The Transfer of Korean Passenger Car Production to East Central Europe: The Case of Direct Foreign Investment by Daewoo Motor

This Thesis is submitted in fulfilment of the requirements of the Degree of Doctor of Philosophy by:

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Abstract of the Dissertation

Passenger car¹ companies in developed countries, such as Germany, France, Italy, the United States and Japan, have been investing in overseas plants for local production for a very long time. However, until recently there has been no significant indigenous car manufacturer to become a global player from newly industrialised countries (NICs) or developing countries. In contrast to major players in the world market, current car producers in the NICs and developing countries locate their manufacturing plants at home, seeking to export their products rather than investing in overseas production facilities.

However, car manufacturers, particularly in the Czech Republic, Malaysia and South Korea, are currently preparing to go one step further with direct investments in car manufacturing abroad. Among them, South Korean car manufacturers have made the most significant progress in setting up production facilities in foreign countries. Daewoo Motor is one of the leading investors among car manufacturers in South Korea, with direct investments concentrated in developing and East Central European countries².

This research aims to understand the reasons for Daewoo Motor's direct investment in car manufacturing in Poland and Romania, and investigates the company's comparative advantages and global strategy by identifying the pattern of its global operations.

Two sets of research hypotheses have been tested in this research study. The first is that Daewoo Motor was motivated by market access in Poland and Romania. The second proposes that the company aims to access Western European markets. That is, with the prospect of future integration of East Central Europe into the overall European car market, those countries offer attractive investment opportunities and a justification for Daewoo Motor to change its export strategies toward the whole European market. By setting up production facilities in East Central European countries, Daewoo Motor can not only obtain access to potential markets in the region, but can also avoid regional trade barriers in European Union member countries in the future.

¹ Throughout this thesis, "car" refers to passenger cars only and "motor vehicles" means passenger cars, trucks, and buses.

² In this dissertation, East Central European countries refer to Bulgaria, the Czech Republic, the Slovak Republic, Hungary, Poland and Romania.

Through the field survey, the dissertation finds that initially the main reason for Daewoo Motor's investments in car manufacturing in Poland and Romania is a necessary strategy to secure a market for future increases in production. However, the responses collected from interviews during the field survey were different from the reality Daewoo Motor is facing. Governments' support in Poland and Romania, particularly through investment incentives and import controls, seems to motivate the company's investment in these countries, implying a typical crony capitalism. However, the global strategy of Daewoo Motor constitutes a new chapter in the history of the South Korean car industry and in the world motor industry, which has been dominated by car producers in developed countries for almost a century.

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Chapter One

Introduction

1.1 Motivation of the Research

As the competitiveness¹ of South Korea's major labour-intensive exports have been eroded, due to increasing costs of production caused by rising labour costs, manufacturers in the country have endeavoured to seek ways to achieve a continuation of the success of the export-oriented economy. This has generated major changes in the South Korean industry.

From the mid-1980s, Korea's labour-intensive industry made its first foreign direct investment (FDI) moves to developing countries, including China and the members of the Association of Southeast Asian Nations (ASEAN), where cheaper labour could be sourced. On the other hand, capital- and technology-intensive industries are becoming the core of the Korean economy, partly with government's support since the 1970s. Owing to the diversification of export markets, exports of upgraded South Korean products have increased, reducing the weakness caused by heavy dependence on the markets of the United States and Japan in the past. Now, however, South Korean companies are targeting the world market.

¹ While this dissertation reached its final stages the Korean won recorded one of its most serious setbacks in that it has been drastically depreciated against the US dollar. It is, however, rather too premature to comment on how the recent development will affect future competitiveness of the Korean industry.

From the late 1980s, capital- and technology-intensive industries started to move out of the country. Major FDI by capital- and technology-intensive industries have been made in advanced regions, such as Western Europe and North America. Through their involvement in FDI, since the 1990s some South Korean firms have attempted to become multinational enterprises (MNEs) and have managed to establish a network of global operations.

The South Korean car industry is one of the industries which has become international through FDI. There are three major South Korean car manufacturers: Hyundai Motor, Kia Motors², and Daewoo Motor. South Korean car manufacturers started with assembling imported completely knock down (CKD) kits from car producers in advanced countries, which enabled the country's car manufacturers to localise a high proportion of auto parts and components. Despite the fact that the car industry in South Korea has a relatively short history of 30 years, car producers are now in the stage of developing indigenous car models. Due to the increase in domestic sales and exports, car production has expanded to 2 million units in 1995.

Interestingly, one different feature of FDI by scale-sensitive industries can be identified in the South Korean car industry. FDI by these car manufacturers have been made in developing and transitional countries, such as those in Southeast Asia, East Central Europe and the former Soviet Union, rather than in developed countries, with a remote exception by Hyundai Motor in North America (Canada)³. Generally, automobile production is more strongly concentrated in the developed market economies (Western Europe, the United States and Japan), and most automobile manufacture in developing countries is assembly rather than production (Dicken, 1986, p. 281).

² Since 1997, Kia Motors has been insolvent.

³ Hyundai Motor's car production factory in Canada has been closed since 1993.

Among the car manufacturers of South Korea, whereas previously Hyundai Motor was the first South Korean car producer to commence FDI, Daewoo Motor started major FDI flows to developing and transitional countries from 1994. Outside the three main car manufacturing regions, Daewoo Motor is the first car manufacturer from a developing country to engage in the world automobile industry via FDI in those countries, and thereby becoming an MNE, rather than becoming a global player through just exporting its products from the home country. There has been no significant global car manufacturer from developing countries either through exports or through FDI over the last century. There has been the development of the theory of the firm to explain the firm's economic activities in relation to the individual firm's difference in strategies, growth and diversification. Through this theory, the selection of Daewoo Motor's FDI over other foreign market entry modes, and the reasons for the company's different diversification strategy from other South Korean car producers, can be explained.

In particular, Daewoo Motor's investment in car manufacturing in East Central Europe has significant implications. For Daewoo Motor, establishing production facilities in European countries can be very attractive. Within the European continent, the Western European market is one of the three major car markets in the world (the other two being the United States and Japan). In addition, the European Union members have established free trade agreements to create a single European market. When East Central European countries join the single market, the future European car market will be re-shaped as one of the largest in the world.

The governments of the East Central European countries have tried to attract FDI in order to achieve their economic development through the positive effects of FDI by MNEs within the countries. These governments have also adopted selective industrial policies which support strategic industries, including the car industry. In high-performing

Asian economies, industrial policies have played a significant role in the successful economic development, although there are some policies which have had negative effects on the industrial development. It is, therefore, interesting to study whether the industrial policies of the regional governments affect Daewoo Motor's FDI in the region and the development of the car industry, particularly in Poland and Romania.

MNEs from developing countries are particularly important as the engine of growth and transformation in many regions that are dominated by developing countries (Yeung, 1994, p. 297). In Lall's study (1983) on developing countries MNEs, he argues that developing countries firms can become a MNE through attaining firm-specific advantages. He also explains that there are certain conditions to be fulfilled to gain these advantages. However, little research in developing country MNEs has been carried out over the last 15 years in terms of effect, scope, geographical distribution, and organisational network forms. The existing empirical research rarely succeeds in explaining why developing countries' MNEs are actually involved in economic activities across national boundaries through FDI, such as vertical or horizontal integration⁴, and why they are even engaged in the formation of strategic alliances with developed country MNEs. In this research, particularly by looking at the case of Daewoo Motor and the theory related to developing country MNEs, it can be ascertained whether the company does indeed obtain firm-specific advantages which gives it the opportunity to potentially become an MNE.

Although few theoretical works have been conducted to explain South Korean FDI, there have been several empirical studies on the motivations for FDI by South Korean firms producing labour-intensive products in developing countries, and also

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⁴ Vertical integration means that firms directly engage in either backward or forward stages or both of the production process in line with products it already manufactures. Horizontal integration involves the production in new countries of the same products as at home (refer the section 2.3.4 Caves' theory in Chapter 2).

capital- and technology-intensive products, such as semi-conductors and electronics, in developed countries. However, there has been no research conducted on why South Korean car manufacturers became MNEs by engaging in FDI.

