seeking investments remains the action of the host government encouraging such investment".¹⁶

Dunning's findings are confirmed by several studies¹⁷ conducted in recent years. In this section, I will focus on the study by the Bundesbank (1997) but it is worth noting that the other studies come to similar conclusions. In addition to Dunning's motives, the Bundesbank identifies the sluggish economy at home as a motive forcing domestic companies to expand abroad. The study concludes, that market-seeking or sales-oriented motives are predominant in a company's decision to invest in a foreign country.

The study found a direct correlation between German FDI and exports which indicates that companies expand abroad according to their sale strategies. Furthermore, the regional structure of German FDI is (mostly) identical with its export structure.¹⁸ These results indicate a sequential relationship between FDI and trade as outlined by the UNCTAD (1996b, pp. 75-81): Before firms engage in FDI, they begin their internationalization with exports followed by sales offices in the foreign markets. Eventually assembly lines or production facilities are set up to service the foreign market locally. Ul-

¹⁵ See Culem (1988) for a discussion of market size and growth as locational determinants for FDI.

¹⁶ This will be discussed in Chapter VI.

¹⁷ Westerhoff (1991), Jungnickel (1996), Bundesbank (1997), Derks/Halbach (1996), UNCTAD [1996b]

¹⁸ This indicates that a transfer of production to exploit cheaper labor (i.e. exports of jobs) is not the prime object of FDI.

timately, these foreign affiliates may start exporting. This is confirmed by the econometric analysis:

"... an average increase of German exports of goods and services of 1% over the last 20 years is ceteris paribus linked to an increase of German foreign direct investment of about 2%." (Bundesbank [1997], p. 68)¹⁹

Apart from sales-oriented motives, cost factors play an increasingly important role in the decision to engage in FDI. A relative increase in the production costs may urge a company to relocate production facilities abroad. The most important cost factor is, of course, labor cost. In addition, there is an indirect link between FDI and domestic taxation since higher taxes may lead to higher costs²⁰:

"... a deterioration of the competitiveness in price of 1% in the long-term average leads to an increase of German foreign direct investment of 2.5%." (1997, p. 70)²¹

Considering the facts and figures mentioned above, an engagement in FDI is most importantly motivated by market considerations (market-seeking) followed by cost factors. The popular claim that FDI leads to an export of jobs does not necessarily hold.²²

III.3 Conclusion

The process of globalization has resulted in a dramatic change in the world economic system. In the course of the past fifty years a shift has taken place from the primacy of politics over economics to the opposite. Technological developments in the fields of transportation and (tele)communications as well as major reductions of trade restrictions internationally and nationally have facilitated that change.

Multinational enterprises have been both part of and the driving force behind this process. There are several motives responsible for MNE-activities of which market and asset-seeking²³ are the most important. Although they have been around for much longer, they have become the center of attention only in the last 30 years due to their extraordinary rise. The academic treatment will follow in the next chapter.

¹⁹ Own translation

²⁰ Indirect due to multiple factors (see Bundesbank [1997], p. 70).

²¹ Own translation; See Culem (1988) for an additional confirmation of this finding.

²² For a comprehensive and detailed discussion, see the studies mentioned above.

²³ According to UNCTAD (1996b, p. 7), asset-seeking is on the rise.

IV The Multinational Enterprise - A Theoretical Assessment

*"Coincidence is a man-made illusion trying to explain the magic of life."
(Delgado)*

The previous chapter showed impressively the rise of MNEs in the past 30 years. Although the motives for FDI are identified, some basic questions remain: Why do MNEs exist at all? Why would a firm engage in FDI instead of exports or licensing? Why would a firm locate some of its production sites in one country rather than another?

It is apparent from these questions that the MNE is a very complex issue. Each question requires a different approach. Thus, it is no wonder "that there is no one correct explanation of international production, only a correct answer to particular questions, each of which may help us to complete a jigsaw of understanding about the pattern of ownership and location of firms outside their national boundaries" (Dunning [1993b], p. 4). Consequently, this chapter will limit its theoretical discussion to Dunning's "Eclectic Paradigm of International Production" as the only general framework to this date.¹

IV.1 Definitions

The number of MNE-definitions is probably as big as the number of authors treating this subject. There seems to be, however, widespread agreement for the following one:²

A MNE owns or controls valued-added activities in two or more countries. It is called horizontally integrated if it produces the same line of goods in several geographically dispersed locations.³ Vertically integrated MNEs produce an output serving as an input in another plant located in a different country. The usual mode of ownership and control is by FDI whereas other modes include cooperative alliances with foreign firms.

In addition, **foreign direct investment** is defined as an export of capital by domestic companies to a foreign country in order to set up production facilities. This, deliberately narrow, definition does not include investments in joint ventures and such which is in line with my restrictions set in Chapter I.

¹ For a political explanation of FDI, see Brewer (1992), pp. 114-116.

² Source: Dunning (1993), p. 1, Markusen (1995), p. 170 and Horstmann/Markusen (1987b), p. 110

³ A MNE with a corporate headquarter "producing" firm-specific assets (see below) is also considered horizontally integrated.

IV.2 Theories

In my opinion, it does not make much sense to provide an overview of all research strands referring to MNEs in this paper. First of all, my concern is only one aspect of MNE-activities and secondly, several authors already give detailed overviews in their books⁴. Instead I will limit my discussion to the so-called "Eclectic Paradigm".

IV.2.1 The Eclectic Paradigm of International Production

It seems appropriate to start off this section with a definition of the Greek term **eclectic**. Literally translated, it means "selective". In addition, there are two definitions for an **eclectic**. The first refers to a person without own thoughts while the second refers to a philosopher who selects most suitable components out of different systems to form his own system. I personally opt for the second definition not only because it fits the eclectic paradigm of international production laid out by Dunning but it seems the appropriate philosophy when writing a master thesis.

Dunning's paradigm is eclectic in the sense that it draws from and unifies all major research strands that have evolved in various MNE-related theories over the past thirty years. These are in particular the industrial organization theory (based on Hymer [1976]), the theory of the firm (see Chapter II) and the theories of trade and location.

While the industrial organization theory explains the nature of advantages arising from firm-specific assets, the theory of the firm provides the instruments to analyze the benefits from internalizing these advantages. Last but not least, the theories of trade and location explain why a specific location is chosen to host the production facility.⁵

The convergence of the above mentioned fields of economic theory was the aim of Dunning's research. According to him, the eclectic paradigm represents the nexus between the microeconomic theory of the firm and the macroeconomic theory of international trade. Dunning's goal was to develop a general framework for various MNE-activities and their impact on the home and host country. Following the second definition of an eclectic, he identifies three key features having their origins in the three research strands:

- O(wnership)-advantages derived from the theory of industrial organization

⁴ See, e.g. Dunning (1993a) and (1993b).

⁵ For a more detailed discussion of the origins of the eclectic paradigm, see Dunning (1993a), pp. 76-85.

- L(ocation-specific)-advantages extracted from the theories of trade and location.
- I(nternalization)-advantages based on the theory of the firm

IV.2.1.1 O-advantages

The O-advantages hold the key to the answer of the question what facilitates a firm's multinationality. They can take various forms ranging from intangible assets (such as patents and technology) to management skills and reputation as well as innovations. In addition, these advantages may have their roots in the corporate culture and the company's manpower. They can be self-generated⁶ or acquired⁷. As a result, these firm-specific advantages compensate the MNE for its inherent disadvantages (in terms of language, culture, knowledge about the market) relative to local firms.

The advantages of these assets are based on their capabilities to generate scale economies or reduce transaction costs within or outside the firm. Markusen (1995, p. 174) comes to the conclusion that there are two main reasons why the O-advantages give rise to FDI (i.e. MNE-activities). Firstly, the easy transfer to another location (e.g. foreign affiliate) and secondly the (often present) characteristic of a public good⁸. The latter means that the asset can be used several times without reducing the productivity in its original use. As Markusen (1984) and Horstmann/Markusen (1988) have shown, the jointness aspect gives rise to multi-plant economies of scale. This is defined as a situation where two plants under common control produce the same amount of output less costly than two independent firms. This is because in the latter case, the firm-specific asset has to be created twice while in the former only once (joint input).

IV.2.1.2 L-advantages

The L-advantages provide the answer to the question why a company prefers one production site to another. These advantages favor, of course, both the home and host country. It is important to note that, in general, all companies have equal access to these advantages.

Apart from the market size, the most obvious L-advantage is country-specific factor endowment (inputs). These include natural, human or created resources (such as infra-

⁶ Many improvements in companies originate in ideas by its own employees ("Betriebliches Vorschlagswesen" and others) or through R&D efforts.

⁷ For example through the acquisition of another company or through technology transfer from research institutions.

structure). The environment in which the firm operates has a huge influence on its decision to engage in FDI. It is comprised of the political, social and judicial system as well as the government's attitude towards FDI. Furthermore, culture and language are also part of the L-advantages. It is obvious that companies wishing to engage in FDI are in need of up-to-date country-specific information (provided, e.g., by a German Centre).

IV.2.1.3 I-advantages

The I-advantages are based on the theory of the firm and thus on Chapter II of this paper. They resolve the question why a firm would want to engage in FDI as opposed to alternative forms of servicing a market, notably exports and licensing.

Internalization arises when it is advantageous for a company to exploit its own assets (O-advantages) or the L-advantages of the host country internally. There are multiple reasons for internalizing transactions, most importantly market failure. Dunning (1993a, p. 78) identifies two types of market failures:

- Structural market failure (like entry barriers) and
- Transactional market failure (see Chapter II).

Another reason is safeguarding the supply of a crucial resource (or an intermediate product) by backward (or forward) integration. As a consequence, the inability of the market to organize a satisfactory deal between potential contractors and contractees is the reason why a firm engages in internalization and thus becomes multinational.

Some authors, namely Williamson (1981b) and Rugman (1980) consider the internalization theory sufficient enough to explain the emergence of MNEs.⁹ No doubt, internalization is the foundation of the MNE's emergence for what use is a superior asset (O-advantage) if the firm is neither capable nor willing to embody or exploit them in additional activities. There must be an incentive to internalize. Nevertheless, I strongly believe that an issue as complex as MNEs cannot be explained by just internalization.

⁸ A public good is characterized by non-rivalry in consumption (individual consumption is independent of the consumption by others) and non-excludability from consumption, irrespective of one's personal contribution. If both characteristics are satisfied we talk about a "pure" public good.

⁹ See also Section IV.2.3 for further criticism concerning the eclectic paradigm.

IV.2.2 OLI-predictions

The eclectic paradigm can be used to predict all combinations of foreign engagement and the pattern and extent of production at home and abroad. These predictions are summarized in the following table:¹⁰

foreign engagement	Advantages		
	ownership	internalization	location-specific
foreign production (FDI)	yes	yes	yes
exports	yes	yes	no
licensing	yes	no	no

Table 2: OLI-predictions

Teece (1986, p. 27) comes straight to the point when he concludes that "*the multinational enterprise and foreign direct investment represent a response to high transaction costs by firms with unique assets/capabilities which have value when utilized in production facilities located in foreign markets*".

IV.2.3 Critique of the Eclectic Paradigm

Although Dunning's approach is highly appealing because of its integration of major strands of economic theories and its plausible and comprehensive conclusions, significant criticism has emerged.

In his critical assessment of the eclectic theory, Itaki (1991) demonstrates that internalization and location-specific advantages are sufficient enough to explain the existence and growth of MNEs. The redundancy of the ownership advantage "originates [most importantly]¹¹ from the internalization and integration in the sense that they acquire and exploit the ownership advantages" (p. 457).¹²

Macharzina/Engelhard (1991) consider Dunning's approach a robust framework but insufficient to explain comprehensively international business activities. First of all, it is based on the perfect decision-maker (homo oeconomicus) which is more a recommendation than a fact of life.¹³ Secondly, the "most striking problem [...] seems to be its lack of combining causal connections which would cross-relate the relevant variables and their characteristics with the different types and problems of international business activities

¹⁰ Source: Dunning (1981), p. 32

¹¹ Note from the present author.

¹² For a complete line of argument, see Itaki (1991).

¹³ A fact that Aharoni (1966) had already clearly recognized.

[...]. There is an obvious problem of causality. What is offered instead is a juxtaposition of many variables, added up like a list or scheme" (p. 28).

This criticism should not be seen as a rejection of Dunning's approach rather as constructive contributions to its future refinement and development.

IV.3 Conclusion

This chapter started off with three basic questions, all calling for a separate answer but only their combination was able to "de-mystify" the multinational enterprise. The industrial organization theory explains the existence of firm-specific assets that are prerequisites for cross-border engagements since they give rise to advantages over local competitors. These O-advantages do not, however, explain why a firm should engage in FDI instead of using contractual arrangements. The theory of the firm, in turn, explains why a company would want to exploit these O-advantages internally (if it is willing and capable).¹⁴ The O- and I-advantages do not explain a company's decision in favor of a production location over another. The theory of trade and location provides the necessary framework to answer this question.

I deliberately limited the theoretical discussion to Dunning's eclectic paradigm because it is the only general framework for determining the reasons for the emergence of multinational enterprises and their activities.

¹⁴ See Chapter V of this paper.

V The Relationship between Trade and FDI

"You don't need to travel to some illusory world to find the principles of life: Just pay attention to the details of life and experience them. When you begin to doubt, an answer is most likely found where the question begins."

(Qianfeng)¹

This chapter will depict a "typical" way of (manufacturing)² companies on their way to multinationality. It is based on the "Sequential Relationship between Trade and FDI" as identified by UNCTAD (1996b, p. 75-81) that is well in line with the empirical data and findings (see Chapter III).

Each step will be treated theoretically in separate sections with the aim of demonstrating what motives lead to the emergence of MNEs. In the course of the sections to come, I will answer the following questions: Why do companies wish to become multinational? Why would a firm engage in FDI to explore new markets? Finally, why would a firm prefer to build a production site (FDI) in the explored market?

V.1 A simplified Version of the Sequential Relationship

The sequential relationship³ is certainly firm- and industry-specific but the sequence represents the usual way of manufacturing companies to become multinational.⁴

Traditionally, the domestic market is the prime object of a firm's strategy. The foreign market does not enter the entrepreneur's mind, although occasional exports may occur. Once foreign markets gain importance (e.g. because of a sluggish home economy), the preferred mode of servicing the foreign market is at arm's-length through local or international agents. Trade is considered less risky and costly than FDI.

Exports are usually followed by licensing agreements for the production of the product sold in the foreign market. Once the company has enough information and experience with the foreign market, it starts setting up assembly lines and eventually production sites. Thus, it starts to engage in FDI to service the foreign market. The internationalization is complete if the foreign affiliate begins to export to other countries (e.g. an affiliate in Singapore starts to service South East Asia).

¹ In: Tsai Chi Chung (1994), p. 135

² I chose manufacturing companies for two reasons. Firstly, manufacturing is, despite the rise of the service industry, still the most important sector in the world economy. Secondly, most companies in the German Centre (Singapore) are in manufacturing.

³ See Appendix B for more details.

⁴ Buckley (1989, pp. 28-30) terms this process "The Evolutionary Approach: Internationalisation".

Each step represents a deepening commitment to the foreign market. Additionally, each intermediate step enables the firm to engage in a learning process (about the market and country) and provides an exit-option in case of failure.

V.2 Exploring New Markets - Modes of Entry

Once a company is faced with the challenge of going multinational (i.e. exploring new markets), it must decide on the mode of entry. There are two options to choose from. The first one involves contractual arrangements (local agents) while the second one involves foreign direct investment (setting up own sales offices), i.e. internalization.

V.2.1 Local Agent versus Owned Sales Operations

This model is based on two papers by Horstmann and Markusen published in 1992 and 1996. The question to be answered is why a company would choose to engage in FDI instead of an arm's-length arrangement. The most obvious answer is that the use of a local agent involves costs that are higher than those when setting up own sales offices.

The firm is assumed to have insufficient experience with servicing foreign markets. Additionally, it is uncertain about the size and growth potential of the targeted market. The agent, however, possesses these information since he is familiar with the market. Thus, the firm's optimal strategy is straightforward. It will offer a one-period contract to find out through the agent's sales if demand is high or low. In the former case it will engage in the costly set-up of its own sales office (i.e. dumping the agent) while in the latter case the MNE will renew the agent's contract indefinitely.

This strategy creates a moral hazard problem for the agent. If he reveals that sales are high, his contract will not be renewed after that period. As a consequence, he may be better off claiming that sales are low and thus receiving lower transfers (= earnings) from the MNE over a longer period of time. Consequently, the MNE is confronted with the following decision problem:

"The choice for the multinational then turns on whether the savings that result from learning about the market through the agency arrangement are more than dissipated by the agency costs that the contract produces" (1996, p. 2).

V.2.1.1 *The Foreign Sales Model (Reference Model)*

The firm (MNE) is situated in country 1 (home country) where it produces the well-established product X. The need to explore and enter country 2 (foreign country) brings about the decision between the local agent and its own sales office.

The local agent has, as opposed to the MNE, superior information about the market size N_i that can take two forms: N_1 and N_2 with $N_1 < N_2$. The MNE knows, however, the distribution of values for N_i : $N_i = N_1$ with $0 < \rho < 1$.