The car industry is one of the scale-sensitive industries. Several academics have developed and elaborated Vernon's product cycle model, particularly in order to explain a locational shift of scale-sensitive industries. The income-driven product cycle model explains that firms can increase competitiveness if they move their production plants to places where the markets are in a dynamic and youthful stage of product cycle, due to the Verdoorn effects, and that the minimum viable size of a plant are crossed by the market demand. In this research, locational theories, particularly the income-driven product cycle model, is tested to see whether Daewoo Motor shifts its production facilities to East Central Europe (Poland and Romania) because the company can gain or increase competitive advantages by being located in that region.

Hence, the motivation of this research is to provide an understanding of South Korean firms' economic activities, and of their trans-nationalisation as developing country MNEs in general, and to seek an explanation of the determinants of Daewoo Motor's FDI in East Central Europe (Poland and Romania) by testing the theory of the firm for Daewoo Motor's growth and diversification strategy in particular. This study is also stimulated to examine the viability of the East Central European car markets and the importance of industrial policies, in terms of protection and promotion, by testing the theory of industrial location.

1.2 Objectives of the Research

The objectives of this dissertation are as follows:

- (1) To understand the characteristics of the South Korean MNE, in general, and those of Daewoo Motor, in particular;
- (2) To identify factors that affect Daewoo Motor's FDI;
- (3) To identify the advantages of the company's FDI in East Central European countries;
- (4) To explore the effects of the company's FDI in those countries; and
- (5) To comprehend the global strategy of Daewoo Motor

1.3 Significance of the Research

Developing country MNEs are still in a state of development, but they have the potential to flourish in the near future. Much research is required to comprehend their characteristics, behaviour, and significance. Therefore, this empirical research can contribute to a better understanding of developing country MNEs' economic involvement in foreign countries, and to the further development of theoretical work in the field of international production and FDI.

Most developing countries wish to establish their own automobile industry because the industry is considered to have some of the largest spin-off effects compared to other industries. In other words, the development of the car industry needs to generate various supporting industries (auto parts and components) for car manufacturing. In addition, a significant increase in employment opportunities can be created not only in the car industry, but also in the auto-related industries. Policy makers and government officials, who have launched policies for fostering their car industry, or who are considering the development of the car industry in their countries, can refer to this research as an example.

This research is also valuable as a reference to the governments of underdeveloped countries in terms of their policies toward economic development. Over the last three decades, business groups (the so-called Chaebol) in South Korea have grown rapidly and have established a peculiar organisational structure through government support. Through examining the Chaebol and South Korean economic development, this research will provide a broadened perspective and knowledge about firms' growth and government's policies.

It is said that the markets of East Central Europe are unstable and unpredictable because East Central European countries have experienced a rapid change in their economies. By examining regional market potential and the establishment of free trade agreements in Europe, this research will provide an understanding of East Central European markets and prospects for the whole of the European markets. Particularly, findings of the determinants of Daewoo Motor's investment in car manufacturing in Poland and Romania will give an insight into the economic activities of car manufacturers and the web of the global car industry.

1.4 Limitation of the Research

This research was conducted from 1994, when Daewoo Motor invested in East Central European countries, to early 1998. Although the research focuses on the motivations and global strategy of Daewoo Motor rather than the effects of the company's FDI, the time span is too short to carry out a proper observation of the case study, and the financial crisis in South Korea in 1997 generated a great deal of uncertainty over the viability of Daewoo Motor's investment projects in the region. This may cause some of the findings of the research to appear relatively weak.

In addition, the case study is too specific to expound the economic activities of all South Korean car producers as only one company was surveyed. This is because there is no other direct investment in car manufacturing by South Korean car manufacturers in European countries. Recently, Hyundai Motor planned to set up production facilities in Poland. If more case studies in the region are conducted, the motivations for the transfer of South Korean car manufacturing to the region could be scrutinised more profoundly.

1.5 Structure of the Dissertation

This thesis is about the trans-nationalisation of South Korean passenger car production, and thus about the economic activities of Daewoo Motor in East Central European countries (Poland and Romania) through FDI. The thesis can largely be divided into three parts: Part A, Part B, and Part C.

Chapter 1 introduces the overall description of this research. In the first part (Part A), the contextual framework for the case study is provided in Chapter 2. In

Chapter 2, issues related to international trade and production in cars are scrutinised and the prevalent theories of international production and MNEs' economic involvement in foreign countries are examined. Based on this review, hypotheses are formulated. This is followed by the drafting of the research design, which should test the hypotheses with the case study.

Part B consists of three chapters which provide an understanding of international car manufacturing as well as that of South Korea. Chapter 3 deals with the chronological development of international trade and FDI in cars by looking at the cases of car manufacturers from the three major car manufacturing regions. In particular, as the fourth generation, it examines the development and capabilities of emerging car manufacturers. Chapter 4 introduces the background of the process of South Korean economic development and the struggle of the South Korean industries to upgrade its exports from labour-intensive to capital- and technology-intensive industries for the continued growth of the country's economy. The evolution of the capital- and technology-intensive industries is also examined in this chapter, with an overview of the car industry as a backbone of the country's economy, as well as a discussion of recent FDI trends by car manufacturers. In Chapter 5, it is explained how South Korean groups have evolved over the past three decades, and what the characteristics of the groups' organisational structure are. The advantages and disadvantages of the groups' organisational structure are critically analysed. In particular, the Daewoo Group is explored to provide a proper understanding of its development and growth, as well as its peculiar organisational structure.

In the final section (Part C), three chapters focus on an explanation of motivations for Daewoo Motor's investment in car manufacturing in East Central Europe. In order to understand the background of the company's investment in the

region, in Chapter 6, by using variable indicators, the market potential of East Central European countries is examined. For the further economic development of the region, policy implications are discussed. In addition, the future web of the European car markets is explored by observing the creation of the single European market. Chapter 7 consists of findings on, and discussions about, determinants of Daewoo Motor's investment in car manufacturing in Poland and Romania as identified in a field survey. This empirical study is analysed in two steps: the first step is about gaining an appropriate understanding of Daewoo Motor through the company's development and economic performance; the second part is about the summaries of the field survey (primary research), followed by critical analysis of the findings from the fieldwork.

In the conclusion, the major issues of this dissertation are re-capped, explaining the competitive advantages and disadvantages of Daewoo Motor's direct investment in car manufacturing in East Central Europe. This chapter also attempts to provide an insight into the Daewoo Group and Daewoo Motor's global strategy. In addition, agendas for future studies are suggested for researchers who wish to contribute to the development of this academic area.

Part A

 ${\it Conceptualisation}$

Chapter Two

International Production¹ and Research Design

2.1 Introduction

The purpose of this chapter is to investigate how international production theories help explain the international economic activities of firms, particularly those relating to FDI. This includes reviewing the existing behavioural explanations of multinational enterprises (MNEs) of the FDI they own or control. In addition to understanding the prevalent theories, this chapter aims to identify the characteristics of economic activities and the motivations for FDI of developing countries' MNEs.

Section 2.2 provides the various definitions of MNE and FDI, suggesting the limitation of those definitions. The definitions of MNE and FDI adopted in this thesis are described in this section. In section 2.3, prevalent theories on the activities of MNEs and FDI are explained and in most cases presented chronologically. Section 2.4 explains the location theory based on Vernon's product cycle model. Section 2.5 examines existing studies of the MNEs from developing countries. In section 2.6, the theory of the firm is explained in order to understand FDI at the level of the firm.

The final section presents research designed to identify the motivations for Daewoo Motor's direct investment in Poland and Romania, based on a review of relevant literature. In order to conduct the case study, hypotheses and a methodology

¹ International production refers to production organised and controlled by the MNEs (Ietto-Gillies, 1992, p. 7).

are proposed, including the data collection procedure and the analysis of obtained information and findings.

2.2 The Definitions of a Multinational Enterprise and FDI

Many definitions of a multinational enterprise (MNE)² have been suggested by analysts and international organisations such as the United Nations (UN) and the Organisation for Economic Co-operation and Development (OECD).

Aharoni (1971) draws the term 'multinational firm' from D.E. Lilienthal, who defined 'multinational corporations' as "corporations which have their home in one country but operate and live under the laws and customs of other countries as well" (Ietto-Gillies, 1992, p. 17). Hood and Young (1979) define an MNE as a corporation which partly or wholly owns, controls, and manages income-generating assets in more than one country. In so doing it engages in international production, namely production across national boundaries. Caves (1982) describes the MNE as an enterprise that controls and manages production establishments (plants) located in at least two countries. Ietto-Gillies (1992) sees an MNE as a transnational corporation that organises and controls production and / or related activities in more than one country. Dunning (1981 and 1992) delineates an MNE as an enterprise that engages in FDI and organises the production of goods or services in more than one country. The definition of an MNE as 'an enterprise that engages in FDI and owns or controls value-adding activities in more than one country' is widely accepted and used by international institutes such as

² The terms 'multinational' and 'transnational' are usually used interchangeably. The last was adopted by the United Nations Centre on Transnational Corporations (UNCTC) in 1974. Over time, the terminological differences have become increasingly obscure and most scholars, businessmen, and politicians use the terms 'multinational' and 'transnational' as meaning the same thing. Similarly, the terms 'firm', 'enterprise' and 'corporation' all have more or less the same meaning, although 'corporation' is used more commonly (Dunning, 1992, p. 11). The term 'multinational enterprise' (MNE) is used in this thesis.

the OECD and the United Nations Centre on Transnational Corporations (UNCTC), and by most national governments (Dunning, 1992, p. 5).

However, defining an MNE is not simple, as there seems to be difficulty arriving at a clear-cut definition. For example, without 'ownership', MNEs can involve value-adding activities in more than one country, but 'control' may not coincide with ownership or management. Many MNEs engage in a variety of cross-border, non-equity co-operative ventures via licensing agreements and strategic alliances which may provide them with some degree of control or influence over foreign production, and they also participate in international networks of economic activity (Dunning, 1992, p. 4).

To outline the territory of MNEs' activities is therefore problematic, although there is a growing consensus that those economic activities and minority joint ventures should be considered as an MNE's scope of 'influence' and 'control' (Dunning, 1992, p. 6). It can be said that the only common feature among these definitions is that an MNE engages in economic activities both at home and in other countries.

With regard to the definitions of FDI, most are conceptualised in terms of control and ownership of assets, although there are differences in using definitions of FDI used in the academic field and by official data collecting agencies (such as the International Monetary Fund (IMF) and the United Nations Department of Economic and Social Affairs (UNDESA)). FDI is also distinguished from foreign portfolio (or indirect) investment because the latter involves only the transfer capital and no change in ownership (Evans and Gereffi, 1979, p. 59; Dunning, 1992, p. 5).

The UNDESA (1973) suggests distinguishing between subsidiaries, affiliates, branches and associates by the proportion of stockholding: a foreign branch is a part of an enterprise that operates abroad, an affiliate is an enterprise under effective control by a parent company and may be either a subsidiary (with a majority or sometimes as little

which case as little as 10 per cent control of voting stock may be judged adequate to satisfy the criterion). According to the IMF (1977), direct investment refers to investment that is made to acquire a lasting interest in an enterprise operating in an economy other than that of the investor, the investor's purpose being to have an effective voice in the management of the enterprise. In 1993, the IMF Balance of Payments Manual adds to its 1977 definition as follows:

as 25 per cent control of the voting stock by the parent company) or an associate (in

'investment that involves a long-term relationship reflecting a lasting interest of a resident entity in one economy (direct investor) in an entity resident in an economy other than that of the investor. The direct investor's purpose is to exert a significant degree of influence on the management of the enterprise resident in the other economy'.

Lindert and Kindleberger (1982) explain that "FDI can also be defined by balance-of-payment accounts as any flow of lending to, or purchases of ownership in, a foreign enterprise that is largely owned by residents of the investing country, and direct investment consists of any investment, whether new ownership or simple lending, as long as the investing firm owns over 10 per cent of the foreign firm being invested in". Dunning (1992) sees FDI as "the investment that is made outside the home country of the investing company, but inside the investing company. Control over the use of the resources transferred remains with the investors".

Although many definitions of FDI have been drawn by scholars and official statistics, none of them provide a fully adequate concept. Firstly, there is no accepted international criterion for a minimum equity stake deemed necessary for "an effective voice" as used in the definition of the IMF or "largely owned" in that of Lindert and Kindleberger (1982). The required minimum equity varies in different countries, for

example in South Korea, 20 per cent ownership by the investing firm suffices as an official definition of direct investment, but in Germany shares of 25 per cent or more, or in the United States shares of 10 per cent are regarded as FDI (Shin, 1995, p. 57). Secondly, to delineate "a significant degree of influence" in the definition of the IMF (1993) and "control" in that of Dunning (1992), it is not possible to provide clear measures, and there is no international consensus on this matter.

In this thesis, an MNE is defined as a domestic firm headquartered in its home country which engages in FDI and owns or controls value-adding activities in more than one country. FDI is defined as 20 per cent ownership by the investing firm according to the Foreign Exchange Control Regulation, Article 15-3 (2) (i) in South Korea.

2.3 The General Theories of FDI

2.3.1 Prior to the 1960s

No well-established theory of MNEs or FDI existed until the 1960s. Largely, studies focused on explaining the activities of companies abroad through portfolio (capital) investment, although a number of empirical studies on factors influencing the location of foreign direct investment were conducted by researchers (Southard, 1931; Barlow, 1953; Dunning, 1958). Most of this literature was based on neo-classical assumptions³ and it ran parallel to the neo-classical theory of trade developed by Heckscher (1919) and Ohlin (1933) (Ietto-Gillies, 1992, pp. 78-9), although some economists such as Williams (1929) realised that the internationalisation of some

³ The various models are specifically neo-classical in that they implicitly or explicitly contain the following assumptions: perfect competitive markets, perfect knowledge, and certainty (Ietto-Gillies, 1992, pp. 78-9).

industries required a modification to neo-classical theories of trade (Dunning, 1992, p. 68).

Ohlin (1933) researched the mechanism of international capital movements, specifically referring to portfolio investment. He focuses on analysing the new equilibrium position following disturbances because of capital movements. He also mentions the issues of location of economic activity and production and the various elements affecting it, such as the relative mobility of raw materials and finished goods; the locations of raw materials and markets; differences in transportation and related costs of transport; economies of scale in transportation and related costs of transport; and economies of scale in production. However, no distinction is made between direct and portfolio investment in his study.

Nurkse (1933) developed an analysis of capital movements based on Ohlin's study. His analysis is based on all neo-classical assumptions, as is Ohlin's, but he introduced interest rate differentials and profit making as motivations of capital movement. However, foreign investment is still regarded as portfolio investment.

Iversens' (1935) well-established theory of capital movement explained why interest rates differed between countries and sectors, and argued that movements of capital and differentials in interest rates are indicators of the amount of risk involved. The common feature of these studies was that no distinction was made between portfolio and direct investment.

Hymer, in his Ph.D. thesis of 1960, put forward a groundbreaking contribution to the modern theory of MNE and FDI. He points out that the neo-classical theory of portfolio investment does not give a complete explanation due to market imperfection⁴ in reality, and the difficulty of applying it to foreign direct investment by identifying the

⁴ Hymer identifies imperfections in factors and goods markets such as governments' interference and monopoly control of raw material or managerial and research skills (Ietto-Gillies, 1992, p 88).

following problems: (1) the theory's difficulty in explaining which way capital would flow and in which amount due to the elements of risk and uncertainty involved as well as the costs of gathering information; (2) the difference between FDI, which involves the transfer of a package of resources such as technology and management skills and no change in the ownership of resources, and portfolio investment that involves only capital transfer (Dunning, 1992, pp. 69-70; Ietto-Gillies, 1992, pp. 83-84). Hymer applies an industrial and organisational approach to the theory of foreign production, arguing that firms which directly engage in foreign value-adding activities must possess counterbalancing advantages through acquisition of control via direct investment to offset the existence of structural market failure, high costs⁵ and risks.

Hymer opened a new research field of foreign direct investment. Later, his work was expanded by Caves (1971) and in particular by the Reading school, with Buckley and Casson's (1976) internalisation theory and Dunning's (1977) eclectic theory of international production (that are discussed in the following sections), the theory of international operations (Rugman, 1982, p. 13).