The actual number of customers for X is determined by the agent's or MNE's sales effort (e). It is assumed to be proportional to the potential customer pool and thus takes the form $n_i = q_i = e \cdot N_i$ with $0 \leq e \leq 1$ for the agent and $n_i = \alpha \cdot e_m \cdot N_i$ with $\alpha \leq 1$ or $\alpha \geq 1$ for the MNE. The proportionality implies that an increase in effort generates a bigger increase in n_2 than in n_1 which means that it is in the interest of the MNE if more sales effort are undertaken in case of N_2 ($q_2 > q_1$).

This sales effort incur costs on the agent being described by a strictly convex cost function: $C = c(e)$ with $c'(0)=0$, $c'(e)>0$ and $c''(e)>0$. It will be convenient to make an assumption about the cost function: We assume that $c'(q/N_1) > c'(q/N_2)$ for all values of q . It follows that for any two levels of q_i with $q_2 > q_1$, we must have $c(q_2/N_2) - c(q_1/N_2) < c(q_2/N_1) - c(q_1/N_1)$. This assumption is called "single-crossing property"⁵ because it implies that any indifference curve for N_1 crosses any given indifference curve for N_2 just once.⁶

If the MNE decides to engage in FDI and open its own sales office, it has to bear one-time set-up costs of $G \geq 0$ and per-period fixed costs of $F \geq 0$. Otherwise, if the local agent is employed, the MNE needs to pay him the lump-sum of $R \geq 0$ for adding X to his product line and covering his opportunity costs for accepting the contract.

Together with the simplifications that both the local agent and the MNE are risk-neutral and the MNE is a monopolist in the foreign country, we return to the original decision problem - local agent versus sales office.

V.2.1.2 *One-period Choice*

The agent maximizes his utility U depending on the MNE's transfer (w) and his sales effort costs. This must equal the lump-sum R and takes the following form:

⁵ See Varian (1992), p. 457

⁶ The "single-crossing property" is not explicitly used in Horstmann/Markusen (1992, 1996) but rather implicitly assumed.

$$(1) U = w - c(e) = R \text{ with } c'(e) > 0 \text{ and } c''(e) > 0.$$

Sales in the foreign country can take two forms ($q_i = e \cdot N_i$). The price of output is normalized to one. As a consequence, the MNE maximizes its own profits depending on the mode of entry:

$$(2) \pi^a = (q - w) \text{ in case the agent is employed, respectively}$$

$$(2') E\pi^a = \rho (q_1 - w_1) + (1 - \rho) (q_2 - w_2) \text{ which represent expected profits or}$$

$$(3) \pi^m = (q - G - F) \text{ in case of MNE's own sales office.}$$

The MNE will offer a contract which is comprised of a set (w_i, q_i) depending on the sales by the local agent. The optimal contract is thus described by a pair (w, q) which maximizes the MNE's profits while simultaneously satisfying the agent's incentive compatibility (IC) and individual rationality (IR) constraints. The IC-constraint guarantees that the agent is acting according to the market size while the IR-constraint ensures the participation of the agent. The maximization problem can be written as follows:

$$(4) \quad \begin{aligned} & \max_{w_1, w_2, q_1, q_2} E\pi^a = \rho (q_1 - w_1) + (1 - \rho) (q_2 - w_2) \\ & \text{subject to} \quad \text{IC}_1: w_1 - c(q_1/N_1) \geq w_2 - c(q_2/N_1) \\ & \quad \quad \quad \text{IC}_2: w_2 - c(q_2/N_2) \geq w_1 - c(q_1/N_2) \\ & \quad \quad \quad \text{IR}_1: w_1 - c(q_1/N_1) \geq R \\ & \quad \quad \quad \text{IR}_2: w_2 - c(q_2/N_2) \geq R \end{aligned}$$

Total differentiating of (2) results in the slope of the MNE's iso-profit curves which is 1: $d\pi^a = 0 = dq - dw$ leads to $dw/dq = 1$. The same applies to equation (1). Total differentiation produces the slope of the agent's indifference curve: $dU = 0 = dw - c'(e) \cdot 1/N_i \cdot dq$. This leads to $dw/dq = c'(e) \cdot 1/N_i$. Since $c'(q/N_1) > c'(q/N_2)$, the indifference for N_2 is flatter than for N_1 .

The maximization problem is solved diagrammatically below while the formal confirmation of the results will follow in Appendix C.

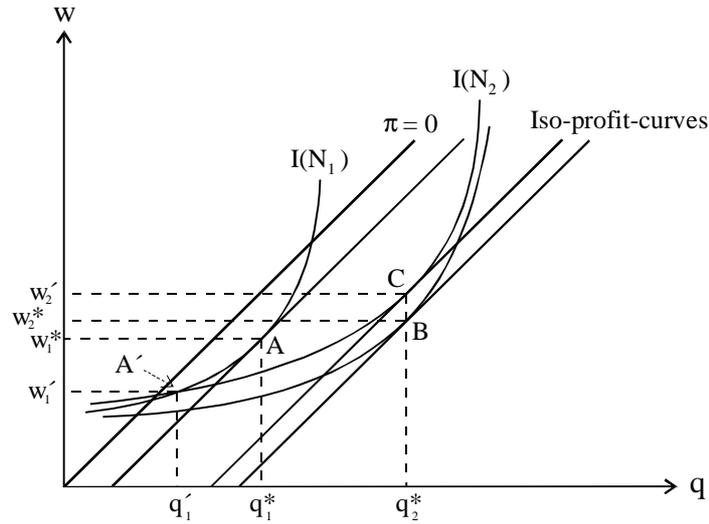


Figure 1: Maximization Problem

The optimal (full information) contract for the MNE is (w_1^*, q_1^*) if sales are low (point A in Figure 1) and (w_2^*, q_2^*) if sales are high (point B). It is obvious from Figure 1 that if $N_1 = N_2$ the agent has no incentive to produce q_2^* since his utility is higher if he chooses contract (w_1^*, q_1^*) . The findings can be summarized as follows:

A: (w_1^*, q_1^*)	$U_1 = R$	$U_2 > R$
A': (w_1', q_1')	$U_1 = R$	$U_2(w_1^*, q_1^*) > U_2 > R$
B: (w_2^*, q_2^*)	$U_1 < R$	$U_2 = R$
C: (w_2', q_2^*)	$U_1 < R$	$U_2 = U_2(q_1^*, w_1^*) > R$

Consequently, the optimal contracts for the MNE under asymmetric information are points A' and C with $w_1 < w_2$ and $q_1 < q_2$. This solution implies, however, that the agent can extract some information rent from the MNE amounting to $(w_2' - w_2^*)$. The MNE's aim is to minimize this information rent. This can be accomplished by reducing the amount of q_1 and w_1 (keeping $q_2 = q_2^*$)⁷ in a way that its expected profits at the margin and the utility of the agent facing N_1 remain unaffected. The reduction in q_1^* makes this contract less attractive to the agent facing N_2 since his indifference curve is flatter. This implies that IR_1 and IC_2 must be satisfied (binding).

Now that the optimal contracts are determined, the initial question needs yet to be answered. What is the optimal strategy to explore a new market? - To find an answer, the

MNE must compare the agency costs with its own costs of setting up a sales office. It is faced with a trade off between an inefficient outcome q_1' and paying information rent if $N_1=N_2$ (agent) and its own sunk cost of $F+G$ (sales office). This trade off is especially crucial if $\alpha=1$ and no specific answer can be given. If the MNE's sales office is more efficient than the local agent ($\alpha>1$) entry by FDI is more desired. The opposite is true for the inefficient sales office ($\alpha<1$).

V.2.1.3 The Multi-Period Choice Problem

I termed the above model "reference model" because it can be applied to the a multi-period setting. This section will clarify when the MNE prefers FDI to a contractual arrangement because the multi-period model allows the firm to offer contracts of different lengths which makes an initial use very attractive. The MNE will offer a one-period contract to learn about the market. If sales are high, the agent will be dumped while at low sales, the contract will be renewed indefinitely.

The contract in this setting is thus characterized by a triple (q_i, w_i, T_i) where T_i is the last period in which the contract is in force. It can be shown⁸ that IR_1 and IC_2 must be binding, so that the maximization problem⁹ can be written as:

$$(a) \max \rho \left[\sum_{t=0}^{T_1} (q_1 - w_1) \delta^t + \delta^{T_1+1} \{ \pi_1 / (1 - \delta) - G \} \right] + (1 - \rho) \left[\sum_{t=0}^{T_2} (q_2 - w_2) \delta^t + \delta^{T_2+1} \{ \pi_2 / (1 - \delta) - G \} \right]$$

by choice of $w_1, w_2, q_1, q_2, T_1, T_2$

$$\text{subject to } IR_1: \sum_{t=0}^{T_1} [w_1 - c(q_1/N_1)] \delta^t + \sum_{t=T_1+1}^{\infty} R \delta^t \geq R / (1 - \delta)$$

$$IC_2: \sum_{t=0}^{T_2} [w_2 - c(q_2/N_2)] \delta^t + \sum_{t=T_2+1}^{\infty} R \delta^t \geq \sum_{t=0}^{T_1} [w_1 - c(q_1/N_2)] \delta^t +$$

$$\sum_{t=T_1+1}^{\infty} R \delta^t.$$

This means that the values of q_i remain the same as in the single-period setting and the values of w_i will be determined so that IC_2 and IR_1 are satisfied. More interesting are the values of T_i . Differentiating the Lagrangean function with respect to T_i gives:

⁷ The MNE is interested in keeping q_2 at the level q_2^* since N_2 is the bigger customer pool. A deviation from the optimal q_2^* is more costly for the MNE than a deviation from q_1^* . Additionally, the aim is to make the N_1 -contract less attractive so that the agent facing N_2 will choose the corresponding N_2 -contract.

⁸ This will not be done since it does not give any additional insights. See also V.2.1.2.

$$(b) \quad \partial L / \partial T_1 = \{ \rho(q_1 - w_1 - \pi_1) + (1 - \delta)G \} - \lambda_2 [w_1 - c(q_1/N_2) - R] \\ + \lambda_1 [w_1 - c(q_1/N_1) - R] \} \delta^{T_1+1}$$

$$(c) \quad \partial L / \partial T_2 = \{ (1 - \rho)(q_2 - w_2 - \pi_2 + (1 - \delta)G) + \lambda_2 [w_1 - c(q_1/N_1) - R] \} \delta^{T_2+1}$$

Since q_i and w_i are independent of T_i the optimal value of T_i is either 0 or infinite. With the previously determined values of $\lambda_2 (=1-\rho)$ and $\lambda_1=1$ as well as with $q_1=q'_1$ and $q_2 = q^*_2$ (b) and (c) can be rearranged to:

$$(b') \quad \rho \{ (q_1 - c(q_1/N_1) - R) - (\pi_1 - (1 - \delta)G) \} - (1 - \rho)[c(q_1/N_1) - c(q_1/N_2)]$$

$$(c') \quad (1 - \rho)[(q_2 - c(q_2/N_2) - R) - (\pi_2 - (1 - \delta)G)]$$

Equation (c') reveals that $T_2 = 0$ if $\pi_2^a < \pi_2^m$ and infinite if $\pi_2^a > \pi_2^m$. The former case applies to (b') but it is not guaranteed that T_1 is infinite. This is true "because an increase in T_1 results in an increase in the information rent that must be paid to the agent to induce self-selection when $N_1 = N_2$ " (1996, p. 11). So, the only variable left to be determined is w_2' . It must be set in such a way that IC_2 is satisfied in conjunction with the firm's desire that the agent reveals the true size of the market. This implies that the MNE may have to "buy" itself out of a long-term contract by offering high information rents, possibly above the level in point C (Figure 1) implying negative profits in the first period.

Horstmann and Markusen (1996, pp. 13-18) go on by analyzing the effects of FDI-costs and profit variability on the decision about the mode of entry. I do not see the need to go into detail since the formal treatment "just" confirms the intuition described in this chapter's introduction.

V.2.2 Conclusion

The decision between a local agent and owned sales operations (FDI) is a real-world problem for companies wishing to explore new markets (of which they have little information). In their (sequential) quest for multinationality, they are confronted with a principal-agent problem resulting in a trade off between agency costs and FDI-costs.

Economic intuition predicts that the MNE will use a short-term contract to gather information about the market size. This implies, however, that it may have to "buy" this short-term contract by offering high information rents to the agent in exchange for the

⁹ Where $\pi_i = q_i - c(q_i/N_i) - F$ represents the MNE's profit if it establishes its own sales office and δ' is the depreciation factor.

¹⁰ $\pi_i^m = \pi_i + (1 - \delta)G$ while $\pi_i^a = q_i - c(q_i/N_i) - R$

true revelation of the market size. The formal treatment by Horstmann and Markusen confirms the intuition that can be summarized as follows:

A contractual arrangement is more likely if sales are low, the MNE's sales efforts less efficient, the FDI-costs (F+G) high relative to R and the profit variability significantly. Otherwise, the company will internalize its sales efforts by establishing its own sales operations.

V.3 Local Production - The final Step

After systematic exports to service the targeted market, the set-up of assembly or production sites is next on the company's agenda. A pre-requisite is, of course, that the market size (demand) justifies and supports such an investment. Besides, other motives gain importance, such as proximity to customers and after-sales-services. Thus, it is not only an investment in production facilities.

Similar to the case of initial marketing (Section V.2.1) there are different possibilities for local production, most prominently own production and licensing. Before going into detail, the optimal timing of FDI needs to be addressed. As a consequence, the relevant question is not "if" but "when" and "how" FDI will take place.

V.3.1 Optimal Timing of FDI

Among the first theorists considering the optimal timing of FDI was Vernon. In his classical article (1966) he postulates the hypothesis that most products follow a life cycle from innovation to standardization. A company will engage in FDI if it is threatened to lose markets as the product matures (emergence of imitations by other firms). FDI is thus a defensive strategy aiming at capturing the remaining rents from the innovation by locating the production of the now standardized product to cheap-labor countries.¹¹

Although it is an appealing approach it is nevertheless a child of its time. It explains the rise and domination of US multinationals after World War II. In today's economic system this approach may still be able to explain trade and FDI-patterns between developed and developing countries. Vernon's product cycle fails, however, to explain trade and FDI among developed countries. Today FDI is an aggressive strategy aiming at en-

¹¹ An excellent example is Volkswagen's Beetle which was first produced and sold in Germany, then exported to fellow industrial countries and is now produced in Brazil, Mexico and Nigeria. It was recently reintroduced with new technology and design.

tering new markets or asset-seeking. Additionally, countries actively seek FDI and access to new technologies.¹²

Buckley and Casson (1981) use a different approach to demonstrate the optimal timing of FDI. In their model, they distinguish between three modes of market servicing by their individual cost functions. As the market (demand) grows, switches between these modes take place, solely based on cost considerations. They apply the model to a decision problem between exporting, licensing and FDI. By assuming that each mode is efficient over a specific range of output, "the theory then predicts that the firm will begin by exporting, switch to licensing as market size increases, and then finally switch to FDI" (1981, p. 80). They extend their model to a dynamic cost reduction due to familiarization with the market leading to the obvious prediction that the firm will choose the mode with the lowest adjusted costs.¹³ Furthermore, the introduction of set-up costs does not change their findings but only result in a postponement between switches.

In my opinion, this approach neglects one important point. Although they emphasize that the question is not "if" but "when" FDI should take place, they do not include other motives (besides costs and market demand), such as principal-agent problems. Furthermore, it may be more profitable in the long-run to invest before the (cost-)optimal time in order to preempt future competition or secure market shares.

These strategic reflections are considered by Horstmann and Markusen (1987b). They use a model with firm-specific assets (O-advantages) and transportation costs or tariffs.¹⁴ Firm-specific costs and tariffs/transportation costs create an incentive for branch plant production (MNE) while the existence of plant scale economies suggests centralized production and exports. It is demonstrated that the MNE evolves endogenously because it is able to (partially) preempt local competition by opening a branch plant prior to the emergence of local competition (after the market demand grew large enough to support one or more host country plants). The important point is that the optimal timing of FDI is not solely based on market demand and costs (as in Buckley and Casson) but also on

¹² This will be discussed in Chapter VI.

¹³ The authors emphasize that this is only true if familiarization applies to the market in general.

¹⁴ They use transportation costs and tariffs interchangeably. It must be stressed, however, that they differ in many respects. A tariff is an intervention by the host country government while transportation costs can be considered transaction costs in the sense that they arise if a company participates in a market which is geographically separated from the production site. Additionally, tariffs render revenues to the state and may be subject to retaliation by the affected country.

strategic considerations (preemption of local competition in order to capture future monopoly rents). In this sense, Horstmann and Markusen extend the Buckley and Casson-model by strategic considerations. At this point, I would like to add more strategic considerations creating an incentive to engage in FDI - proximity to customers, after-sales services and commitment to the market. These, growingly important reasons suggest FDI not exclusively based on market demand and costs.

V.3.2 Mode of Local Production: Licensing versus Branch-plant Production (FDI)

The remaining question is now "how" local production should be organized - externally (licensing) or internally (FDI).¹⁵ Similar to the decision between a local agent and a sales office, the firm is now faced with a trade off between licensing and FDI. While FDI might be too costly, licensing bears the problem of opportunism by the licensee. Ethier and Markusen (1996) consider the problem of a firm with superior technology. If licensing is the mode of entry, the licensee may defect and become a local competitor once he has learned to imitate the technology.¹⁶ This creates an incentive for the use of FDI. In this section, I will present a different approach drawing upon earlier considerations.