2.3.2 The Product Cycle Theory

Vernon (1966) used the theory of product life cycle, as the first dynamic approach to explain the determinants of, and relationship between, international trade and FDI through examining the foreign activities of US MNEs in the post-war period. Based on Posner's work⁶ (1961), Vernon advanced the hypothesis that firms in an

⁵ According to Hymer the high costs of foreign direct investment are due to: (1) costs of communication and of acquisition of information in general; (2) costs due to less favourable treatment given by host countries' governments; (3) costs due to exchange rate risks (Ietto-Gillies, 1992, p. 87; Dunning, 1988; Dunning, 1992, pp. 69-70).

⁶ Posner (1961) explains how an initial product innovation in one country leads to cumulative technological advantages and to trade advantages, arguing that the development of 'dynamic economies of scale' contributes to cumulative advantages.

advanced country have access to technology and a capacity for technological innovation in production, although it does not mean any firm in advanced countries in the world can apply accessible knowledge. Depending on each firm's decision on using such knowledge to innovate products, the results can vary from one firm to another.

He argues that the structure and pattern of the US market at the time provided US firms with the capacity to invent new products. This is because of the unique characteristics of the US market: (1) consumers with high average income per capita; (2) the size of market, (therefore, even if a small number of consumers preferred a particular product they could still provide a relatively large market); and (3) a large supply of capital and a shortage of labour.

He further developed the relationship between a firm's production location and oligopolistic structures, arguing that the location of production is affected by decisions taken by MNEs rather than national firms. As the MNEs run their businesses internationally, they have access to any location where capital, labour and components can be mobilised at lower factor costs, and they operate in oligopolistic markets to a larger extent than national enterprises.

Drawing upon an analysis of the firms' response to an oligopolistic market structure, Vernon identifies three stages influenced by the incorporation of oligopolistic elements, and comparative costs in two locations (Agarwal, 1980, p. 751; Ietto-Gillies, 1992, pp. 98-101): An *innovation-based oligopoly*, as the first stage, is one in which new technology, whether in products or in processes, is needed to overcome entry barriers. The production facilities for new products are therefore likely to be established in the country where the new technology is developed and the firm's headquarters are located. In a *mature oligopoly*, sustaining stability is the principle concern. The MNEs in a mature industry therefore search for stability through economic activity in countries

with a geographical concentration of investment. Increasing demand and competition in the markets affect pricing and FDI strategies of the MNEs for local production. A complete standardisation of the product and production technique forces the MNEs to find other means to maintain oligopolistic stability ,such as cartels or production differentiation. As demand becomes more price elastic and labour costs become a large share of total costs, eventually the MNEs seek cost advantages by securing cost reducing production locations, particularly in developing countries. Vernon calls this final stage a *senescent oligopoly*.

Despite the fact that the product cycle theory has mostly been quoted in the field of international business, it has been criticised for only partially explaining the MNEs' activities and for being less applicable today than in the 1950s and 1960s. This is because firms increasingly become global players and there is a diminishing time span between the initiation of production in the home country, and production of the same goods abroad.

Vernon's theory only explained the location of production facilities without addressing all determinants of FDI by the MNEs such as ownership, the search for resource based efficiency, or acquisition of strategic assets by FDIs (Dunning, 1992, p. 71). Solomon (1978) criticised the applicability of this theory as it was restricted to highly innovative industries. FDI by firms in service industries such as hotels, or banking and insurance for example, cannot be explained by the theory.

Furthermore, the theory does not consider the costs and advantages of all possible ways of exploiting innovation abroad and fails to provide a proper analysis for the dispersal of technological, managerial, and marketing advantages from one product to another (Ietto-Gillies, 1992, p. 100). In addition, this theory cannot explain why some

MNEs have not become involved in FDI to exploit their technological advantages (Shin, 1995, pp. 73-5).

2.3.3 The Currency Area Theory

Aliber (1970, 1971) developed a theory of FDI based on currency areas. This currency area theory focuses on explaining when and why domestic companies import products from a host country through licensing agreements with local firms, or via direct foreign production by the source country's firms (Ietto-Gillies, 1992, p. 102). He argues that FDI is determined by the imperfection of international finance and the inefficient performance of currency markets. He is of the view that firms' internationalisation needs to seek explanations which refer to the 'foreignness' of FDI as caused by the movement across the boundaries between customs areas and between currency areas: the existence of multiple customs areas result in the prices differences of products exported from one area to another; the existence of multiple currency areas affects the interest rates on securities issued by borrowers from different areas reflecting different risks because of movements in exchange rates (Aliber, 1970, p. 21; Ietto-Gillies, 1992, p. 103).

Under the assumption that the firm in the source country has a monopolistic advantage (such as technological and managerial advantages etc.), Aliber (1970) calls such advantages 'the patent'. He explains the value of the patent as the capitalised value of the difference between production costs before and after the patent is used (Aliber, 1970, p. 22). He also views that the firm owns the patent has three options: serving a foreign market; (1) exporting; (2); licensing its patent to a foreign company; and (3) foreign production.

If the firm decides to serve a foreign market through (1), the high prices, reflecting high tariffs and high costs of production aboard due to the small quantities of production, are less advantageous than a reduction in production costs due to economies of scale, and a reduction in prices due to avoiding tariffs.

It is assumed that the firm that wants to source a foreign market faces unified custom areas and separate currencies. The essential question is whether (2) or (3) is chosen. Aliber argues that 'the decision whether the source-country firm or the host-country firm exploits the patent abroad depends on the costs of doing business abroad and on national differences in capitalisation ratios, and not on the height of the tariff' (Aliber, 1970, p. 27).

In his argument, countries with strong currencies, such as the United States, the Netherlands and Switzerland, are likely to be source countries, whereas countries with weak currencies tend to be host countries because source-country firms can borrow at lower rates of interest due to smaller risks and provide cheaper capital to their overseas affiliates than those available to host-country firms. That is to say, one of the elements that affects the pattern of FDI is the dispersion in capitalisation rates.

Other elements are the size of the host-country's market, the value of the patents, the height of tariffs, and the costs of doing business abroad in a particular industry. He views that his theory predicts the FDI will be larger in more capital-intensive industries, as well as in research-intensive industries, due to the disadvantage of host-country firms increase, so does the contribution of capital to production (Aliber, 1970, pp. 31-2). The difference in capitalisation ratios can explain take-overs across countries.

Although the currency area theory is useful to understand short- and mediumterm capital movements, it is weak in explanatory and predictive power. Firstly, this theory does not provide reasons for the continuous growth of both American and British firms' investment. Even when their respective currencies were weak (they are currently strong) an exchange of investment was still taking place (Hood and Young, 1979, p. 51; Shin, 1995, p. 88). Secondly, Aliber's theory has great difficulties in explaining cross-hauling or intra-industry FDI, reducing its predictive power. Thirdly, according to this theory, a source-country firm should make immediate profits with the acquisition of a host-country firm. Buckley and Casson (1976) point out that this theory does not provide reasons for MNEs' green-field ventures in foreign markets. Finally, this theory does not explain why overseas affiliates source most of their finance locally and not through a transfer of capital from investors. The contribution of capital to local production is, therefore, not a determinant of FDI.

2.3.4 Caves' Theory

Caves (1971) starts with the analysis that FDI: (1) 'ordinarily effects a net transfer of real capital from one country to another; and (2) it represents entry into a national industry by a firm established in a foreign market'. His study focuses on the industry characteristics of the FDI and on structural traits of the market where MNEs operate. He seeks an explanation as to why a new location affects a firm's horizontal and vertical expansion or conglomerate diversification.

Horizontal integration means the production of the same products in new countries as at home. Vertical expansion relates to firms directly engaged in either backward or forward stages or both of the production process in line with products it already manufactures. If this expansion takes place across national boundaries, vertically integrated MNEs are established. Foreign investment that does not involve any

horizontal and vertical integration is called a 'conglomerate' (Petrochilas, 1989, p. 17; Ietto-Gillies, 1992, p. 109).

In seeking the explanation of why firms are horizontally integrated in a foreign country, Caves argues that 'the firms with special assets, which can be used for additional activities at little or no cost once obtained, are likely to engage in horizontal expansion globally because these assets must give the foreign firms an advantage over the host country's firms, which in normal situations would have a greater advantage. The specific characteristics of market structure where these assets are likely to be found are those that involve product differentiation. He argues that successful firms producing a differentiated product, control knowledge about serving the market that can be transferred to other national markets for this product at little or no cost (Caves, 1971, p. 271). He provides it as the link to the basis for FDI.

His theory would predict that horizontal FDI takes place in industries with considerable production differentiation. For example, the research-intensive industry tends to make horizontal FDI. Industries in which FDI take place tend to be very research-intensive, and therefore a considerable amount of research is directed towards new products and product development. He also explains that firms tend to utilise direct investment when serving a market because of uncertainty about the value of the knowledge and the difficulty in transmitting it (Caves, 1971, p. 273).

Caves argues that industries in advanced countries tend to use vertical FDI in order to reduce or avoid 'oligopolistic uncertainty' and to erect barriers to the entry of new rivals by securing raw materials. In markets in which both buyers and sellers of raw materials are few in number, backward integration can eliminate uncertainty over long-term suppliers and prices. In addition to avoiding oligopolistic uncertainty, vertical integration can also contribute to raising entry barriers against new competitors: a

producer that has significant competitive advantages in the supply of raw materials is a considerable rival for a new entrant into the industry, hence industries in which vertical FDI takes place tend to be dominated by sellers (Ietto-Gillies, 1992, p. 110).

Caves adds to his explanation of determinants of FDI by introducing a few modifications to his 1982 work. In horizontal FDI, he emphasises the transactional advantages of operating under common ownership across national boundaries and focuses less on marketing skills and successful advertising as the source of intangible assets (Ietto-Gillies, 1992, p. 111). He also postulates that "vertical integration depends not on natural resources but on subdividing production processes and placing abroad those that are both labour-intensive and footloose" (Caves, 1982, p. 20). He explains that vertical and horizontal FDI are often combined because affiliates can be involved in both manufacturing components and selling finished products to the local market (Ietto-Gillies, 1992, p. 111).

In general, Caves' theory can be applied to FDI in specific sectors and one might accept his theory as an explanation of growth strategies of firms. However, his theory does not provide a reason for the fact that such strategies are applied internationally. He also overlooks the fact that the MNEs themselves are responsible for the technology of the division of production processes into stages. Neither this feature of vertical integration nor diversification on an international basis is fully explained.

2.3.5 The Oligopolistic Reaction Theory

Knickerbocker (1973) introduced a theory of FDI in order to address (1) the *a* priori reasons why certain firms engage in FDI, (2) how such engagement is linked to the market structure, and (3) why and how the pattern of FDI varies according to

industries and countries through testing twelve industries in the United States⁷. He begins by defining two stages of FDI: (1) 'aggressive investment' as the establishment of the first subsidiary in a given industry and given country; and (2) 'defensive investment' as the establishment of subsequent subsidiaries on completion of the first.

Knickerbocker mainly focuses on defensive investment in his work. He develops his explanation for FDI as being based on oligopolistic structures in which specific characteristics are identified: (1) few sellers; (2) products that are close substitutes; and (3) substantial market interdependence among the competitive policies of these firms (in other words, firms' behaviour is interdependent, leading to a pattern of action and reaction in this market structure) (Knickerbocker, 1973, p. 4). In an oligopolistic market structure, special opportunities to seize a market or new technologies or sources of raw materials may cause each oligopolistic firm to consider an aggressive move in order to minimise the risks of losing its own market position. However, this aggressive move is unlikely to be used because firms with roughly equal competitiveness want to avoid the risk of mutually destructive competition due to reactions, leading to defensive policies. He explains this as oligopolistic equilibrium.

Knickerbocker assumes, however, that firms in fast-changing and growing industries where technologies and markets change rapidly may make an aggressive move to challenge the oligopolistic equilibrium. In order to link this assumption to oligopolistic firms' FDI, he uses Vernon's product life cycle model (Knickerbocker, 1973, p. 18). Firms involved in innovative products and their development can obtain various technological, managerial, and marketing advantages which then lead to oligopolistic structures through the elimination of smaller producers and entry opportunities of new rivals. He argues that "the special technological and organisational

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⁷ The source of data used by Knickerbocker (1973) is the 'Multinational Enterprise Study', a survey of international expansion by major firms, conducted between 1966 and 1971 at the Harvard Business School.

capabilities acquired by these firms first invested them with market power at home and at a later date invested them with market power abroad" (Knickerbocker, 1973, p. 20). In other words, these advantages can provide firms with the capability to establish oligopolistic structures in domestic markets and make direct investment in foreign markets.

Knickerbocker then explains the reasons for the existence of a cluster of firms in the field of FDI in terms of countries, industries and timing. He claims that rival firms engage in FDI to avoid the risk of losing competitive advantages, such as large scale production, the use of new technologies, access to cheaper inputs and marketing skills. This is because rival firms may then use such advantages to improve competitiveness (which can change oligopolistic equilibrium) and eliminate others. Under oligopolistic conditions, firms therefore tend to match each other's moves in FDI (defensive investment) as defensive policies.

Knickerbocker's empirical study suggests that (1) entry into certain markets tend to be concentrated in peak years; (2) increased industrial concentration causes increased entry time concentration in FDI; and (3) "the profitability of overseas manufacturing industries is positively related to entry time concentration" (Knickerbocker, 1973, pp. 190-5; Ietto-Gillies, 1992, p. 132).

Although Knickerbocker's theory is dynamic in discussing changes in the oligopolistic structure, his theory does not explain why firms initially desire to engage in FDI, and also fails to predict either the behaviour of firms or the pattern of FDI in various countries and industries, for the following reasons: (1) it is difficult to quantify the variables of risks; and (2) this theory does not consider the possibility that firms may use various strategies (sub-contracting, joint venture, licensing, etc.) and make an FDI in a country for different reasons. That is, a wide scope of multinational firms' activities in

terms of countries, industries and sectors, require a variety of strategies and different behavioural patterns, resulting in different patterns of FDI.

2.3.6 The Internalisation Theory

Originally, attention was drawn to the internalisation approach theory by Coase in 1937. He explains that a firm's tendency to grow is based on the costs and benefits of internal transactions until such costs become equal to costs and benefits of external transactions on the open market or in another firm (Coase, 1937, p. 341). His approach, therefore, suggests that vertical integration within a firm can avoid the transaction, contracting, and co-ordinating costs incurred when using the market. Williamson (1981) uses the economising of transaction costs to analyse the growth of the firm. He also explains the evolution of the internal structure of modern corporations and the issue of ownership and control within it.

Buckley and Casson (1976) developed Coase's internalisation approach into a general theory on MNEs. They try to explain the post-Second World War pattern of FDI through examining large cross-investment between developed countries (Ietto-Gillies, 1992, p. 117). The internalisation theory is based on the application of market imperfections which produce benefits for internalisation as Hymer, Vernon and Caves assumed in their theories. This theory is concerned with explaining the MNEs' tendency to internalise intermediate products rather than to organise them through market forces.

In the theory, Buckley and Casson start with pointing out that (1) firms tend to maximise profit in imperfect intermediate product markets; (2) in imperfect intermediate product markets internalising intermediate products are likely to take place to avoid these imperfect markets, taking different market-linked activities under common

ownership and control; and (3) internalisation of markets across borders causes FDI by firms (Buckley and Casson, 1976, p. 33; Ietto-Gillies, p. 115).

Buckley and Casson suggest four main factors affecting the internalisation decision: (1) industry-specific factors that are connected to the nature of the product and markets, and which generate internalisation of markets for intermediate products and thus vertical integration; (2) region-specific factors, such as cultural differences and geographical distance; (3) nation-specific factors, such as political and fiscal considerations; and (4) firm-specific factors related to a firm's capability to create internal markets, such as technical know-how and marketing skills (Buckley and Casson, 1976, pp. 33-35; Ietto-Gillies, 1992, p. 115).

According to Buckley and Casson, particularly markets for intermediate products and markets for knowledge are considered as the two most important areas of internalisation. Firstly, before the Second World War, firms engaged in FDI to secure primary products through vertical integration: the internalisation of intermediate markets. Secondly, since the Second World War, firms producing knowledge-intensive goods have strong incentives to internalise because of difficulties in organising efficient external markets for knowledge. Markets in knowledge-based products normally involve: (1) long time lags to complete the production process, (2) high transaction costs because of market future uncertainty, (3) buyers' uncertainty in assessing the value of the knowledge, (4) nature and quality of the product, (5) the capability to use discriminatory prices, and (6) difficulty in transferring prices of the knowledge. In the case of international markets, government intervention through tariffs and restrictions on capital movement may generate transaction costs.