V.3.2.1 Reputation Model - Full Information

This section is based on a paper by Horstmann and Markusen (1987a) in which they consider the case of opportunism by a licensee due to imperfect information on the product market. It is assumed that there is a good q with two possible types: a high-quality good q^h and a low-quality good q^l . The consumers cannot distinguish between the two prior to purchase. As a consequence, the firm must seek a reputation and transfer this firm-specific asset to the local producer. In reference to the model in Section V.2.1, I assume, that the firm has acquired this reputation through its exports.

Intuitively¹⁷, the problem is straightforward. The firm has an incentive to maintain its reputation while simultaneously extracting the returns on its reputation. If employing a li-

¹⁵ This decision problem reminds us of the first question of this paper: Why do firms exist at all?

¹⁶ Yanagawa (1994) points out that the papers so far have always assumed complete contracts. He considers this a first approximation and thus insufficient. His incomplete contract approach stresses the importance of the allocation of control rights in the presence of incomplete contracts.

Additionally, I want to stress that these papers have all neglected certain transaction costs which might alter the results. These include costs of searching the licensee and contracting costs (negotiations and monitoring) that create additional incentives for FDI.

¹⁷ I will not give a formal treatment but resort to a verbal line of argument. This is done because the formal treatment only confirms the intuition without shedding more light into the problem.

censee, parts of the returns must be transferred to him as an incentive to maintain the firm's reputation. FDI avoids this transfer and is hence preferred to licensing. On the other hand, however, the licensee may be more efficient than the branch plant.

It is assumed that the firm possesses a superior technology enabling it to produce q^h and q^l while the licensee can only produce q^l . So the home country firm transfers this technology¹⁸ and its reputation to the licensee or its affiliate. In addition, it is assumed that the production of q^h exhibits scale economies (i.e. only one host country plant is possible) and the market for q^l is competitive.

The cost function for the production of q^l is described by per-period fixed costs¹⁹ of rk^l and variable costs given by an increasing convex function $C^l(x) \geq 0$. The price for q^l is determined by the amount of x minimizing average costs: $p^l = [rk^l + C^l(x^{\min})]/x^{\min}$.

If q^h is produced, the producer needs to incur per-period fixed costs of $rk^h > rk^l$ and variable costs described by an increasing convex²⁰ function $C^h(y) \geq 0$. For any quantity q , $C^h(y) > C^l(x)$ and $C^{hl}(y) > C^{hl}(x)$. Both the local agent and the MNE are faced with identical costs for either q -production.

This leads to the last open aspect - the licensing agreement. A contract is defined by a pair of (F,S) where F is a one-time non-recoverable transfer from the licensee to the licensor at the beginning of the period in which the contract is in force while S is a per-period payment for each period the contract is in force. A contract must be renegotiated each period at no additional costs. Consequently, the licensee receives the exclusive right to produce q^h in exchange for (F,S) . It is worth noting that the feasibility of a lump-sum payment is a simplification since it avoids principal-agent problems. Consequently, the present problem is thus confined to asymmetric information on the product market.

Under perfect conditions (consumer can detect quality prior to purchase), the host country branch plant would yield a profit of

$$\pi^*/r = \max \{p^h D(p^h, p^l, q^h, q^l) - C([D(p^h, p^l, q^h, q^l)] - rk^h)\}/r \text{ by choice of } p^h.$$

¹⁸ If technology dissipation (like in Ethier/Markusen [1996]) is incorporated an even stronger incentive is created to engage in FDI.

¹⁹ "r" is the interest rate and "k" represents the capital used.

²⁰ Horstmann and Markusen (1987a) assume that there are scale economies in the production of q^h . This implies that the marginal costs are below the decreasing average costs. In their paper, the cost function for the production of q^h is given by an increasing convex function with a fixed cost bloc. They fail, however, to make clear that the optimal output must be on the left of the intersection between marginal and average cost-curve.

If the MNE decides to make use of a licensing arrangement, it is unable to extract more than π^* which means that the optimal contract is described by $F^*=0$ and $S^*=\pi^*$. If there are no inefficiencies in the product market, the firm has no incentive to internalize activities and therefore always favors licensing over FDI.

V.3.2.2 Reputation Model - Imperfect Information

If there is, however, imperfect information the consumer uses p^h and the fact that q^h has been produced in previous periods as signals that the product is of high quality. If q is q^l the consumer will resort to the competitive q^l -market for all future periods. As a consequence, q^h will be produced as long as the present value of its production (maintaining reputation) is at least as large as selling q^l at price p^h for one period (losing reputation). As the firm is interested in maintaining its reputation, it prefers producing q^h . Since licensing implies the share of some of the returns from reputation with the licensee as an incentive ($= S < \pi^*$)²¹ the firm will engage in FDI and become multinational.

In case the licensee exhibits cost advantages over the branch plant, the results may be altered. The cost advantage arises due to assumed economies of scope in the licensee's production capacities because he can use his output for both markets (q^l, q^h). Since the firm is unable to monitor the licensee's activities prior to sale, it needs to provide an incentive (see above). In this case, however, the equilibrium outcome may be licensing. Due to the economies of scope, the firm may be able to extract at least π^* leaving behind enough profits for the licensee to maintain reputation.

To sum it up, the fact that a licensee might act opportunistically gives the firm a strong incentive to internalize. This is true for the dissipation of reputation as well as for any other firm-specific asset. An ownership agreement guarantees the secrecy of the O-advantages and thus the sole exploitation by the firm itself. This is confirmed by empirical studies: The more modern and complex the O-advantage, the more likely FDI (wholly owned subsidiaries) will take place.²²

²¹ It is worth reminding that both parties are faced with identical costs.

²² For a summary, see Blomström (1991, pp. 2-6)

V.4 Conclusion

This chapter started off with several questions that were answered in reference to the sequential relationship between trade and FDI. When foreign markets enter the firm's strategy, it is faced with multiple decision problems. These can be narrowed down, however, to one single question: Do I enter and explore new markets by myself?

In the first step, the firm was faced with a principal-agent problem when dealing with a local agent. It was demonstrated that the optimal strategy is a short-term contract in order to find out about the market. Based on this information the firm decides whether to renew the contract or set up owned sales operations.

As the market grows, the point will be reached when demand cannot be covered by exports only any longer. The firm must then decide on the optimal timing and mode of local production. Timing depends on demand and efficiency of the individual modes as well as on strategic considerations and non-market reasons (such as after-sales service). The choice of mode is a crucial decision since setting up a production site is a costly operation and failure may jeopardize the very existence of the firm. On the other hand, employing a licensee bears inherent risks due to opportunism.²³ If possible, the firm's preferred mode is FDI (i.e. becoming multinational) because in this way, it is on the safe side in terms of maintaining secrecy and sole exploitation of its O-advantages.

We can sum up Chapter IV and V with a (certainly incomplete) explanation why MNEs exist: Multinational enterprises are, as The Economist put it, "Creatures of Imperfection" (1993, p. 6). They arise due to structural and transactional market failures as well as imperfect competition. The MNEs observe these imperfections and exploit them. In reference to the theory of the firm, the preferred mode of exploitation is internalization. In addition, the firm's O-advantages give rise to multi-plant of scale economies which in turn lead to imperfect competition.²⁴ Consequently, market failure and imperfect competition are the key to the understanding of MNEs.

²³ In other words, the market for knowledge (O-advantage) is inefficient or fails.

²⁴ See also OECD's definition of globalization on page 6 of this paper.

So far, I have (deliberately) neglected the L-advantages of the host country. In reference to Dunning²⁵ (and the title of my master thesis), the host country's attitude towards FDI (and thus MNEs) is important enough to dedicate the next chapter to it.

²⁵ Dunning (1993a, p. 59) cited in Section III.2 of this paper.

VI The Role of the Host Country Government

*"Failure is the key to success;
Each mistake teaches us something."
(Morihei Ueshiba)*

The location-specific advantages are a set of variables¹ with more or less inherent importance. I will restrict my analysis to the attitude and policy of the host country government towards FDI. As before, this implies the negligence of other factors but not a judgement concerning their influence. Nevertheless, the government has unquestionably the power to actively attract or distract FDI and MNEs by various measures while the other factors are mostly fixed or again influenced by the government.

The chapter will first give an overview of the benefits and costs from FDI for the host country. For this reason, it must be clear what kind of goal the government pursues. This is especially important when the discussion of the benefits flows into an analysis of the subsequent policy implications. Section VI.4 will combine the previous chapters (IV and V) with the results of this chapter. The aim is to show what kind of relationship prevails between a specific host country government (Singapore) and MNEs.

VI.1 *Benefits from FDI*

As in the case of MNEs, it would be naive to think that there is a once-and-for-all explanation of the benefits from FDI. An example will illustrate the complex nature of this problem: Let's assume that there is a country enjoying a high rate of economic growth in which labor is a scarce factor. The economy is based on high tech production and services. The consumers possess a high purchasing power and trade unions are weak. The impact of a MNE producing a low-quality good with a labor-intensive technology for the local market is definitely different on the country than an engagement by an information technology company.

From this rather extreme example, it should be clear that there will be only specific answers to specific questions. As a consequence, I will generally discuss the impacts of FDI on the host country before applying them to a specific country: Singapore.²

¹ See Chapter IV.2.1.2 or Dunning (1993a, p. 81).

² I chose Singapore because of its remarkable development during the last three decades. Additionally, it will be subject to further discussion when the German Centre-concept is presented.

The impact of FDI on various aspects and agents³ is **country-, industry- and firm-specific**. Consequently, my analysis will be restricted to initial market-seeking FDI which is in line with previous sections. For simplification, it is assumed that the firm will always prefer internalization to contractual arrangements of any kind.⁴ The reason for this restriction is, as mentioned above, the highly complex subject matter.

VI.1.1 FDI and Technology Transfer

The transfer of technology has become the predominant issue relating to MNE-activities. The reason why is that MNEs not only create technology (through R&D efforts and such) but also control and own the most modern (production) technology.⁵ As we have seen before, MNEs depend on firm-specific assets to overcome inherent disadvantages when competing against local companies in a foreign market.

"Technology" is defined as the human ability to handle the means and process of production while "innovation" means the production or creation of new technology. As a consequence, technology transfer is the transfer of knowledge from one party to another through various channels, such as licensing, joint ventures or internalization.

VI.1.1.1 Technology Transfer and Economic Growth

It has long been recognized by economists and non-economists alike that technology transfer is the heart of economic growth defined as the rate of change in GDP at constant prices. Thus, countries actively seek access to new technology which leads to the question of appropriateness. One has to consider two aspects: the product made with the technology transferred and the factors of production. Appropriateness means that the host country must be capable of using the technology and the good produced. It would be in the interest of neither the MNE nor the host country if the former transferred the most modern technology for the production of a sophisticated good to a low-income country with very little skilled labor.⁶

Empirical studies confirm the above mentioned findings. Borenstein et al. (1995) demonstrate, for example, that "the effect of FDI on economic growth is dependent on the level of human capital available in the host economy" (p. 18-19). This effect has two

³ In addition, the variables interact with each other. Technology transfer and economic development are inseparably linked to each other. Nevertheless, every variable will be treated differently but the interactions will be mentioned.

⁴ The impact of a joint venture is definitely different from the impact of a wholly owned subsidiary.

⁵ According to UNCTAD (1996b), MNEs control and own 80% of the technology.

⁶ For a detailed discussion of appropriateness, see Lall and Streeten (1977), pp. 52-62.

aspects. The first one states that FDI leads to an increase in domestic investment while the second refers to the fact that FDI is more productive than domestic investment if the required human capital is available.

VI.1.1.2 Technology Transfer and Economic Development / Restructuring

The impact of FDI on economic development can be described as follows: An economy in transition would want to attract FDI speeding up and supporting this transitional period. For example, an agricultural country that wants to pursue industrialization actively seeks foreign knowledge relating to production of (firstly) low-quality standardized goods. The success of the transition depends very much on the host country's ability to "build up their technological capabilities to absorb, build and improve upon imported technology" (Lall [1993], p. 12). I will return to the relationship between FDI and economic development in the section about Singapore.

VI.1.2 FDI and Spill-overs

Spill-over effects (externalities)⁷ arise as a direct consequence from various linkages between MNEs and domestic economic agents that affect the activities of other firms (such as their supply of or demand for goods and services). In this section, I will restrict my analysis to the MNE's suppliers and competitors.

VI.1.2.1 Inter-industry Spill-overs

VI.1.2.1.1 Sourcing from Local Suppliers

Sourcing from local suppliers by MNEs means that local suppliers gain access to the exclusive markets of MNEs. The usual mode is subcontracting or long-term contractual arrangements. The amount of goods purchased from a local supplier depends on several factors, among others the range and amount of goods produced by the MNE as well as on the MNE's internalization of the market for intermediate goods.

The latter one is especially important since it implies decision problems between "make or buy" and "import⁸ or procure locally". The decision to internalize (= eschew local suppliers) depends on the comparison between the costs of producing internally and

⁷ Externalities (or spill-over): Interdependence of productions and/or utilities not being coordinated by the price mechanism. Thus, externalities represent a form of market failure.

⁸ This can be done both internally and externally.

transaction costs when operating in the open market. Transaction costs include search and contracting costs, disruption of supplies, unreliability of product quality and the inability to supply on the agreed date. Similar considerations apply to the decision problem of "importing versus local procurement". It is obvious that the decision varies from country to country and industry to industry. If, for example, the local suppliers provide excellent goods but the country's (transportation) infrastructure is inadequate to guarantee reliable and timely supply, the MNE may prefer other ways of procurement.

As a result, "[f]or TNCs, strong linkages with suppliers allow flexible and dependable arrangements for strengthening production capacity. For suppliers, they provide dependable and advantageous access to markets" (UNCTAD [1995], p. 205).⁹

VI.1.2.1.2 Impact on the Supplier

The previous section stressed the importance of the good's quality from local suppliers. Due to the fact that the MNE usually enters a foreign market with the latest and sophisticated technology (to overcome inherent disadvantages), it is in need of intermediate goods and services of corresponding quality. The presence of a MNE forces the local suppliers to improve their efficiency and productivity of their production and distribution so that they are able to compete for the MNE. This may include the introduction of new technology, new forms of management and revised organizational structures.

It may be in the interest of the MNE to provide assistance to its local suppliers so that they improve their productivity and efficiency with the MNE's help. This may include technical, administrative and financial assistance, as well as training in quality control. This is especially true if the MNE's competitiveness crucially depends on the quality of local suppliers.

Additionally, "linkages to TNCs may be important in helping smaller firms in the international marketing and distribution of their products" (UNCTAD [1995], p. 206). This may take place through contractual arrangements in distribution or product supplies as well as generation of new customers and promotion.

Several studies confirm the correlation between the presence of foreign firms and the raised standard of local suppliers (see Dunning [1993a], p. 456-457). Evidence is also provided for a point made earlier. Similar to MNEs, local suppliers more and more engage in transborder activities to provide their customers a global network of supplies.

VI.1.2.2 *Intra-industry Spill-overs*

The most important spill-over within an industry is competitive pressure. This means that the entry of a foreign firm stimulates local entrepreneurship and domestic rivalry. This increased competition leads to several consequences. The local firms need to improve their productivity and efficiency in every aspect of their business activities.¹⁰ Companies not being able to do this will have to exit the market setting free factors of production which can now be used in higher productive firms.

In addition, innovatory capacities are being stimulated since the MNE brings along the latest technology. In order to keep up with increased competition, local firms respond by either catching up technologically or by creating own O-advantages. In this way, the technology transfer may speed up since it is in the interest of local firms to gain access to the latest technology. In addition, leakages of technology from the MNE to host country firms may occur.

Another spill-over is represented by human resource development within the MNE. This knowledge becomes available to the economy in general and the specific industry in particular if the newly trained employee decides to transfer to a local firm.

As a consequence, the presence of MNEs is a stimulus for the efficiency of the industry it penetrated. The more willing and capable domestic firms are to respond with intensified innovatory efforts the more beneficial is the presence of the MNEs. Several empirical studies treated inter-industry spill-overs. Evidence was found to support the above mentioned findings. Blomström (1986) investigated the Mexican manufacturing industries and found out that industries being dominated by foreign firms (MNEs) tend to be more competitive and efficient (p. 286). Dunning (1993a, pp. 465-469) and Blomström (1991, pp. 9-12) provide detailed summaries of various studies.

VI.1.3 FDI and Employment

"Foreign Direct Investment means employment" (Alter [1995], p. 9). This is especially true for inward FDI as MNEs create or expand business activities that need (local) employees. The job-creating effect differs, as usual, from industry to industry and the type of FDI (e.g. labor-intensive production or sales office). In addition to the direct impact,

⁹ See Dunning (1993a, p. 451) and UNCTAD (1995, pp. 202-206) for more details.

¹⁰ This includes production, distribution and administration.

inward FDI creates jobs indirectly, e.g. local suppliers expand due to increased orders from MNEs.