Buckley and Casson conclude that imperfect markets cause internalisation; markets for intermediate products, and particularly for knowledge, are highly imperfect

and tend to be internalised. Like Caves (1971), Buckley and Casson view knowledge as public goods which are easily transferred across national boundaries at little or no cost. Hence, firms producing knowledge-based products are more likely to create internal markets across frontiers by engaging in FDI. That is, firms which own knowledge tend to internalise through FDI in countries where they can make efficient use of their knowledge, and where buyers exist who can appreciate knowledge-based products.

The internalisation theory has been adopted as one of the leading FDI theories along with the eclectic theory developed by Dunning (1977;1979), as both theories are able to predict the MNEs' activities relating to the internalisation of products in foreign markets based on the costs of organising cross-border markets. Although Buckley and Casson provide a useful approach with the theoretical framework for assessing the international horizontal and vertical integration on the basis of efficiency, the internalisation theory still has limitations in embracing all elements of the MNEs' activities.

Firstly, internalisation is one of the ways in which a firm grows, not an explanation for the growth of the firm. Due to his consideration of market imperfections as exogenous factors, this theory does not give a clear explanation as to what extent imperfect markets lead to the growth of firms, in particular at the level of very large firms. As Hymer argues, market imperfection is an assumption and part of the environment where MNEs operate and are a creation of MNEs. In order to increase market power and their level of control, the larger MNEs may create market imperfections which then become external (Ietto-Gillies, 1992, pp. 117-8). Buckley and Casson's theory can only be valid if market imperfections are considered as exogenous variables.

⁸ Buckley (1983) acknowledges that: 'It is a valid criticism of the internalisation rubric that market imperfections are taken as exogenous to the internalising firm'.

Secondly, the internalisation theory does not provide strong reasons why MNEs decide to internalise through FDI in many countries. The MNEs may use different methods to involve business in foreign countries other than production through FDI; for example manufacturing products at home and exporting to foreign countries, or by establishing license agreements.

Thirdly, the MNEs do avoid imperfect markets in intermediate and knowledge-based products via FDI, yet it is not clear that internalisation is motivated by high transaction costs of external markets, and the motives for internalisation provided by this theory are not satisfactory (Petrochilas, 1989, p. 23).

Finally, this theory fails to see that internationalisation is not a by-product of internalisation because it overlooks the advantages of firms' FDI in many countries as characteristics or advantages of MNEs; internationalisation cannot be simply considered as an extension of the internalisation process as problems generated by internalisation may cause firms' FDI or internationalisation (letto-Gillies, 1992, pp. 118-9).

2.3.7 The Eclectic Paradigm

The eclectic paradigm was developed by Dunning (1977) to seek a general framework for explaining FDIs undertaken by various companies. Dunning considers both the determinants of the extent and pattern of FDI of a country's enterprises, and of domestic production by foreign-owned enterprises (Dunning 1992, p. 76). He regards the advantages of ownership, location and internalisation together and attempts to apply them to firms' international production, FDI and international trade.

Dunning starts by introducing the two types of economic involvement by one country's enterprises in those of another: the first type is related to economic

involvement that takes place in the domestic market, using domestic resources, but providing goods and services for foreign markets; the second type is related to economic activities of domestic firms that exploit resources located in various countries in order to produce goods and services, and serve foreign markets.

The eclectic paradigm suggests an analysis of why and where an enterprise makes decisions on the exploitation of ownership, location and internalisation advantages abroad by identifying four necessary and sufficient conditions for FDI to be undertaken by a firm: (1) an enterprise must be able to acquire certain assets as ownership-specific (O) advantages over firms from another country in serving a particular market; (2) once O advantages are obtained, the enterprise must be capable of adding most value to its O advantage through internalising the use of resources rather than selling them, or their right of use, to foreign firms. These advantages are referred to as market internalisation (I) advantages. These advantages may reflect a firm's ability to exercise monopoly power over the assets under their control. (3) Firms tend to be located in a country that possesses one or more location-specific (L) advantage over those which do not, in order to exploit them along with O and I advantages; and (4) firms that possess all the above O-L-I advantages tend to engage in FDI as a long-term management strategy (Dunning, 1977; 1988; 1993, pp. 79-80; Agarwal, Gubitz & Nunnenkamp, 1991, pp. 8-10; Ietto-Gillies, 1992, p. 121).

Unlike L advantages, which are exogenous to the enterprise, O advantages are endogenous to it. Dunning provides three types of ownership advantage in his approach. The first type of O advantages consist of standard advantages which any firm can have over another producing in the same location from which firms benefit in terms of access

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⁹ The word 'assets' is used in the Fisherian sense (Johnson, 1968) to mean not only tangible assets, such as natural endowments, manpower and capital, but also intangible assets or capabilities such as technology and information, managerial, marketing and entrepreneurial skills, organisational systems and access to intermediate or final goods markets (Dunning, 1992, p. 77).

to and usage of raw materials and markets, size and monopoly power. In the second type of advantages, a branch of a national firm may have more advantages than a new enterprise in relation to economies and benefits, such as cheaper inputs, knowledge of markets, R & D at no or low marginal costs, stemming from belonging to a larger pre-existing organisation. The final type of advantage is when firms that operate in many countries are in a better position than a national firm to exploit different factor endowments and market situations (Ietto-Gillies, 1992, p. 121).

Dunning explains that a company's overall competitive advantages are decided by not only the L and O advantages of its enterprises, but also by "the desire and capability of these enterprises to internalise the advantages derived from this possession" (Dunning, 1977, p. 402). He accepts, however, that such advantages are not static and that a firm's strategic response to any particular O-L-I configuration may affect the nature and pattern of its O and I advantages in a later period (Dunning, 1992, p. 80).

Dunning claims that the eclectic paradigm suggests that all forms of foreign production by companies from all countries can be explained by the above conditions, and also predict that at any moment in time, the more a country's enterprises possess O advantages, the greater they are motivated to internalise rather than externalise their use, and that the more they seek to take advantage of a foreign location, the more they tend to engage in FDI.

Although the eclectic paradigm is the most comprehensive explanation of FDI, it is difficult to formulate mathematically or test empirically in a single model. It is not possible to use this paradigm to explain all FDI at the firm, industry and country level. Any empirical study conducted usually refers to one or several of the elements of the eclectic paradigm.

Dunning focuses on countries' characteristics affecting O-L-I advantages in his paradigm. He argues that countries with low labour costs, and / or abundant natural resources, tend to have above average inward direct investment, while developed countries tend to engage in an above average outward direct investment. However, the eclectic paradigm cannot explain why both inward and outward FDI takes place in developed countries, in particular in the case of the United Kingdom (Ietto-Gillies, 1992, p. 123). Hence, applying country-specific characteristics (L advantages) as one of the determinants of firms' FDI may not be appropriate to every country's experience.

In addition, this paradigm ignores the possible effects of O advantages, particularly size and monopoly power, on the macro-economy and thus on L advantages. Dunning accepts that "the ability of the owners of the firm to extract the maximum value added from the various factor inputs it utilises, and the way it coordinates these factors, will determine the size of its O advantages" (Dunning, 1992, p. 95).

2.3.8 The Kojima Theory

Kojima's theory (1978) of FDI is an extension of the neo-classical theory of trade to explain cross-border transactions of intermediate products, such as technology and management skills. He expresses dissatisfaction with using existing theories, usually developed on US experience, to explain the pattern of Japanese outward direct investment.

Differentiating Japanese FDI (as trade-oriented investment determined by the principle of comparative advantage), from US FDI (as anti-trade oriented investment made within an oligopolistic market structure), Kojima explains that Japanese FDI is

made for two purposes: firstly, to take advantage of natural resources which are not available or not produced in sufficient quantity domestically; and secondly, to seek cheaper production locations, such as South-East Asia, for labour-intensive industry (Petrochilas, 1989, p. 21).

In the theory, Kojima claims that FDI acts as a stimulus to trade in intermediate products, and that the timing and direction of such investment should be determined by market forces. He argues that a firm that produces intermediate products requiring the use of non-transferable inputs should engage in outward FDI in which the host country does not have comparative advantages in these products (Dunning, 1988, pp. 50-1).

This theory also explains how the flow of direct investment is determined by the structure of a country's comparative advantages in trade and firm-specific advantages, and identifies some of activities of MNEs as being the result of structural market distortions. The Kojima approach, however, is problematic as a general explanation of FDI.

This theory's limitations are as follows: (1) it fails to view the internalisation of intermediate product markets as the essential characteristic of MNEs' activities. Hence this theory cannot explain the kind of trade flows, including trade in intermediate products, based more on the need to exploit economies of scale, production differentiation and other evidence of market failure rather than the distribution of factor endowments; (2) this theory is very much normative and tends to be static (Dunning, 1977, p. 412); and (3) the motives for FDI are not explained properly in the theory. Kojima asserts that FDI by Japanese firms is to upgrade the industrial structures of both home and host economies. If this were so, technological agreements or licensing could be an alternative to FDI and may even be more satisfactory from the host country's point of view; (4) this theory has limited predictive power for, and applicability to, the

explanation of future Japanese outward FDI (Petrochilas, 1989, p. 21); this theory does not properly consider that trade in intermediate products is based on benefits from common governance of cross-boundaries activities, such as O advantages (Dunning, 1992, pp. 50-1).

2.4 Income-Driven Product Cycle Model

The general FDI theories were observed in the above section. Among those theories, Vernon's product life cycle model (refer to section 2.3.2) was elaborated so that it could be applied particularly to the scale-sensitive heavy and chemical industry (HCI). In Vernon's theory, technology via innovation and product standardisation was the central instrument adopted to encourage plant locations close to major markets where external economies reduce the risks for new producers. In other words, the production technology becomes standardised, so production relocates to regions with lower labour costs.

Stobaugh (1970) attempted to adapt the product cycle model to scale-sensitive HCI by using a case of the petrochemical industry. In his study, he pointed out that the locational change was affected by changing market size rather than technological innovation. He also explained that the industrial plants were initially located at the major market because the market demand could support a plant of minimum viable size, therefore developing countries with smaller markets were effectively served by imports rather than by local production. However, if the market demand in developing countries increased enough to support the minimum volume for viable plant size, then local production could take place in those countries. This diffusion of scale-sensitive plants to emerging economies was motivated by efforts to minimise freight costs.

The income-driven product cycle model was elaborated upon from Stobaugh's scale-based reformulation of the product cycle by Auty (1984). He formalised the link between competitiveness, the level of economic development in the regional market and the market's stage of demand growth within the product cycle (Auty, 1993, p.187). Initially, he explained changing post-war global petrochemicals production by applying the income-driven model, then he applied it to the steel and aluminium industries that were categorised as scale-sensitive heavy industries (Auty, 1984, 1987).

Auty particularly attempted to apply the model at the global level. Due to the different level of economic development, regional markets are at differing stages of the product cycle. If everything else is considered to be constant, he argues that 'the income-driven product cycle model shows that manufacturers located in large regional markets in the dynamic youthful stage of the product cycle have a competitive advantage over those in regional markets in the pioneer, mature or eclipse stages' (Auty, 1993, p. 187). The reason is that the mechanism that drives changing locational competitiveness in this model is a growth dynamic or Verdoorn effect. Technological change or market size alone cannot motivate transfer of production plants in a particular market whereby manufacturers wish to gain competitive advantages.

In dynamic regional markets, the Verdoorn effect improves the competitiveness of manufacturers, but for producers located in the markets of the mature or eclipse stages, their competitive advantages are weakened due to the decrease or absence of the Verdoorn effect. Mishimizu and Page (1989) studied productivity trends for a cross-section of developing and developed countries and concluded that there was a positive relationship between the level of economic development and total factor productivity (TFP) change which is consistent with Verdoorn effects. They found that the highest

rates of TFP growth occur in high-growth developing countries with export-oriented strategies, such as South Korea, while rates in the industrialised countries are lower.

The Verdoorn effect is explained by the impact of 'learning by doing', in other words the greatest productivity gains are to be made in the early stages of the product cycle, and then they are gradually reduced as markets mature. Another explanation of this effect is a virtuous circle of growth effects (Auty, 1993, p. 188). This shows that the more dynamic and fast-growing markets indicate high income elasticity and a rapid growth in demand, consequently the average age of the plant is low and productivity is high. In these markets, producers can lower the risks of over-capacity and secure trained labour force more effectively, compared with those in slow-growth markets. Auty summarised that the competitive advantage in HCI shifts from those producers in markets in which demand is decelerating, to those in regions of lower per capita income whose markets have crossed the minimum viable plants threshold size and are in the dynamic and youthful stage of the product cycle, as markets grow at different stages in the product cycle.

For the automobile industry, which is a skill-intensive HCI, the competitive advantages can be explained by the locational theory on a global perspective rather than classical one. In classical locational theory, cheap labour has been an advantage due to its contribution to the reduction in operating costs which may be one of the most significant advantages in automobile assembly. A second advantage is a reduction in construction costs. The cost of plant can be cut down to more than one-third of average production costs (Auty, 1993, p. 189). Particularly, in the dynamic markets such as of South Korea and Taiwan, cheap labour is more productive according to Mishimizu and Page's study. Therefore, cheap productive labour in newly-industrialising countries (NICs) may enhance the potential competitive advantages in the car industry as well as

HCI. Technology innovation, including organisational changes, also increase production flexibility and lower the optimum plant size. This implies that smaller producers in NICs and developing countries can survive due to the plant down-scaling.

However, at the same time, the development of new technology deters NICs' competitiveness in HCI which can be compounded by their market dynamic advantages. For example, the just-in-time (JIT) system, or new technology in building a painting shop in the automobile industry, slows the loss of industrial country competitiveness, as such countries pass through the mature stage of the product cycle For example, Japanese producers are able to retain sufficient flexibility to reduce production costs, and American producers use innovated technologies in constructing a painting shop which reduces plant minimum viable size. In particular, opportunities for exports from NICs to developed countries are restricted, compared with Western Europe and Japan at similar phases in their product cycles, because lower optimum plant size facilitates the diffusion of HCI, including the automobile industry, to the smaller developing countries which might otherwise have imported from the NICs (Auty, 1993, p. 196).

Overall, in the wide perspectives of the income-driven productive cycle model, government policy emerges as an important variable. It was observed that inappropriate industrial policies, such as inward-oriented policies for HCI in the Latin American and low-income Asian NICs, lacked or gave a negative effect on adequate local demand for the minimum viable plant size. This implies that government policies can affect the diffusion of HCI significantly.

Since the 1930s many economists have devoted themselves to developing theories of international economic involvement. These theories consist mainly of a well-established theory of international trade with a complementary theory of capital movement (Agarwal, 1980, pp. 739-40; Dunning, 1977, p. 395). The genuine development of FDI theory started in the early 1960s. Since then, the literature relating to FDI has evolved and proliferated.

Most existing theories, which were observed in the above sections, have mainly concentrated on the motives for FDI by firms from developed countries, such as the United States of America, Europe, and Japan with exception of the income-driven product cycle model. The common pattern of FDI after World War Two was by direct investment from firms based in developed countries to firms in other developed countries. As was often the case, high-income countries that provide an environment suitable for the development of large Research and Development (R and D)-intensive firms, and to specialisation in technologies and products, led to FDI in countries with the purchasing power for resulting products derived from similar income levels (Giddy and Young, 1982, pp. 55-6).

There is a reason why theories of the international economic activities or FDI of firms from developing countries or newly industrialising countries (NICs) are not well developed. This is because there were insignificant numbers of MNEs active as global players until the mid-1970s. It was only from the 1980s that MNEs from developing countries and NICs have proliferated, although MNEs from developing countries existed in the pre-World War I period (Argentine enterprises were engaged in economic activities within Latin America) (Vernon - Wortzel and Wortzel, 1988, p. 27).

Papers on various perspectives of LDC MNEs have been published since the 1970s. Innovative research on the growth and effects of developing country MNEs were contributed by Diaz-Alejandro (1977) on Latin America firms, Wells (1977) mainly on Asian firms, and Lecraw (1977) on developed and developing country firms operating in Thailand. Lall (1979) studied direct investment by LDCs as a form of technology export, and later (1982) presented more complete research on Indian MNEs. Theoretical analyses¹⁰ were also discussed, although they were rather superficial and ad hoc explanations of motives due to severe constraints in available data and information.