There is, however, no comprehensive approach to explain (in)direct effects of FDI on employment. Some figures may shed light into the subject matter. According to the OECD (1995a, p. 10), 70 million persons are employed by MNEs world-wide, of which 22 million work for foreign subsidiaries.¹¹ This accounts for about 2% of directly FDI-related employment of total employment in most of the OECD countries. Unfortunately, there is no data available on indirect employment induced by FDI.

Inward FDI may lead to an up-grade of the local workforce. This occurs through training within the MNE, the need for local competitors and suppliers to adapt to higher standards (of their goods and services) as well as through the dissipation of the knowledge from MNEs via leakages or personnel switching to local firms.

VI.1.4 Conclusion

As we have seen in Chapter III, FDI has grown enormously in the last thirty years (more than world output and trade). The question about the impact of FDI must necessarily arise. From the very beginning, it was clear, however, that this is a very complex subject matter. First of all, one has to distinguish between the flow of FDI (inward or outward), between countries (host or home), and type of country¹². Additionally, a distinction between the type of FDI is appropriate. FDI involving investment banking has definitely a different impact than FDI involving the set-up of a production plant with old-fashioned technology. The impact is thus industry-, firm- and country-specific. Furthermore, within a country, the FDI impact varies between actors, such as government, consumers, local suppliers and trade unions.

From the reflections above, it is no wonder that there is no once-and-for-all explanation for the benefits from FDI. For this reason, I restricted my analysis to inward market-seeking investment and its impact on the host country economy. The general discussion led to following results:¹³

Market-seeking FDI provides complementary assets (technology, management and organizational competence), fosters backward supply linkages, raises the

¹¹ Jungnickel (1995) shows that in Germany in 1992, 1,847 million were employed in 12,566 affiliates of foreign-based MNEs which accounted for 10% of the total workforce. Of these, 1,221 million were employed in manufacturing (17%).

¹² Distinction between less developed countries, developed countries and newly industrialized countries.

¹³ See Dunning (1994), p. 39

standards of product quality and stimulates local entrepreneurship and domestic rivalry.

VI.2 Costs of FDI

So far, inward FDI has been considered beneficial to the host country. There are, however, costs that may offset the benefits.¹⁴ They include

- erosion of sovereignty,
- monopolistic position by the MNE or suppression of local firms,
- transfer pricing,
- complete repatriation of the subsidiary's profits,
- complete circumvention of local suppliers,
- cultural erosion (e.g. Western goods in Islamic countries) and
- technology from MNEs may be more expensive than buying it elsewhere.

The costs are, just like the benefits, industry-, firm- and country-specific. Although one should not put aside the costs lightheartedly, I assume that the benefits outweigh the costs. This implies that the government policies are directed at attracting inward FDI.

VI.3 The Host Country Government and FDI

The question to be answered is now what policy implications emerge when considering the net benefits of inward FDI. In other words, what can the government do to facilitate, support and enhance the benefits?

For this reason, I assume that the government's goal is to improve the economic and social welfare of its citizens.¹⁵ This includes full employment, economic growth and development as well as economic well-being (of firms and citizens alike). In order to make an analysis of a host country government's policies on FDI possible, it seems appropriate to introduce a framework of analysis.¹⁶

VI.3.1 Systemic Competitiveness

The predominant framework of analysis is definitely Porter's "Competitive Advantage of Nations" (1990). Although it is an appealing approach, it has significant shortcomings,

¹⁴ See Section VI.4.7 for a discussion of possible costs in a particular country (Singapore).

¹⁵ I do not consider other tasks, such as national defense.

¹⁶ It will be sufficient to outline the highlights and main conclusions.

most importantly the exogeneity of the government.¹⁷ As a consequence, I decided to present a rather different framework developed by Eßer et al. (1994) from the German Development Institute (GDI) called "Systemic Competitiveness".¹⁸ It is aimed at providing both LDCs and DCs a base for policy creation and implementation.¹⁹ Similar to "globalization", "competitiveness" is yet another catch-phrase prompting a famous economist to conclude that "competitiveness is a meaningless word when applied to national economics. And the obsession with competitiveness is both wrong and dangerous" (Krugman [1994], p. 44). It is not my intention to weigh up pros and cons concerning the use of "competitiveness". Rather, I define competitiveness as the creation of conditions favorable for the pursuit of welfare creation.²⁰

The concept of "Systemic Competitiveness" is based on four equal levels interacting with each other. This interaction is the single most important point to be made. If a country wishes to attract FDI, it is not sufficient to change a set of policies. Going back to the example used before stresses this point. If the country in transition²¹ only provides tax incentives to potential investors without improving its infrastructure and human capital (education), investors will stay away.

VI.3.1.1 Meta-Level

The most important factors of the meta-level are socio-cultural factors.²² These include religion, ethic standards, social structure and culture. In order to optimize the other levels, a societal integration and management based on these socio-cultural factors is required. This means that "the key actors have to accept the world market as a framework of analysis" (Meyer-Stamer [1997], p. 372) because "globalization" has become a fact of life. This consensus, in turn, sets free the societal capability to a continuing learning and transformation process leading to open-minded citizens.

In addition, the society must be willing and capable to implement long-term strategies of industrial development. This development is based on three conditions: Firstly, a de-linking between government, economy²³ and other societal agents; secondly, the exis-

¹⁷ This implies that the action of a MNE has no impact on the government.

¹⁸ For a similar approach, see Brewer (1993).

¹⁹ Creating "systemic competitiveness" is similar to upgrading Porter's "national diamond" but the GDI-approach goes beyond Porter's approach in the sense that it is dynamic and the government is endogeneous.

²⁰ The "Systemic Competitiveness" approach is presented graphically in Appendix D.

²¹ Transition from an agricultural to an industrial country.

²² Good examples are the much cited "Asian Values" and "Confucianism".

²³ The recent turmoil in the Republic of Korea and in Indonesia demonstrates impressively the dangers of interwoven and intransparent relationships between the government and private enterprises.

tence of functioning subsystems (trade unions, firms) and thirdly, the ability for conflict and consensus as well as dialogue among societal agents. As a consequence, the existence of a common goal and the firm pursuit of its development within an open-minded and flexible society are prerequisites for optimizing the government's policies, the firms' competitiveness and social welfare.

VI.3.1.2 Macro-Level

The creation of a framework for the development and maintenance of a functioning competitive economy is the dominant task on the macro-level. For this reason, the government needs to take decisive and coordinated actions to understand the nature of markets and to help make them work. One such action is the creation of a stable macroeconomic framework represented by low inflation, a balanced budget, a balance of trade and a "real" exchange rate (i.e. no manipulation to promote exports or imports).

VI.3.1.3 Micro-Level

It is acknowledged that a pivotal factor of a firm's competitiveness is the qualification of its employees. Competitive firms are able to create and implement long-term strategies, to innovate (engage in R&D) and implement best practices in all stages of the value-added chain.²⁴ Consequently, the micro-level is represented by competitive, efficient and flexible companies being able to innovate and adapt to new challenges (e.g. globalization or entry of MNEs) quickly and efficiently.

VI.3.1.4 Meso-Level

The creation of the economic environment is the predominant task of the government on the meso-level.²⁵ This includes building physical infrastructure (transportation, communication, energy) and pursuing various policies (education, R&D, technology, trade). Furthermore, interactions between administration, technology-transfer institutes (universities and others) and companies improve the country's attractiveness as a recipient for investment, both local and international. Consequently, "meso-policies, in particular the development of a material and non-material industrial infrastructure, should focus on a number of areas to speed up the process of world-market-oriented specialization" (Meyer-Stamer [1997], p. 371).

²⁴ Such as lean production, just-in-time and simultaneous engineering.

VI.3.1.5 Conclusion

According to the GDI, the creation of competitiveness and industrial (technological) development of a country is based on the interaction between all societal agents on all levels. This dynamic approach concludes that, in order to improve a country's attractiveness for investment, it is not sufficient to change single policies but, due to the interaction, various components of the system. In other words, a country's competitiveness rests on a common social goal (meta-level), the ability of its firms to organize and utilize its own assets efficiently (micro-level) and on the ability of the government to implement a macro-economic and macro-organizational strategy ensuring that the markets in which the firms operate are the least distorted (macro- and meso-level).

This last point is rather important because it implies that national policies to encourage FDI should focus on market forces instead of resorting to conventional policies to directly influence the MNEs' actions (such as technology transfer requirements).

The government acts as a mediator between firms, associations, science and research institutions and its citizens in order to optimize the performance on all levels. Governments must live up to "their responsibility as *enablers* and *steerers* of wealth-creating activities, or as *facilitators* of the private enterprise system" (Dunning [1994], p. 43). In addition, the decision-making process should be shifted into intermediary arenas in order to heighten the legitimacy of government decision and to ensure a higher degree of information availability as well as to ensure the participation of many societal agents.²⁶

VI.3.2 Policy Implications

The net benefits from inward FDI crucially depend on the kind of FDI, the host country's competitive advantages and the economic policies of its government. In addition, they depend on the type of country (i.e. the technological or industrial stage). This is perfectly in line with the approach of "Systemic Competitiveness". The question is, therefore, what the government can do to enhance its systemic competitiveness, i.e. the conditions to attract FDI.

²⁵ Dunning (1992, p. 24) refers to this task as the "macro-organizational strategy" of the government.

²⁶ This is usually referred to as the "Subsidiaritätsprinzip" (subsidiary principle).

It all comes down to one aspect. The government must ensure that the market as a systemic entity is constantly upgraded.²⁷ This means a stable political, economic and social environment, a functioning judicial system, an extensive infrastructure (both legal, financial, commercial and physical), a sound macroeconomic policy and a wealth-creating culture as well as the steady upgrading of the local workforce. From the vast numbers of tasks, it is obvious that governments play an active role in attracting FDI.

Since it is impossible to list all feasible policy implications and their effects on net benefits of inward FDI, I want to postpone this analysis to the treatment of Singapore. In addition, Appendix E provides an overview of various policies and their effects.

VI.4 The Special Case of Singapore

VI.4.1 History in Brief

One of the "miracle economies" of South East Asia, the city-state of Singapore²⁸, has an area of only 641.4 km². It is situated off the southern tip of the Malay Peninsula in the South China Sea. Singapore was founded in 1819 by Sir Stamford Raffles as a trading post for the "British East India Company" before becoming a British Colony in 1857. After the Japanese occupation during World War II, the British returned and granted Singapore full sovereignty in 1963. Following the failure of the Malay Federation (Malaysia and Singapore), it became an independent state again on August 9, 1965.²⁹

VI.4.2 Population

The population of Singapore reached 3 million in 1997. The Chinese represent 78%, Malays 14% and Indians 7% of the total domestic population. In addition, approximately 600.000 expatriates live and work in Singapore. It is worth noting that about half of the population (ex expatriates) is aged 30 years and below. Furthermore, the population is highly educated (British education system) and at least bilingual (English is mandatory and business language).³⁰

²⁷ Refer to Blomström/Kokko (1993) and Blomström/Kokko/Zejan (1992) for detailed surveys on the roles of policies to attract FDI. They summarize that "one policy conclusion is that host country governments may choose to support local investment, competition, and education rather than to rely on controls and direct supervision of FDI" (1993, p.20-21).

²⁸ The local name is Singapura - The City of the Lion.

²⁹ Source: Islam (1997), pp. 194-198 or SüdwestLB (1995), pp.195-197

³⁰ Source: Department of Statistics of the Government of Singapore (1997)

VI.4.3 Political and Legal System

The Constitution of the Republic of Singapore provides for a parliamentary system of government. General elections are held every five years. Head of the State is the President who is also elected by the people. The government is appointed by the President from among the Members of Parliament. Since its independence, Singapore has remained politically stable. In all general elections held between 1968 and 1997, the People's Action Party (PAP) won (almost) all parliamentary seats, first under Lee Kuan Yew (today Senior Minister) and presently under Goh Chok Tong.

The legal system is based on the British Case Law. The independence of the judiciary from the executive and the legislative branches of the government is safeguarded by the Constitution.³¹

VI.4.4 The Economy

Singapore has no significant resources. It does have, however, a strategic geographical location. This, together with a well-developed infrastructure³² (such as the harbor and Changi International Airport), political and social stability, a government policy of actively encouraging private enterprise and foreign investment, an industrious workforce, and harmonious labor relations has made Singapore an international business and financial center (often referred to as "Singapore - the Hub of South East Asia"). It has been among the top countries of various ranking schemes, such as No. 1 in the "Global Competitiveness Report 1997" by the World Economic Forum or No. 2 in the "World Competitiveness Report 1997" by the International Institute of Management Development.

The Gross Domestic Product (GDP) rose 7% in 1996 and 6,4% in 1997 while the Consumer Price Index remained moderate with 1,5% and 2,1% respectively. In 1996, the GDP amounted to S\$ 132,6 billion³³ resulting in a per-capita GDP of S\$ 43.582.³⁴

VI.4.5 Economic Development

This section will provide a historical overview of Singapore's outstanding economic development with special emphasis on the role of the government.

³¹ Source: SüdwestLB (1995), p. 198-199

³² Such as the harbor and Changi International Airport.

³³ Exchange rate: 1 S\$ = 1,028 DM (January 26, 1997)

³⁴ Source: Bundesstelle für Außenhandelsinformation (1997), p. 6-7; See also EDB's Yearbook 1996/7 for a detailed summary of Singapore's economic performance and (future) strategies.

VI.4.5.1 1965: From Entrepôt to Industrialization

When Singapore became independent on August 9, 1965, there were two major problems: unemployment (an estimated 10%)³⁵ and shortage of housing (not subject to discussion). In addition, the future did not look bright since the split from the Malaysian Federation cut Singapore off from the big Malaysian market. In addition, tensions between Malaysia and Indonesia (over Kalimantan) made trade almost impossible. These problems were worsened when the British government announced the departure of its troops by 1971.³⁶ Thus, Singapore was characterized by a "single industry economy" (entrepôt)³⁷ with a small manufacturing base, little industrial know-how, domestic entrepreneurial capital and an extremely uncertain future.

From the very beginning, Singapore adopted liberal FDI-policies. This was based on two main reasons. First of all, it opted for a market economy, partly because "there was precious little to nationalize" (Ow [1986], p. 233) but more importantly because of the experiences of its neighboring countries, namely Vietnam and Indonesia. Secondly, "Singapore [did] not suffer from xenophobic post-colonial hangover" (1986, p. 234) meaning that it pursued an open-door policy towards FDI, foreign managers and entrepreneurs. A fact acknowledged recently by Prime Minister Goh (1997) when he said that "we must therefore welcome the infusion of knowledge which foreign talent will bring". The reasoning behind this open-door policy was the belief that a small city-state like Singapore had to engage in exporting (rather than import substitution) and that local entrepreneurs would be unable to facilitate a rapid industrialization process. The latter was due to a substantial lack in industrial expertise and experience.

Consequently, the government launched an industrialization program by establishing the Economic Development Board (EDB) back in 1961 centralizing Singapore's efforts to promote industrial development. Additionally, FDI was attracted through various incentives, such as tax relieves. To flank these measures, several important laws were passed to ensure a favorable investment environment (Employment Act [1968] and Industrial Relations Act [1968]). In order to improve the business infrastructure, the government developed the Jurong Industrial Estate through the Jurong Town Council³⁸

³⁵ Source: Ministry of Trade and Industry, Singapore, (1997).

³⁶ In 1967, the British military employed about 38.000 local employees and its expenditures were estimated to S\$ 550 million, or about 12,7% of GDP (see Ow [1986], p. 229).

³⁷ Mainly transshipping and supportive industries like banking, commerce and telecommunications.

³⁸ The JTC is the landlord of the German Centre for Industry and Trade Pte Ltd.

(JTC). Furthermore, the government established new companies, especially in areas where the private sector lacked capital and expertise (such as Singapore Airlines and Development Bank of Singapore).

By the late 1960s, Singapore shifted completely to an export-promotion-strategy with the introduction of the Economic Expansion Incentives Act (1967). This Act offered a variety of incentives for investors, such as reduction of tax rates and tax exemptions.³⁹ The aim was to encourage export activities and inflow of foreign technology (MNEs). Between 1965 and 1980, cumulative FDI inflow into the manufacturing sector amounted to S\$ 13160 million, starting off with S\$ 82 million at the end of 1965.⁴⁰

The policies were highly successful with an average economic growth of 10% annually during 1965 and 1980, a steady decrease in unemployment (3% in 1980) and a developed manufacturing sector.⁴¹ In addition, the anticipated investment by MNEs in Singapore began to surge at the beginning of the 1970s.⁴²

VI.4.5.2 1980: Industrial Restructuring

After the goals were achieved (low unemployment rate and a diversified economy) by encouraging labor-intensive industries, Singapore faced the challenge of restructuring its economy towards higher value-added activities and further diversification. This was especially urgent because of the tight labor market. As a consequence, the government set up a new development plan with various strategies to upgrade its economy:

- "Corrective" Wage Policy: wage increase to reflect tight the labor market
- Skill Development Policy: Renewed emphasis on education and training
- Selective Investment Promotion Policy: increased emphasis on R&D and high value-added services

Although Singapore was hit by a severe recession in 1985/86, its economy rebounded in 1986 and by 1990, unemployment hit a record low of 1.7%. Despite the recession, the economic growth averaged 7.1% during 1980 and 1990.⁴³ In addition, Singapore had reached the rank of a Newly Industrialized Country (NIC) by 1990.

³⁹ For more details, see von Alten (1995), p. 33.

⁴⁰ See Soon and Stoeber (1996), p. 321.

⁴¹ See Appendix F.

⁴² Cumulative FDI inflows between 1971 and 1980 amounted to US\$ 7455 million. Between 1981 and 1990, the amount reached US\$ 25161 million (see OECD [1995b], p. 25).

⁴³ Source: Department of Statistics of the Government of Singapore (1997)

VI.4.5.3 1990: Looking Beyond Singapore

The next challenge to be tackled by Singapore will be the transformation from a NIC to a developed country. For this reason, the Strategic Economic Plan was prepared aiming at transforming Singapore into a global city with high tech manufacturing and international business being integrated in an Asia Pacific economic community.

Strategies to accomplish these ambitious goals include the development of its domestic economy by upgrading the local workforce, promoting R&D and new economic activities in all sectors as well as restructuring domestic sectors (with emphasis on information technology).⁴⁴ In addition, Singapore has intensified its engagement in regional investment, especially in Indonesia and China (development of industrial parks in Batam respectively Suzhou).

VI.4.5.4 Summary

Singapore's economic development is characterized by two main features: market economy and outward orientation. Market economy must be understood in a Singapore-specific sense. Although free enterprise is considered to be crucial, the government plays an interventionist role (so-called "managed economy"). Outward orientation is derived from the fact that a small city-state like Singapore with scarce resources but a strategic location has no other choice than encourage FDI and exporting.

The government's attitude toward foreign investment can only be described by encouragement. Foreign and local investment is treated equally and there are no restrictions on foreign ownership. In addition, foreign investors may import capital freely and repatriate it and profits without restrictions. Furthermore, investment incentives are available to foreign and local investors alike.⁴⁵

I am not able to provide a comprehensive discussion on Singapore's economic development, so I suggest three excellent analyses: Soon/Stoeber (1996) on the role of FDI, Ow (1986) and von Alten (1994) on the role of the government.

⁴⁴ An excellent example is Singapore ONE, an island-wide network platform that will deliver a "potentially unlimited range of multimedia services to the workplace, home and school". See National Computer Board, Singapore (1997).

⁴⁵ For a complete list of investment incentives and other business-related matters in Singapore, see Price Waterhouse (1996).

VI.4.6 Economic Philosophy

The previous section on economic development revealed three main features of economic management by the government: pragmatism, role of incentives and disincentives and meritocracy.

Pragmatism is referred to a non-dogmatic or non-ideological approach towards economic development. Whatever is best for Singapore will be done. In line with this pragmatism is the belief in the effectiveness of incentives and disincentives. This approach can be found in various economic policies (such as investment incentives) or social policies (such as in family planning)⁴⁶. PAP-leaders, especially Lee Kuan Yew, believe in the hypothesis that the "people's behavior, values and attitudes can be moulded and changed toward certain directions" (Ow [1986], p. 235).

Along with pragmatism and (dis)incentives, the government strongly believes in the principle of meritocracy. This means, that, starting from equal opportunities, rewards go to these persons who are the most able, industrious, enterprising and dynamic.

The economic philosophy is best described by Lee Kuan Yew himself:

"... The question was how to make a living? How to survive? This was not a theoretical problem in the economics of development. It was a matter of life and death for two million people (in 1965). The sole object was survival. How this was to be achieved, by socialism or free enterprise, was a secondary matter." (cited from Ow [1986], p. 233)

These three main features of economic management imply a strong role of the government. Section VI.4.8 is thus dedicated to the role of the government in Singapore.

VI.4.7 Some worrisome Aspects concerning Singapore's Success Story

Worries arise from the heavy dependency on FDI⁴⁷ leading to a dualistic structure, especially in the manufacturing sector. This means that MNEs and government industrial policies have suppressed and marginalized local entrepreneurship.⁴⁸

Although industrial restructuring opened up the possibility for women to work, it led to the feminization of the workforce. In other words, "Singapore's 'economic miracle' has

⁴⁶ Families with more than two children are entitled to tax relieves.

⁴⁷ Between January and March 1997, confirmed investment in the manufacturing sector amounted to S\$ 2,23 billion of which 60% is FDI (bfai [1997], p. 14).

⁴⁸ For example, in order to be entitled to tax breaks as a "pioneer enterprise" a company needs to invest over S\$ 1 million. Most local entrepreneurs are unable to provide such a capitalization meaning that they are excluded from some investment incentives (see Lee [1997], p. 62 and Price Waterhouse [1996], p. 25).

been made possible, ..., in part at least, by overworking and underpaying the female half of its working population" (Pettman [1992], p. 55). In the course of industrial restructuring towards high value-added activities, Singapore increased its dependency on FDI and foreign skilled labor leading to significant income inequalities.

As a conclusion, critics claim that "the success of Singapore industrialization strategy is achieved through the subordination and underdevelopment of local entrepreneurship, and the suppression of minority and disadvantaged groups" (Lee [1997], p. 69).

VI.4.8 The Roles of the Singapore Government

In many analyses of Singapore's economic development, the emphasis lies on its decision to set up a free market economy with virtually no restrictions. The previous sections revealed, however, the significant role of the Singapore government in economic development.

Von Alten (1995) identified six roles of the government in the economy of Singapore. The author conducted a survey on the roles of the government among managing directors of MNEs in Singapore. The results are presented below.⁴⁹

Rank / The Government as ...	Features
1. Provider of Public and Merit Goods	Political stability, efficient and state-of-the-art infrastructure, education
2. Facilitator	Promotion of economic development, favorable business environment, efficient bureaucracy, and statutory boards ⁵⁰
3. Regulator	Industrial relations, wage determination, foreign labor
4. Public Revenue	Taxation, sales of goods and services, foreign grants
5. Planner	See Chapter VI.4.5
6. Entrepreneur	Public or government-linked companies ⁵¹ and statutory boards

Table 3: Roles of the Singapore Government

It is worth reminding that the systemic competitiveness approach called for an active role of the government in various fields of the economy and society.

⁴⁹ See von Alten (1995), p. 61 and p. 221; for a detailed discussion, see von Alten (1995).

⁵⁰ Statutory Boards include the Singapore Trade Development Board (TDB), Singapore Economic Development Board (EDB), National Computer Board (NCB) and others. For a complete list, see von Alten [1995], pp. 203-204.

⁵¹ These include, e.g. Singapore Airlines, Singapore Telecom, Keppel Bank and Neptune Orient Line.

VI.5 Host Country Government and the MNE (Bargaining Model)

The remaining aspect to be addressed is the relationship between the host country government and the MNE. It is assumed that both benefit from FDI, otherwise FDI would not take place. The host country benefits have been described above and the MNE's benefits arise through the exploitation of the host country L-advantages. Both agents try to maximize their benefits subject to constraints (such as lack of information), resources and negotiating abilities. It all narrows down to a bargaining setting.⁵²

A bargaining model is characterized by the interaction between a firm's O-advantages and a country's L-advantages. It all depends on what each agent is able to offer. The bargaining process determines the structure and impact of FDI and the government's actions. If the host country is able to offer excellent L-advantages and is faced with several FDI-offers, it possesses a strong bargaining position which means that it can extract high net benefits. From this example, it is obvious again that the bargaining position depends on the firm and industry as well as on the country's systemic competitiveness. Consequently, it is impossible to make general predictions about the bargaining process, rather only specific assessments of specific situations.⁵³

VI.6 Conclusion

The role of the government as the most important L-advantage of a country was analyzed in this chapter. For this reason, the benefits and costs of market-seeking FDI were described. Due to the country-, industry- and firm-specific nature of the FDI impact, Singapore was chosen to demonstrate the interaction between FDI and the government because it has undergone a transformation process from an *entrepôt* economy to a NIC in about three decades. It was shown that the Singapore government played (and still plays) an active role in managing its economy (i.e. creating systemic competitiveness). Consequently, the impressive economic performance can be explained by several factors: an efficient bureaucracy, adequate accumulation of human and physical capital, adequate savings, outward orientation, market-driven economic system and a favorable investment climate. Negative side-effects include, however, the marginalization of local enterprises and the exploitation of disadvantaged groups of the population.

⁵² I do not consider bargaining between countries (competing for MNEs). Rather, the decision to engage in FDI in that particular country has already been made by the MNE. Other countries enter the scene only as alternatives. The same applies to MNEs - no consideration of competition between MNEs for a particular host country.

⁵³ See Appendix G for a graphical presentation of the bargaining model and turn to Lecraw (1984) for an application of a similar model as well as Gill and Law (1988), pp. 213-217.

VII The German Centre concept - the Realization in Singapore

"We all experience troubles and worries, but it often happens that our greatest troubles arise from ourselves!"

(Unknown)

The concept of the German Centre (GC) has gained widespread attention ever since the German Centre for Industry and Trade Pte Ltd in Singapore went off with a promising start on June 16, 1995. Since it is the aim of a German Centre to help small and medium-sized enterprises (SMEs) explore and enter new markets, SME-related aspects will be discussed before presenting the German Centre-concept.

VII.1 Small and Medium-sized Enterprises and FDI

VII.1.1 Facts and Figures (with special Reference to Germany)

Small and medium-sized enterprises are generally defined as all businesses engaged in industry, commerce, the skilled trades, the service sector and the professions employing less than 500 people and achieving a turnover of less than 100 million DM.¹

Based on this definition, German SMEs amount to approximately three million registered companies as opposed to 5800 large companies (in 1995). Thus, 99.6% of all companies subject to VAT (value-added tax) are SMEs. Furthermore, they employ 2/3 of the employed workforce, train 80% of all apprentices and therefore represent the backbone of the German economy and a strong macroeconomic force. In the past, SMEs managed economic turbulences better than their larger counterparts and while the latter reduced their workforces, SMEs created new jobs. This is due to their small size enabling them to quickly adapt to new situations and to act flexibly upon challenges.²

SMEs usually specialize in certain products, mostly in high tech markets. "This role of small firms to fill a market niche³ is a major advantage" (Buckley [1989], p. 35) enabling many of them to become world market leaders. A systematic analysis of these world market leaders is provided by Simon (1997) who coined the term "Hidden Champion" to describe highly successful SMEs.

¹ See Deutsche Bundesregierung (1996), pp. 1-2.

² See Deutsche Bundesregierung (1996), pp. 2-3.

³ This is referred to as the "boutique" effect which arises through heterogeneous consumer preferences (Braunerhjelm [1993], p. 259).

Although many SMEs have achieved and sustained the top spot in their individual sector, they are rarely (physically) present in foreign markets, especially outside Western Europe. In a HWWA-survey on German SMEs in the Asia-Pacific region (1996), it is demonstrated that the German FDI position in this area is rather weak.⁴

VII.1.2 Challenges

The most important challenge facing SMEs is globalization which was discussed in some length in Chapter III. There are, however, SME-related aspects to be analyzed. The Single European Market brought about new competitors from all over Europe now challenging German SMEs, even in their previously "protected" niche markets. Additionally, other countries have caught up technologically, especially in Asia. Due to their lower production costs, they can offer technologically similar products at lower prices. This leads to a new form of competition: it shifted from quality to price and non-price factors, such as after-sales services. Consequently, competition increased both domestically and globally (although German technology is still appreciated world-wide).

Additionally, the German SME's traditional markets (Western Europe) are currently going through low-growth periods resulting in fewer orders and thus posing a threat to the SME. In order to survive, they have to explore and enter new markets, preferably high-growth markets⁵ like ASEAN⁶.

VII.1.3 Theoretical Approaches to Small Firm FDI

The way to multinationality of small firms is no different to the one of their larger counterparts. SMEs are faced, however, with special difficulties which will be analyzed later. In this section, I want to list some of the motives for small firm FDI.

In addition to Dunning's motives (Chapter III.2), small firms may be pulled into foreign markets by larger firms, as part of the latter's strategy of "Global Sourcing"⁷. Furthermore, SMEs may be pushed into foreign markets by domestic conditions (taxes, low economic growth). Last but not least, entrepreneurial foresight may result in FDI, especially under market-seeking considerations. The modes of entry were described in

⁴ See also p. 8 of this paper: German FDI in South East Asia amounts to 2% of total FDI.

⁵ The business community and governments expect that the recent economic downfall in South East Asia will be short-term if the affected countries push forward necessary and anticipated reforms, especially in the financial market and public bureaucracy (extinction of corruption). The South East Asian region bears a great potential - just consider the countries' young populations.

⁶ Association of South East Asian Nations; see for example the GDP growth rate of Singapore.

⁷ This is referred to the procurement of goods and services on a global basis (Perlitz [1997], p. 398).

Chapter V with the conclusion that if the firm possesses O-advantages and incentives to internalize, it will engage in FDI rather than resorting to contractual arrangements.

VII.1.4 SME-related Considerations

Problems and difficulties of SMEs arise as a consequence of their small size. In particular, they arise because of manpower- and capital-related aspects. Basically, SMEs suffer from limited resources. Another problem may arise due to family-ownership.

The manpower problem has two aspects: managerial time and lack of skilled management. Due to their small size, the SMEs cannot afford to employ specially trained executives to manage their international operations. In addition, managerial time is limited which leads to several consequences. Firstly, the decision-making process is short-term (ad hoc) with improper evaluation of alternatives. Secondly, the economic horizon is limited due to limited managerial capacities resulting in high information costs. A SME-entrepreneur usually has weak knowledge about the foreign market, production conditions abroad and the foreign country in general (culture, language, legal and economic environment). Thus, the risk of entrepreneurial misjudgement is inversely correlated to the manpower problem.⁸

SMEs face considerable constraints on the financial markets that arise due to their small size (and correspondingly few assets). They do not have equal access to capital as their larger counterparts. Consequently, when raising capital, small firms may face "a Catch-22": how to raise finance without disclosing its competitive advantage secrets" (Buckley [1989], p. 34). In addition, resources (both in terms of capital and manpower) committed to an international engagement are rather high in proportion as compared to larger firms. Thus, investment failures weigh much higher in case of a small firm. Consequently, SMEs may want to resort to less risky and costly contractual arrangements (licensing and others) or a financial strategy called "Gambler's Earnings Hypothesis". This strategy was put forward in the 1950's to explain a FDI-related phenomenon. MNEs began their investment with a small stake and continually put back their foreign subsidiary's profits until a "real" killing was made.⁹

⁸ See Perlitz (1994), p. 41 or Buckley (1989), p. 34-35

⁹ See Buckley (1989), p. 30

In addition to the difficulties described above, SMEs are usually family-owned with the owner or an outsider as managing director. It may be difficult to convince the owners that an involvement abroad is sensible and vital for the survival of the company.

Consequently, small firm FDI requires detailed information about the foreign country, skilled management, a solid strategy and a sound financial planning as well as a certain amount of risk-taking.

VII.2 The German Centre-concept

The concept is a general outline being adapted to country-specific features. The German Centre in Singapore is definitely different to a certain degree to the one established in Bumi Serpong Damai, close to Jakarta, Indonesia. The subsequent discussion is based on my personal experience and discussions with the persons in charge.¹⁰

VII.2.1 The Aim

The German Centre-concept must be seen in the light of the previous section on SMEs since it is its primary aim to provide a supportive environment for small and medium-sized enterprises seeking to expand their businesses into foreign markets. The idea behind it is that it is not sufficient any more to do business from Germany alone. Local presence is a must in today's business world because other factors gain importance. Among others, these are after-sales-services and cultivation of customer and business contacts. The latter one is especially important in Asia. Being where the business is enables the company to build up a network of connections (guanxi)¹¹ making it easier to do business.

VII.2.2 Three Pillars

The concept of the GC is based on three pillars:

Space	Business Centre	Services
stable and reasonable rents	supportive features	by qualified experts

Figure 2: Three Pillar-concept

¹⁰ My internship at the German Centre in Singapore lasted from April to September 1997. During this time, I was able to get acquainted with the German Centre-concept, especially through discussions with Ms. Greiner (SüdwestLB), General Manager of the GC, who provided me with valuable information and sources.

¹¹ In case of Singapore, Perry (1997) points out that Singapore's economic agencies (EDB, TDB) are keen to trade their guanxi (connections) in China for access to Western technology skills and managerial and marketing skills.

The German Centre offers various sizes of units (modules) for different purposes at reasonable and stable rents. An enterprise is able to rent (furnished) office space, exhibition or storage space as well as manufacturing space. Thus, the tenant is able to occupy his optimal size and style of space according to his particular business activity.

The Business Centre supports the individual tenant with various services, such as secretarial, translation and fax handling services as well as rental of office equipment. It also offers conference rooms located within the German Centre. The common use of these services and facilities by all tenants amounts to a considerable cut in costs for the individual tenant (burden sharing).

Lastly, various experts help the tenants solve all kinds of business problems, such as marketing, sales and distribution, local agents, market research and such. These experts may include Representative Offices of Federal States, bfai and the Delegate of German Industry and Commerce as well as the AHK and the German Centre Management.

The management (and other experts) offers various in-house activities such as seminars, open houses and meetings as well as visits to important host country institutions. The most important service is, however, the start-up help for tenants. It ranges from registering the children at school to accompanying managers to relevant authorities as well as legally setting up the business. Furthermore, additional services are provided by specially selected service providers, such as a lawyer, auditor, travel agency, mail courier, a bank and a cargo/freight forwarder being located in the Centre.

The basic idea is that the companies do their business and the GC takes care of the rest. Due to the division of labor it is a very efficient way of managing such an institution since every party does what it does best (specialization) and no service is offered twice by different service providers.

VII.2.3 The Building

The German Centre is a multi-functional and intelligent building. It should contain state-of-the-art technology such as modern telecommunication systems, local networks (e.g. for security) and a business network (e.g. on-line booking of flights). Furthermore, the building's design must be in a way that it can be easily adjusted to the tenant community. It should pose no considerable problem to transform office units into manufacturing space and vice versa. Flexibility is thus one of the main features of a German Centre. Its architecture should be modern but functional, extraordinary but inviting. The working

environment should be comfortable and pleasant with places to meet like a restaurant and a cafeteria. It must represent a special place creating its own charisma for tenants and visitors alike.

VII.2.4 Tenant Community

An important feature of a GC is the tenant community. It facilitates the possibility for tenants to share their individual experiences among one another, offer help and ultimately create a sense of solidarity and mutual understanding. In addition, communication among tenants offers opportunities to work together (which is especially valuable for newcomers). Being under one roof with customers, competitors and suppliers helps to create a network of connections that makes doing business more attractive and easier.

VII.2.5 Requirements

In order to qualify as a German Centre a project has to fulfill certain requirements. These were set up by the Coordination Committee¹² to prevent the abuse of the concept, to coordinate activities and create a common identity of German Centres across the globe. The individual requirements are presented in Appendix H.

VII.2.6 Incubator-Effect

The best way to describe the impact of a German Centre on a SME is by an "incubator-effect". Given the appropriate ingredients and a certain period of time, the GC is able to generate success.

The required ingredients are created in the home country by the company. They include a competitive product, corresponding know-how and a good reputation (e.g. through preceding exports). In addition, the parent company should provide full and long-term support for its foreign affiliate. Furthermore, the managers going abroad must have the correct attitude: hard-working and open-minded towards the foreign country and culture. That's when the GC steps in by assisting its tenants in their activities:

German Centre for Industry and Trade		
Sales	Networking	Investment
<ul style="list-style-type: none"> • Services and advice • acquaintance with the market • Parent company builds trust in 	<ul style="list-style-type: none"> • With authorities • With customers (after-sales-services and others) 	<ul style="list-style-type: none"> • Assembly and Production • Joint Ventures and other forms of cooperation

¹² It was constituted on September 18, 1995. Members include government officials, officials from various associations (VDMA, IHK) and members of the business community.

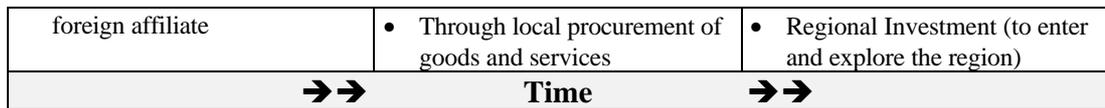


Figure 3: Incubator-Effect

VII.2.7 Summary

German Centres represent an optimal base for primarily SMEs to expand their business into foreign markets. They provide comprehensive service packages, reasonable and stable rents for all types of units and a forum to exchange information and experiences as well as to work together. Last but not least, GCs bundle up all activities concerning foreign trade and foreign trade assistance (AHK, bfai and others).

GCs are well-known and prestigious locations in the host country strengthening the position of the tenants as well as of Germany as a whole. The tenants represent a cross-section of German technology in all sectors, so visitors get a comprehensive view of what Germany has to offer (GC as a permanent show-room). Germany offers itself through its companies as an attractive place to do business and invest. Consequently, the German Centre works on a bilateral basis to maximize the benefits for both the home and the host country.

The German Centre is a multi-functional and intelligent building serving as an incubator for companies seeking to explore and enter new markets. It helps the companies help themselves.

VII.3 The Realization in Singapore

The German Centre for Industry and Trade in Singapore (GCIT) is the first of its kind - integrating hardware and software. Its "predecessor" in Yokohama (Japan) was officially opened in 1987 and is now home to 28 tenants (20 German companies). However, it differs significantly from the one in Singapore since it does not provide the software (services) in addition to the hardware (space). This chapter will describe the realization of the German Centre-concept in Singapore while a historical overview is given in Appendix I.¹³

¹³ The German Centre for Industry and Trade Pte Ltd, Singapore, maintains its own Internet-homepage at: <http://germancentre.com>.

VII.3.1 Choice of Location

Since Section VI.4 analyzed the location "Singapore" in detail a brief overview will suffice. Singapore was chosen to host the first German Centre because of its stable environment (economic, legal, social and others), its excellent infrastructure, highly educated and industrious workforce, efficient bureaucracy and favorable investment climate. In addition, Singapore and Germany maintain excellent bilateral economic and political ties.

Among the business community, Singapore is considered a reference market for the rest of the region. Compared to other South East Asian countries it is rather easy to make business in Singapore. A company can test the market for its product and become acquainted with South East Asia and ultimately expand into the region.¹⁴ Furthermore, foreigners are welcome in Singapore, a fact acknowledged by Prime Minister Goh Chok Tong. He stressed in his National Day Speech (1997) that "Singapore must become a cosmopolitan, global city, an open society where people from many lands feel at home".

VII.3.2 Organization and Investment

In 1992, the Südwestdeutsche Landesbank (SüdwestLB), Stuttgart, and the Westdeutsche Landesbank (WestLB), Düsseldorf, were asked to finance, construct and manage the German Centre (project financiers). To highlight their intention to help German SMEs, their goal was cost-recovery. They bear the entrepreneurial risk and therefore hold full responsibility and decision power. This is in line with the demand that GCs should be privately owned and managed.

The banks established the German Centre for Industry and Trade Holding in Stuttgart in which each party hold 50% of the shares. The German Centre for Industry and Trade Pte Ltd, Singapore, is a 100% subsidiary of the GCIT Holding. Decision power rests with the GCIT Management (Managing Director and one representative per shareholder) and the shareholders (banks). There are several committees attached to the GCIT which are presented in Appendix H.

The total investment amounts to S\$ 50 million. Considering the costs of financing during the construction period it totals S\$ 53 million. The internal work of both banks is not included. These include drafting contracts by their own legal departments, marketing

¹⁴ Singapore can be considered as "Asia light": modern city with English-speaking and highly educated citizens and an excellent business environment, yet the Asian culture is still present.

and co-ordination of all activities. The own capital funds amount to S\$ 12 million of which both banks contribute half. The remaining capital funds are externally financed. The yield on the own capital funds is confidential¹⁵ and the anticipated break-even-point is the year 2000. Additionally, the State of Baden-Württemberg granted a Deficiency Guarantee of 10 million DM for six years.¹⁶

VII.3.3 Features of the GCIT, Singapore

VII.3.3.1 Location

The GCIT is located in the first International Business Park set up by the Jurong Town Corporation (JTC) at Jurong East where most of the manufacturing is done. It is connected by two highways and the Mass-Rapid-Transportation (MRT-station Jurong East Interchange). By car, it takes about 20 minutes to the City and 30 minutes to Changi Airport.

VII.3.3.2 Start-up Help and Services

The start-up help is available to all tenants and features the following services. The management and various service providers help setting up a business and getting the required employment pass. They organize trips to Singapore authorities (TDB, EDB, JTC) and establish links with these institutions. In addition, they provide general help in getting acquainted with Singapore and the region.

The service partners of the GCIT include Dorison Travel, Thümmel, Schütze & Partner (legal firm), Price Waterhouse (book-keeping, auditing), SüdwestLB (banking), Schenker International (provider of logistic, courier and messenger service) and The Delegate of the German Commerce and Industry (consulting). In addition, the Management Office organizes various in-house activities¹⁷ where one major goal is to bring Singapore and German businesses together.

VII.3.3.3 Business Centre

The Business Centre provides all the services mentioned in the general outline. In addition, the original planning allowed for office space to be temporarily rented out (one

¹⁵ The figure is known to the author.

¹⁶ This money has not been used and the GCIT does not intend to do so.

¹⁷ This includes the monthly publication called "GC Newsletter", distributed free of charge to all tenants.

week to 6 months). Due to the insufficient use, it was transformed into office space while the services are now provided by the GCIT Management Office.

VII.3.3.4 Rents

Another important feature of the German Centre is affordable and stable rents that are competitive and even below market rates.¹⁸ Unfurnished office space costs S\$ 30.87 (per m²) in the GC compared to S\$ 80 in the City. Manufacturing space amounts to S\$ 22.80 as opposed to S\$ 24.00 in Jurong East. Finally, exhibition space costs S\$ 41.45 compared to S\$ 40-60 anywhere else.¹⁹

VII.3.3.5 Information Technology

The telecommunication and information network in the GCIT is state-of-the-art. Deutsche Telekom installed ISDN-lines, the LAN-Network was set up by Siemens, the Smartcard-system for door-security by Siemens and Festo and the Industrial-Profibus by Festo. The Chamber World Network provides a business information system while the Delegate's Office provides the Office-software network. Every booking (air conditioning, repair services, travel agency) can be done from every office via computer.

VII.3.3.6 Current Situation (as of January 19, 1998)

Ever since its opening two and a half years ago, the GCIT has been fully booked and the continuing demand is represented by a considerable waiting list. There are currently 140 tenants occupying approximately 20000 m² of space.²⁰ Rented office space amounts to 14500 m², manufacturing space to 4684 m² and exhibition space to 450 m².

In the mean time, 24 tenants moved out of the German Centre for various reasons²¹ but none stated business failure in Singapore as the cause. Nevertheless, it is too early to reach a conclusion if the anticipated incubator effect works as designed. It is acknowledged among the tenant community that it takes roughly two years to get the business running and approximately five to be successful.²²

¹⁸ Comparison by Richard Ellis and John Lang Wootton (1996) [internal paper of the GCIT]

¹⁹ Rents are valid as of May 1997.

²⁰ It is worth noting that the GC started out with 108 tenants but due to the dissolution of the Business Centre and additional construction more office space was created.

²¹ For example, the parent company was acquired by another company or the office is relocated to another South East Asian country.

²² This fact was confirmed by Dr. Rogowski (VDMA-President) during the "VDMA Außenwirtschaftstag" on ASEAN in Stuttgart on September 23 and 24, 1997.

Generally, the German Centre has achieved the goals it set itself. The start-up help has been successful, the rents have remained reasonable and it is a well-known and prestigious location in Singapore as shown by various visits of top politicians (e.g. Chancellor Kohl and Lee Kuan Yew in 1997). There have been many in-house activities, such as an exhibition by the Federal State of Brandenburg. Currently, the Delegate's Office organizes a discussion forum on the currency crisis where all tenants are invited.

A questionnaire conducted among the tenants in October 1996 by the Management Office confirmed the findings mentioned above:

Statement	Percentage
Right decision to move into the German Centre	87 %
Support the German Centre-concept	73 %
Business benefited from the GCIT	66 %
Satisfied with the Service provided by the Management	82 %
Regular use of the Business Centre	3 %
Never use the in-house service providers	56 %
Service providers important in decision to move into GC	34 %

Table 4: Results

The first four results show that the German Centre-concept is accepted while the last three indicate that Singapore is indeed an "easy" place to start a business in South East Asia.

VII.4 Summary and Conclusion

German Centres, wherever they are erected, represent excellent bases for primarily small and medium-sized enterprises wishing to expand their business activities into foreign markets. Due to its general outline the concept is easily adapted to country-specific features. In case of Singapore, it was demonstrated that the Business Centre, as one of the supportive pillars, was unnecessary because of Singapore's excellent environment. Ever since the successful start of the German Centre in Singapore, the idea has gained widespread attention and developed into a government instrument to promote foreign trade, although the support is confined to the political level.²³

The Singapore success story is based on various reasons. One is Singapore's easy environment, others include the thorough preparation by the project financiers and the political support. These ideal conditions may not be met in other parts of the world where

²³ See Bundesministerium für Wirtschaft (1997), p. 9.

GCs will be set up. In addition, the concept has been exposed to political pressure which led to short-sighted actions (like Shanghai)²⁴ and the degeneration of the original idea - helping companies help themselves. Consequently, the German Centres must be preserved from exploitations contradicting the concept, so it will actually be able to live up to the anticipated expectations.

²⁴ See Nölting (1995), p. 180.

VIII Theory Meets Application

"Der Mensch ist um so reicher, je mehr Dinge er liegen lassen kann"
(Henry David Thoreau)

The previous chapters laid the basis for the goal of providing a theoretical foundation for the German Centre. The subject was approached from two directions. Firstly, multinational enterprises, as the object of interest, were treated empirically and theoretically with special emphasis on their way to multinationality. In a second approach, the role of the host country government was analyzed and it was shown that it plays an important role in affecting the locational choice of MNEs.

Consequently, I will start this final chapter by analyzing the impact of a German Centre on the MNE followed by a similar analysis of the impact on the host country. The final section will combine both impacts with the German Centre in Singapore as the center of attention.

VIII.1 Impact of a German Centre on MNEs

VIII.1.1 Reduction of Information Asymmetries

Due to its local presence, the company is able to explore and find out about the market on its own. This process is supported by many German Centre-services, especially by various expert teams filtering and providing crucial information, and the tenant community enabling the exchange of experiences and information.

In case of a local agent, the full information contract may be feasible because the MNE is able to monitor the agent's actions as well as the market size. The same applies to the licensing-problem where the MNE is better able to prevent the dissipation of its firm-specific assets (because it is physically present). The MNE is thus able to make use of the agent's knowledge about the market and the country in general (e.g. how to make business successfully) while simultaneously safeguarding itself against opportunism (because of local presence).

Consequently, a German Centre reduces information asymmetries considerably resulting in a substantial reduction of FDI-related costs.

VIII.1.2 Reduction of FDI-related costs

First of all, the search costs for the appropriate office location is virtually reduced to nil. The company receives all information about the German Centre (location, office space and such) back home. In addition, the set-up costs are reduced because a German Centre provides all necessary services and facilities to start a business (such as start-up help). Furthermore, through the common use of GC-facilities (Business Centre, services) the per-period fixed costs are shared among the tenants resulting in a reduction of these costs for the individual firm. The per-period fixed costs are further reduced because of stable and competitive rents.¹

As demonstrated in Section V.2.1., the company has to pay its local agent high information rents in order to find out about the true size of the market. In case of the licensing agreement, the company had to share some of its returns from its reputation with the licensee. These information costs are reduced because the company is able to monitor the action of its contractee.

As a consequence, the results of the principal-agent-problem and the decision problem between FDI and licensing are altered with the introduction of a German Centre. Since it is now less costly to engage in FDI, a GC creates a strong incentive to eschew contractual arrangements altogether. In case a contractual arrangement is chosen, the resulting costs are considerably reduced by the local presence of the firm. In addition, a GC enables companies to engage in FDI that would normally be too costly.

VIII.1.3 Local Presence

A company is able to pass through the sequential relationship in the targeted market within a German Centre (incubator effect) improving the prospect of successful business activities. The efforts of an owned sales office are improved through local employees being familiar with the domestic market and the services provided by the German Centre. In addition, it opens up new forms of marketing, such as local presence in association with contractual arrangements.

The local presence provides a direct access to the local market and represents a commitment to the market which is important to local customers. This has several conse-

¹ In the GCIT, furnished office space (20 m²) costs approximately S\$ 1000 per month and unfurnished office space (64 m²) approximately S\$ 1800 per month.

quences. It is easier to make business, acquire new customers, cultivate established customer contacts (networking) and pursue non-market goals (such as after-sales-services). A GC is able to support these efforts by hosting in-house events, such as meetings with potential customers, or offering services in the field of sales and distribution. Additionally, due to the common appearance (identity) as a GC, the individual tenant's position towards local authorities and firms is rather strong since a GC is a well-known and prestigious address in the host country.

A GC enables the firm to go through a learning and experiencing process at an early stage of multinationality resulting in improved prospects of successful business activities.

VIII.1.4 Conclusion and Empirical Results

The establishment of a German Centre has a huge impact on a company's decision to engage in FDI. First of all, FDI may take place which otherwise would have not. In addition, due to the considerable reduction of information asymmetries and FDI-related costs, the mode of entry into a foreign market is heavily biased towards FDI. Thus, the inherent disadvantages of contractual arrangements are circumvented. Last but not least, a possible failure of FDI is less costly and the prospect of successful business activities is improved.

These findings are confirmed by a survey conducted by the German Centre Management Office in November 1996.² The survey revealed that 57% of the tenants were established in South East Asia through exports prior to their move into the GCIT. For almost all companies, however, the office in the GCIT represents the first physical presence in the Asian market. The tenants stated that if they had to do it all over again, 90% would move into a GC again and 82% into the GCIT, Singapore. Additionally, only 20% would locate their office elsewhere in South East Asia. These results indicate that the German Centre-concept is accepted and confirm that Singapore is indeed an "easy" environment to start a business in South East Asia.

Additionally, 66% of the tenants stated that their business benefited from the German Centre. After one year (1995), most of the expectations were met. One third expected no increase in turnover confirming the statement that it takes about two to three years to get

² See German Centre for Industry and Trade Pte Ltd (1996).

the business running. The expected increase in turnover (between 10% and more than 20%) of the remaining two thirds were almost exclusively met.

Last but not least, 67% of the tenants chose a Private Limited, 25% a Representative Office and 8% another type of operation. This shows clearly the companies' commitment to the market.

VIII.2 Impact of a German Centre on the Host Country

Since the benefits and costs of inward FDI were discussed in some length in Chapter VI and there are no empirical data available to assess the impact of a GC on a host country, this section will give an overview of the GCIT's possible impact on Singapore.

VIII.2.1 General Impacts

The German Centre itself represents foreign direct investment (S\$ 50 million in case of Singapore). In addition, each individual tenant engages in FDI on its own to set up its operations and get the business running. Consequently, the host country benefits twice from a German Centre in terms of FDI.

Furthermore, a GC is considered a prestigious project signaling German MNEs and others that the host country is considered an attractive place to invest (indirect promotion). As one consequence, similar projects may follow as in the case of Singapore. Next to the German Centre, three Scandinavian countries started to build a "Nordic Centre".

A rather different impact can be found on the bilateral relations between the home and host country. A GC helps to improve bilateral ties on the business level where firms from both countries may be able to cooperate and gain access to each other's markets. Additionally, political ties are strengthened which is shown impressively by the GCIT in Singapore. Many top politicians from both countries visited the GC and Singapore officials supported the project from the very beginning. Improved bilateral ties result in a better environment to do business.

Last but not least, the host country is able to extract tax revenues in form of corporate taxes and personal income tax from the GC-tenants and its managers.

VIII.2.2 Technology Transfer

The German Centre is considered to be a show-room of German high technology where local firms are able to get an idea what Germany has to offer. The host country and its firms may be able to gain access to German technology through various channels, espe-

cially through cooperations. The earlier mentioned survey revealed that many tenants are still using local agents to service the market which may lead to technology transfer and dissipation. In addition, many tenants provide training for their local employees. BMW houses a "Regional Training Centre" and Trumpf a "Technical Competence Centre" within the GCIT where they train their local technicians on their latest technology.

Taking a closer look at the tenants list³ reveals that most companies are engaged in high value-added manufacturing activities⁴ helping Singapore to pursue its goal of restructuring the domestic economy (see Section VI.4.5.3).

VIII.2.3 Employment

Singapore benefited twice in terms of employment. Firstly, during the planning and construction phase the GCIT-organizers employed local firms and thus local workers. Secondly, each individual firm hires local employees as managing directors, technicians or office staff. Usually, there is a German Managing Director (MD) and the rest of the employees are local. The German Centre Management Office, for example, employs a German MD, a German secretary and 13 Singaporeans in various positions.

VIII.3 The Role of the GCIT and the Singapore Government

We have come to the point where every aspect so far considered will be combined. The aim of this section is to analyze the relationship between the MNEs (represented by the GC) and the host country. A simple graphic is able to demonstrate this relationship:

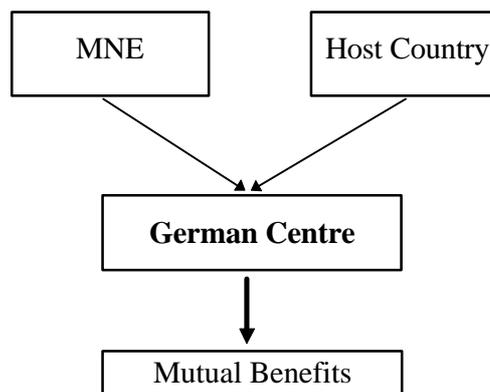


Figure 4: German Centre as a Mediator

³ See homepage of the GCIT.

⁴ I identified 9 "Hidden Champions" within the GCIT (which are explicitly stated in Simon [1997]).

The German Centre acts as a mediator between German firms wishing to invest in the host country and the host country wishing to attract FDI.⁵

VIII.3.1 The Bargaining Model Revisited

VIII.3.1.1 Singapore's Bargaining Position

Singapore's systemic competitiveness and L-advantages have been discussed in detail in Sections VI.4 and VII.3.1, so some highlights will be sufficient. Singapore is characterized by a stable environment, a pragmatic economic philosophy and an excellent infrastructure as well as an educated and industrious workforce. In addition, it offers a variety of investment incentives and connections to China and other countries (*guanxi*). Due to its strategic location Singapore is the target of many FDI-related projects which can be seen in steadily rising FDI-inflows.

As a consequence, Singapore is an attractive place to invest and thus in a strong bargaining position. In addition, due to its long experience with FDI and its many professionals in government positions leading the negotiations, Singapore's bargaining position is further strengthened.

VIII.3.1.2 MNEs' Bargaining Position (represented by the GCIT)

In 1995, the GCIT represented 108 companies, especially in high tech manufacturing. Each firm possessed its individual O-advantages that may help Singapore in its quest to restructure its economy. Each company was planning to engage in FDI leading to the prospect of employment and access to German technology and the German market.

In addition, a GC is a prestigious project sending out the signal that Singapore is an attractive place to invest (indirect promotion). This, together with the political support from the State of Baden-Württemberg (PM Teufel), represents the bargaining position of the MNEs and the GCIT respectively. Furthermore, the organizers could have chosen another location in South East Asia that might have been more difficult but nevertheless feasible (such as Indonesia⁶).

⁵ To be precise, there should be an additional component - the home country. This means, host country firms wishing to cooperate with German firms or to invest in Germany. A German Centre will always operate on a bilateral basis.

⁶ The L-Bank (Karlsruhe) is currently constructing a GC near Jakarta which will be opened by the end of 1998.

VIII.3.1.3 Bargaining Outcome

Apparently, the negotiations between the organizers of the GCIT and the Singapore government were successful in the sense that the German Centre was built. After four years of planning, the actual construction time was roughly 16 months.

The Singapore government, represented by PM Goh, fully supported the project from the very beginning. In addition, the German Centre's landlord (JTC) provided an unbu-reaucratic approval of the tenants⁷, so the first ones were able to move into their premises in April of 1995. Furthermore, all major Singapore Statutory Boards are members of the GCIT Advisory Board (in Singapore). This ensures a continuing contact and exchange of information between the organizers and the hosts.

The tremendous success story⁸ of the German Centre for Industry and Trade Pte Ltd has benefited both partners. The widespread attention on the political level and in the press as well as within the business community is an excellent promotion for both Singapore and the German Centre-concept. Without the success story, other GC-projects would not have been pursued with such efforts.

VIII.3.2 Conclusion

This chapter brought together theory and application. It was demonstrated what impact a GC may have on MNEs as their tenants. They benefit from a GC through a considerable reduction in information asymmetries resulting in a significant reduction of FDI-related costs. As a consequence, the MNEs are able to ease or circumvent the problems arising from local agents and licensing.

The benefits of a GC for the host country are based on the inflow of FDI by high tech manufacturing companies. These benefits include tax revenues, technology transfer, employment and the help to restructure the domestic economy. Additionally, the German Centre engages in indirect promotion for the host country because it is a prestigious project signaling the host country's attractiveness as a place to invest.

The strong bargaining position of both parties brought about an outcome that is mutually beneficial.

⁷ This approval is a requirement by the JTC which is running the International Business Park.

⁸ See Section VII.3.3.6

IX Epilogue

*"Most of economics can be summarized in four words: "People respond to incentives."
The rest is commentary."
(Steven Landsberg [1993], p. 3)*

The aim of this master thesis was the provision of a theoretical foundation for a German Centre. The crucial question was how to approach a subject of such recent nature. The theory of the multinational enterprise with special emphasis on the role of the government opened up a possible solution. This unquestionably broad subject called for some restrictions. Hence, I restricted the MNE-activities to initial market-seeking FDI while simultaneously confining myself to the host country and its government.

The **first starting point** to approach a GC was the theory of the firm. It was decisive for the subsequent discussion of MNEs to know why firms exist at all. After having identified some reasons for the existence of firms (e.g. market failure), the next step took us to the question what facilitated the enormous rise of MNEs. It was shown that the process of globalization provided the breeding ground for the tremendous spread of MNEs. However, the MNE is not only a child of globalization (it has been around much longer) but also one of the midwives together with technological developments and (inter)national de-regulations. The motives for FDI revealed that market- and asset-seeking are the most important. Nevertheless, the question why MNEs exist needed yet to be answered. From the vast number of theoretical approaches, Dunning's "Eclectic Paradigm" provided an interdisciplinary explanation. As a conclusion, MNEs arise through a combination of firm-specific assets with country-specific advantages if the firm is willing and capable to internalize these advantages. The path to multinationality of manufacturing companies demonstrated the inherent problems arising from local agents and licensing.

The **first intermediate result** provided a (certainly incomplete) explanation of MNEs: "The solution to this puzzle is that multinationals are not exploiters of purity but rather creatures of market imperfections, or failures. The best way to understand their behavior is to understand those imperfections and how they are developing" (The Economist [1993], p. 9).

The **second starting point** to approach a German Centre was to analyze the role of the host country government. To understand a host country's attitude towards MNEs, it is important to know the benefits and costs of FDI. Since it is unlikely that FDI takes place if the host country has to bear net costs I assumed net benefits. These include technology transfer, employment, upgrade of the domestic economy and tax revenues. The subsequent question was how the government would be able to enhance the benefits from FDI. It was shown that the host country (government) is able to improve its systemic competitiveness by various means such as macroeconomic stability, societal management and a variety of policies. Since it was impossible to list all policy implications in all possible circumstances a specific example (Singapore) was chosen to demonstrate successful attraction of FDI in order to pursue certain goals.

The **second intermediate result** assessed that the FDI-impact is firm-, industry- and country-specific. Additionally, the host country government plays an active role in attracting FDI by heavily contributing to the creation of systemic competitiveness.

The bargaining model represented the **first combination** of both starting points. It describes the relationship between a firm's O-advantages and a host country's L-advantages. Both advantages determine the individual bargaining position and thus the outcome of the process, i.e. the impact and structure of FDI on both parties.

The previous analysis laid the theoretical basis and what followed was the presentation of the German Centre-concept. It was necessary to discuss SME-related aspects since it is the aim of a GC to help primarily SMEs. The general outline stated that the concept is based on three pillars (Space, Business Centre, Services) designed to help the tenants explore and enter the host market. This concept was successfully applied to Singapore being impressively illustrated by the Tenants Satisfactory Survey (1996).

As a consequence, it was concluded that a GC is a multi-functional and intelligent building serving as an incubator for companies seeking to explore and enter new markets. It helps the companies help themselves.

Lastly, the German Centre entered the theoretical scene and provided the **second combination** of both starting points. Following the approach set up above, the GC's impact on MNEs was first subject to discussion. Two main results emerged: first of all, a

GC enables companies to invest which would normally be unable to afford it and secondly, a GC reduces information asymmetries and corresponding costs substantially. As a consequence, problems arising from contractual arrangements may be circumvented completely. The second discussion led to the impact of a GC on the host country. The latter benefits from a GC in terms of indirect promotion, economic upgrade with the help of the tenants, tax revenues, employment and technology transfer. In addition, both the MNEs and the host country benefit from improved bilateral ties between the home and host country.

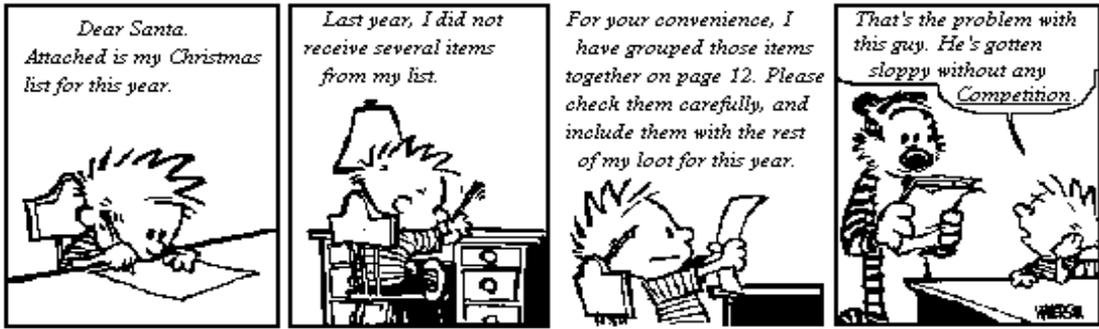
Lastly, the bargaining setting was revisited and applied to Singapore. It was shown that both the MNEs (represented by the GCIT) and the Singapore authorities had strong bargaining positions resulting in a mutually beneficial outcome.

Thus, the paper provides the following conclusion:

The German Centre acts as a mediator between companies wishing to engage in foreign direct investment and a host country actively seeking inward FDI. The outcome of this mediation process is mutually beneficial and consequently worth aspiring.

Although I confined myself to initial market-seeking FDI, this paper reveals several interesting results. I am well aware that it only provides an intuitive (and sometimes empirical) foundation of a German Centre within existing theories. Unfortunately, it was impossible to incorporate the GC into the theories let alone create a theory of a GC. Nevertheless, the paper hopefully serves as a kick-off for future research.

I would like to end this master thesis with an illustrative example of applied economics, adapted from Bill Watterson (1995, p. 98):



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Appendix B: Sequential Relationship

The following graphic represents the sequential relationship between trade and FDI of manufacturing companies based on UNCTAD (1996, pp. 75-81) and Buckley (1989, pp. 28-30). Buckley states that the relationship is firm-specific in the sense that firms may omit one or more steps. In addition, each intermediate step represents a deeper commitment to the market and a possible exit option in case of failure.

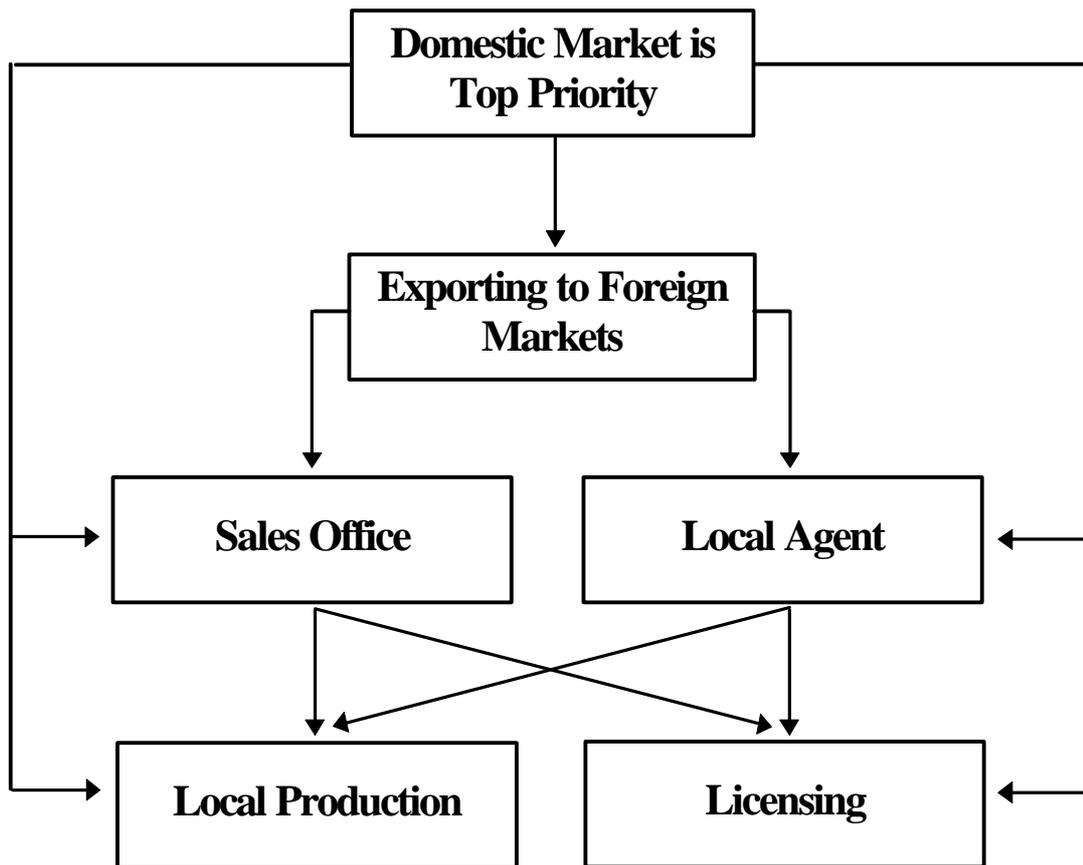


Figure 5: Sequential Relationship

Obviously, this relationship is a market-seeking process. As Dunning (1993a, p. 56) points out, however, companies pursue pluralistic strategies combining various motives for FDI (see Section III.2). In Figure 5, the company may choose a sales office, a local agent **or** acquire a local distributor (asset-seeking). The same applies to local production which can be organized by licensing, own production **or** acquisition of a local production facility (asset-seeking).

Appendix C: Formal Derivation of the Principal-agent Problem

The formal treatment uses the method of proof by contradiction. I claimed IC_2 must be binding, so I suppose now that it does not but IR_2 does. One of these must be binding since the MNE wants w_2 as small as possible (minimization of the information rent). Rearranging IR_2 and IC_2 produces

$$(5) w_2 - c(q_2/N_2) \geq R$$

$$(6) w_2 \geq c(q_2/N_2) + [w_1 - c(q_1/N_2)]$$

We know from the properties of the cost function that $w_1 - c(q_1/N_2) > w_1 - c(q_1/N_1) \geq R$ which means that [...] in (6) is positive. This, however, contradicts (5) and consequently, IC_2 is binding: (6') $w_2 = c(q_2/N_2) + [w_1 - c(q_1/N_2)]$.

In the same manner it can be demonstrated that IR_1 must be binding. Suppose it does not and rearranging IC_1 (which is now assumed to be binding) produces

$$(7) w_1 = w_2 - c(q_1/N_2) + c(q_1/N_1) \text{ in which (6')} \text{ will be substituted:}$$

$$(8) w_1 = c(q_2/N_2) + w_1 - c(q_2/N_1) - c(q_1/N_2) + c(q_1/N_1) \text{ which can be simplified to}$$

$$(8') c(q_2/N_2) - c(q_1/N_2) = c(q_2/N_1) - c(q_1/N_1).$$

The equation (8') is, however, a contradiction to the single-crossing property which means that IR_1 must be binding: $w_1 - c(q_1/N_1) = R$.

As a consequence, the maximization problem can now be written as $\max E\pi^a$ by choice of w_i and q_i and subject to IR_1 and IC_2 . This produces the following Lagrangean function:

$$\mathbf{L} = \rho(q_1 - w_1) + (1 - \rho)(q_2 - w_2) + \lambda_1[w_1 - c(q_1/N_1) - R] + \lambda_2[(w_2 - c(q_2/N_2)) - (w_1 - c(q_1/N_2))]$$

The first-order conditions are:

$$(9) \partial L / \partial q_1 = \rho - \lambda_1 c'(q_1/N_1) 1/N_1 + \lambda_2 c'(q_1/N_2) 1/N_2 = 0$$

$$(10) \partial L / \partial w_1 = -\rho + \lambda_1 - \lambda_2 = 0$$

$$(11) \partial L / \partial q_2 = (1 - \rho) - \lambda_2 c'(q_2/N_2) 1/N_2 = 0$$

$$(12) \partial L / \partial w_2 = - (1 - \rho) + \lambda_2 = 0$$

Equations (11) and (12) imply that $c'(q_2/N_2) 1/N_2 = 1$ which means that the slope of the indifference curve for the agent facing N_2 is one. This in turn means that (q_2^*, w_2^*) is an

efficient outcome since the indifference curve and the iso-profit curve are tangent to each other (same slope).

Equation (10) produces $\lambda_2 = \lambda_1 - \rho$ which can be used to rewrite equation (9) to

$$(9') \quad \rho - \lambda_1 c'(q_1/N_1) 1/N_1 + \lambda_1 c'(q_1/N_2) 1/N_2 - \rho c'(q_1/N_2) 1/N_2 = 0$$

$$(9'') \quad \rho [1 - c'(q_1/N_2) 1/N_2] + \lambda_1 [c'(q_1/N_2) 1/N_2 - c'(q_1/N_1) 1/N_1] = 0$$

We know from the single-crossing property and the convexity of the cost function that $c'(q/N_2) < c'(q/N_1)$ which implies that the second bracketed term in (9'') is negative while the first term is positive. In combination with the results from (11) and (12) we get

$$(13) \quad c'(q_1/N_1) 1/N_1 < c'(q_2/N_2) 1/N_2 = 1 \text{ which can be rearranged to}$$

$$(13') \quad c'(q_1/N_1) / c'(q_2/N_2) < N_1 / N_2 < 1 \text{ which implies (since } c(e) \text{ is convex that}$$

$$(14) \quad q_2/N_2 = e_2 > e_1 = q_1/N_1 \text{ leading to } q_2 > q_1.^1$$

The optimal contract is thus characterized by $q_2 > q_1$ and $w_2 > w_1$ which was shown graphically in Figure 1

¹ This is the formal proof for the claim that $q_2 > q_1$ (page 21) due to the proportionality between q and e .

Appendix D: Systemic Competitiveness

The following graphic shows the determinants of systemic competitiveness as outlined in Eßer et al. (1994, p. 12). Systemic competitiveness is actively created by the interaction between all societal agents on all levels. These levels are equally important which ultimately means that it is insufficient to resort to isolated actions in order to accomplish certain goals. Instead, the approach calls for the optimization of all levels.

This concept is applied to Singapore's determinants which are written in italics:

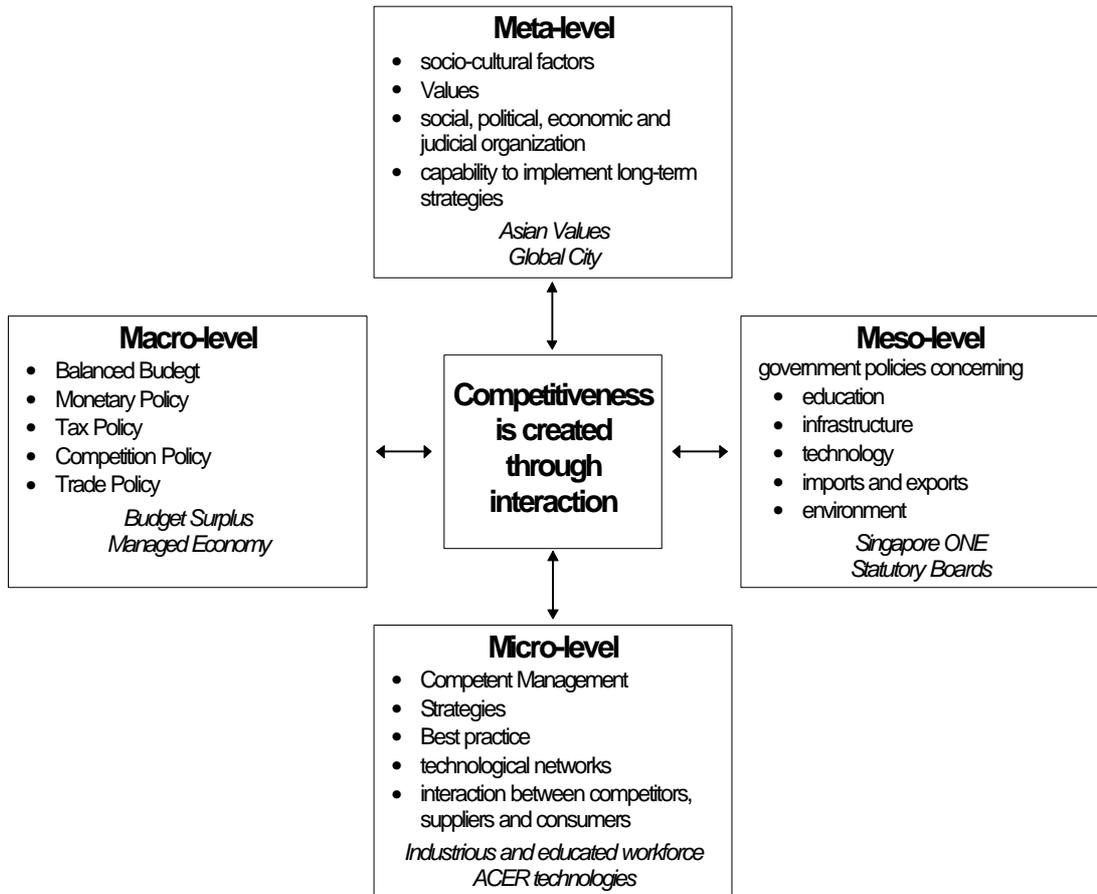


Figure 6: Systemic Competitiveness

Appendix E: Policy Implications

The following table is adapted from Brewer (1992) and contains selected components (for the complete table, see Brewer (1992, pp. 123-125):

Types of Policy (Dis)Incentives and Their Effects on the Attractiveness of a FDI Project	
Host Country's Incentives / Disincentives	Effects on FDI Project Attractiveness
Affecting revenues	
Tariffs	+
Quotas	+
Differential sales / excise taxes	+ / -
Affecting expenses	
Tariffs	+
Quotas	-
Differential sales taxes	+ / -
Corporate tax	
Tax holiday / reductions	+
Accelerated depreciation	+
Tax sparring and double taxation agreements	+
Labor	
Wage subsidies	+
Training grants	+
Minimum Wage	-
Local labor requirements	-
Affecting cost of initial investment	
Direct subsidy	+
Prior import deposits	-
Local content requirement for capital equipment	-
Affecting cost of capital	
Debt	
Subsidized loans	+
Loan guarantees	+
Priority access	+ / -
Equity	
Exemption from capital gains taxes	+ / -
Minimum financial / in-kind ratio	-
Dividend tax / waiver	+ / -
Not classified	
Limitations on foreign ownership	
Free-trade zones	
Countertrade requirements	

Table 5: Policy Implications

Appendix F: Development of Singapore's GDP

The following table provides an overview of Singapore's economic performance during the last three decades. It also shows the government's efforts to restructure the economy, as outlined in the Chapter VI.4.5. The data is drawn from the Statistical Department of the Government of Singapore (via Internet) and from the Economic Development Board (1996/7 Yearbook):

GDP at 1990 Market Prices by Industries (in S\$ millions)				
Sector	1960	1970	1980	1996
Manufacturing	984,7	3545,3	9967,7	29485,5
Construction	326,2	1410,9	2517,1	8982,8
Commerce	1537,5	3314,5	6737,2	19834,9
Transport & Communication	474,7	946,1	3683,2	14500,7
Finance & Business Services	824,4	2397,9	6880,9	29905,2
Others	1420,8	2619,3	4815,8	13543,4
GDP (Total)	5819,7	14177,2	33581,6	109787,1

Table 6: GDP by Industries (in S\$)

Composition of GDP (in %)				
Sector	1960	1970	1980	1996
Manufacturing	11,7	20,2	28,1	24,4
Construction	3,5	6,9	6,2	7,4
Commerce	33,0	27,4	20,8	17,4
Transport & Communication	13,6	10,7	13,5	10,4
Finance & Business Services	14,4	16,6	19,0	28,6
Others	23,8	18,2	12,4	11,8

Table 7: GDP by Industries (in %)

Appendix G: Bargaining Model

The following graphic demonstrates the bargaining setting between a MNE and a host country. This model is static since the bargaining takes place at a certain point in time (in my paper: initial investment) at given conditions represented by the prevailing world economic system, the firm's and the host country's current advantages and bargaining positions. The graphic is adapted from Dunning (1993a, p. 552).

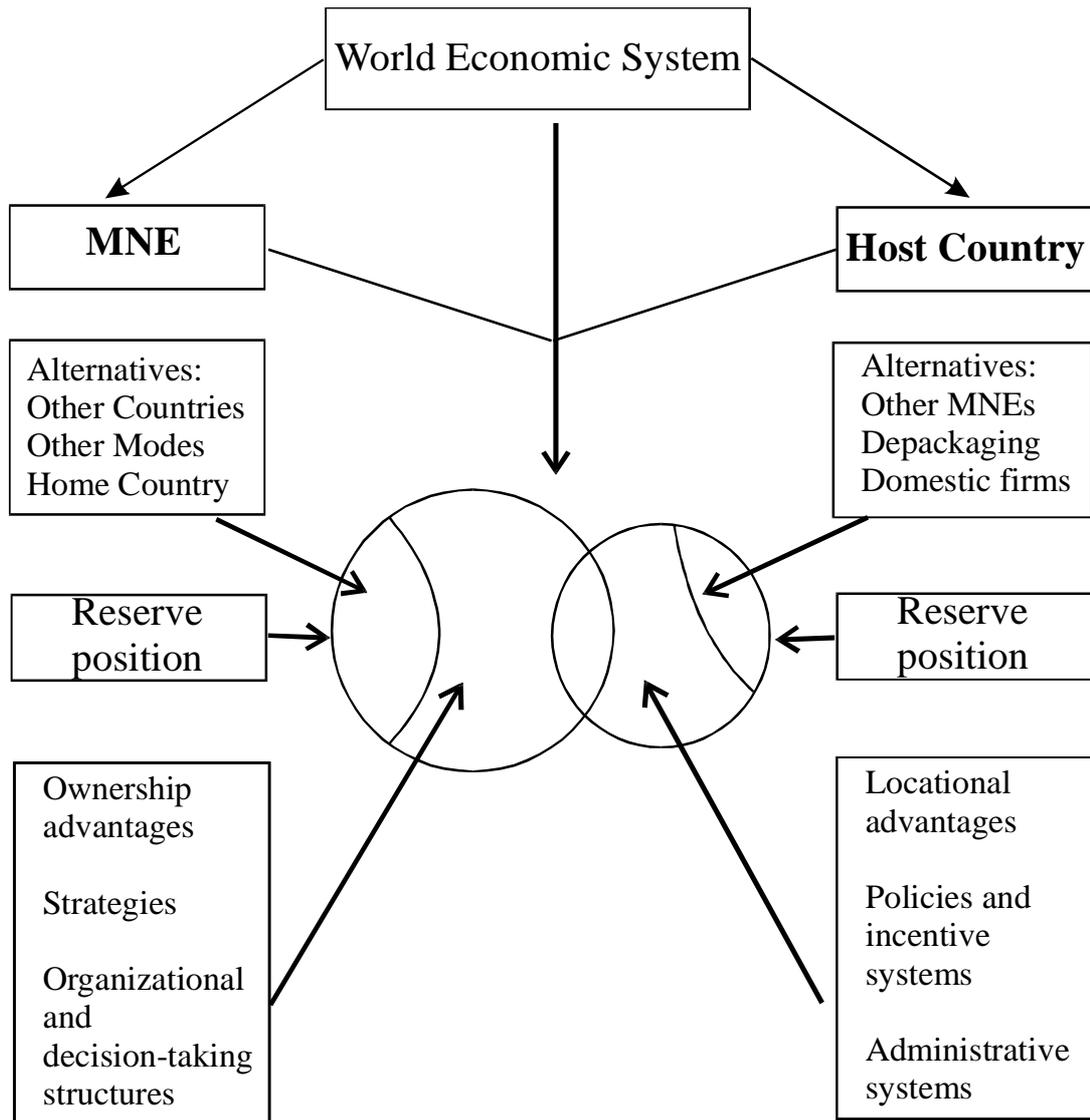


Figure 7: Bargaining Model

Appendix H: Committees and Requirements

The task of the **Coordination Committee** is to coordinate all GC-activities and thus to prevent the abuse of the concept. For this reason, it set up requirements that a project must fulfill in order to qualify as a German Centre:¹

- German Centres must be designed to cover the needs of primarily SMEs from all Federal States of Germany.
- Only one GC per city but there can be more than one within a country.
- German Centres should be privately operated on a cost-recovery basis and may be accompanied by the government's instruments to promote trade.
- Supporting measures by the government to tenants of the GC must be transparent and unified (equal treatment of all tenants).
- The services supplement the operations of already established German agencies (AHK and others) and must be coordinated among one another.
- The concept of the German Centre must be adapted to country-specific aspects.
- German Centres will be characterized by a common logo.

The Coordination Committee is legally not attached to the German Centre, Singapore.

The following committees are within the legal structure of the German Centre for Industry and Trade Pte Ltd, Singapore:

Committee	Tasks
Rental and Legal Committee	Recommendations, tenants policy, legal advice for tenancy agreements and priority list for the selection of new tenants Members: Representatives of both banks, State of Baden-Württemberg, VDMA
Construction Committee	Recommendations for tender and contractors Members: Representatives of both banks, State of Baden-Württemberg, VDMA
Advisory Board (Stuttgart)	General policy and recommendations Members: SüdwestLB, WestLB, State of Baden-Württemberg, State of Nordrhein-Westphalia, Trumpf GmbH & Co., VDMA
Advisory Board (Singapore)	Recommendations and contacts to institutions Members: TDB, EDB, GBA, German-Singapore Institute, Embassy, Singapore Confederations of Industries

Figure 8: GCIT-related Committees

¹ See Protocol of the Coordination Committee (18.8.1995), Appendix 4 [own translation]

Appendix I: History of the German Centre, Singapore

1990

- Prof. Leibinger (then President of VDMA) during a visit to Singapore suggested to build a German Centre similar to the one in Yokohama/Japan
- Questionnaire among members of the German Business Association (GBA) in Singapore: positive response (approximately 20 000 m² necessary)

1991

- Feasibility study by Fichtner Asia Pte Ltd: GC is possible
- November: Securing a plot in International Business Park of the Jurong Town Corporation (JTC) by the GBA

1992

- Confirmation of Fichtner's study by a second study by Knight Frank
- Questionnaire among 3000 VDMA-members in Germany with positive feedback (theoretically 70% of all space rented out already)
- March: WestLB and SüdwestLB agree to finance, construct and manage the project
- 19. November 1992: Letter of Intent to PM Goh Chock Tong signed by PM Teufel (Baden-Württemberg), Prof. Leibinger (VDMA), Mr. Schmidt (SüdwestLB) and Dr. Ringel (WestLB) as well as Dr. Spalcke (Embassy). Goh fully supports the project.

1993

- 01.01.1993: Foundation of the Holding in Stuttgart and employment of MD
- since 1993: extensive marketing in Germany by VDMA, DIHT and Sparkassenorganizations (SüdwestLB and WestLB)
- 4.10.1993: Groundbreaking ceremony

1994

- 14.10.1994: Roofing (topping-out) Ceremony

1995

- April 1995: Ready to move in
- **June 16, 1995:** Official opening by PM Goh and PM Teufel
net rented space: 21 690 m²
fully booked
Waiting list