The most comprehensive empirical work on developing country MNEs is by Wells (1977). His study was based on a large sample of investors from different developing countries. He explained that developing country MNEs have strength mainly in price competitive sectors rather than product differentiation due to low-cost management, although there were some exceptions. He also remarks on a few cases of specific advantages generated by ethnic factors and host government policies. However, he overlooked issues on the possible advantages that may result from conglomerate ownership.

Wells' work was elaborated further by Lall (1983). He enhanced an understanding of developing country MNEs' economic activities by empirical studies of major MNEs from LDCs (India, Hong Kong, Argentina, and Brazil). He explained that when entering equally or more developed host countries, firms from LDCs would tend to provide advantages, less in overall technological terms, but more specialised (or localised) in terms of certain areas of technical progress. He argues that LDC MNEs

These are location-specific advantage theory (Giddy and Young, 'Conventional theory and unconventional multinationals do new forms of multinational enterprise require new theories', in Rugman (Ed), New Theories of the Multinational Enterprise, 1982), extended product life cycle theory (Aggarwal, 'The strategic challenge of Third World multinationals: a new stage of the product life cycle of multinationals' in Farmer (Ed), Advances in international comparative management, 1984), and social construction approach (Granovetter, 'Economic action and social structure: the problem of embeddedness', American Journal of Sociology, 1985).

may develop firm-specific advantages which provide the basis of FDI and these would be derived from innovation on different lines from developing country MNEs.

Lall explained the possibility of obtaining firm-specific advantages as LDC MNEs by using two characteristics of technological progress in the real world: (1) the localisation of technical change at the micro level; and (2) the irreversibility of such change. According to the 'evolutionary' theory of technical change, firms only know and understand a very limited range of techniques, and to shift to a different one requires considerable cost and effort (Nelson and Winter, 1977; Lall, 1983). Their technical progress is localised around this point, and proceeds in a direction governed by given market conditions and scientific advance (Lall, 1983, p. 4). The progress is irreversible. Once the whole industrial system has adapted to new technologies, it is not possible to reproduce or transfer obsolete technologies efficiently. In addition, the conditions of markets are not homogeneous and perfect.

Lall (1983) also added several conditions under which an LDC firm can create a firm-specific advantage over developed country MNEs: (1) its technologies can be localised around a different set of techniques from that of developed countries (this difference may be caused by its own innovation from imported original technology which cannot be efficiently sold by the developed countries); (2) based on the adaptation of imported products, LDC firms can manufacture a specific product to a specific sector of the market better than a developed country firm; (3) LDC firms can possess technological advantages not only because they perform better in adaptation to local factor prices, factor quality, and demand conditions, but also because the direction of their innovation can provide techniques which are efficient at smaller scales than currently used in developed countries; (4) LDC firms serving large domestic markets may develop competitive differentiated consumer products due to their experience of

serving a diversity of domestic users and meeting new industrial needs; and (5) all these advantages may be strengthened by the ability to operate better in the environment of other LDCs (governmental, climatic, cultural), by peculiar ethnic or linguistic links, or by the experience of training 'raw' labour. He argues that these firm-specific advantages can be strengthened by two factors: (1) access to exceptionally cheap skilled labour in their home country; and (2) being an affiliate of large, diversified conglomerate groups owned by traditional business families which may give them certain special advantages in terms of financial, managerial, and technical resources. In summary, he explained that under certain conditions LDC firms operating with generally 'lower' levels of technology and skills can obtain a firm-specific advantage which can be exploited by FDI. The growth of FDI by LDC firms may also be affected by changing preferences on the part of the host countries. For example, depending on the specific industrial policies toward particular industries that host countries pursue, such as an export-oriented or an import-substitute strategy, FDI by LDC firms involved in particular industries can be increased.

However, Lall mentioned that firm-specific advantages obtained by LDC MNEs can vary from one country to another, based on its stage of industrial development, size, skill endowment, and government strategy. Although the size of the economy and its experience with industrialisation will clearly be significant, it is likely that the main source of difference will lie in the widely differing trade and industrial strategies that LDCs have adopted. The findings from Lall's study shows that the industrial characteristics and motivations of the LDC MNEs reveal differences in their competitive advantages overseas, indicating the complexity of LDC MNEs.

Yeung (1994) synthesised the existing research on the motivations for FDI by LDC MNEs. The findings on motives are: (1) to gain access to the exploitation of

location-specific advantages, such as cheap labour and raw materials, in order to overcome foreign rivals in the local markets; (2) not to be restricted by sluggish domestic markets; (3) to exploit the knowledge of local markets; (4) to exploit relative firm-specific advantages; (5) to protect or penetrate foreign markets; (6) to diversify risks; and (7) to establish cultural and ethnic links. Characteristics in ownership patterns, investment strategies and sectoral composition of developing country MNEs may differ fundamentally from those of developed country MNEs (Yeung, 1994, p. 297). The different development stages of the home countries may reflect the different motivations of their own MNEs' FDI.

The MNEs from developing countries in the 1990s are not the same as they were in the 1970s and 1980s. It is particularly difficult to predict the future of developing country MNEs because their economic activities are still in a developing stage, and the empirical studies of developing countries' MNEs are still relatively few, compared with those of developed countries' MNEs.

2.6 Strategy and Theory of the Firm

Effort has been made to establish well-developed and generally applicable theories of FDI. However, it is found that none of them appear to provide a satisfactory explanation as to why firms engage in such activities. At this stage it is necessary to seek improved explanations of FDI by firms at the micro level. Dunning (1993) regards FDI as part of the entrepreneurial and organisational strategy of firms in order to explain the reasons why, and the situations in which, particular firms become foreign producers and / or increase, or change the pattern of, their global economic activities. He looks at FDI from the view of the entrepreneurs and managers of individual firms.

Before related issues are discussed further, it is important to explain the concept of a firm's strategy and why a strategy is needed to achieve firms' specific goals in value-added activities in foreign countries. A business strategy has been defined by several academics. Chandler (1966) relates a 'strategy' to the concepts of long-term goals and objectives of an enterprise, and to the adoption of specific methods for allocating the resources which are necessary for achieving the goals. The Business Policy group at the Harvard Business school developed a more elaborate concept of corporate strategy; 'strategy is the result of a balanced consideration of a firm's skills and resources, the opportunities existent in the economic environment, and the personal desires of management, presumably tempered by its sense of social responsibility'. Dunning (1993) explains a strategy as 'a deliberate choice taken by the entrepreneurs or managers of firms to organise the resources and capabilities within their control to achieve an objective or set of objectives over a specified time period'.

In the world of perfect competition, strategy or management or entrepreneurship is not important because resources and capabilities are generally assumed to be immobile and the firm is presumed to be a rational, but passive, economic agent with little or no freedom for strategic manoeuvre (Dunning, 1993, p. 186). However, the market is not perfect; for example, the market can be distorted by the government policies or firms' oligopolistic behaviour and these distortions incur transaction costs. Once market imperfections are accepted in the real world, the firm's behavioural options are various and the entrepreneur and manager play a rather significant role. Due to these market imperfections, it is not always possible to measure transaction costs, particularly those associated with risks and inter-personal relationships, and it is difficult to judge whether or not costs are being minimised or revenue being maximised at a given level of output, or if the right level of output is being produced. The entrepreneur's and manager's roles

to create strategies for a firm will vary depending on the nature and extent of the market imperfections, the coincidence of interest between the strategist and the stakeholders in the business, the strategist's judgement of the probability and time profile of the outcome of alternative courses of action, and the entrepreneur and manager's attitude to risk taking.

Based on their assessment of the uncertainties involved, the business strategists attempt to address a particular problem more pragmatically by identifying particular solutions for a firm or group of firms as well as focusing on specific areas of decision taking. Therefore, the decision or strategies taken by business strategists based on each firm's particular situations could vary. In other words, the chosen strategy by a firm for a similar or same problem may not be the same one for other firms.

In FDI, diversifying the product locations as a strategy could be particularly costly because this is most likely to increase a firm's transaction costs, for example, those related to hierarchical control and intra-firm communications (Hirsch, 1976). If FDI was, however, made by business strategists (or by a firm), there might be advantages offsetting these increased transaction costs. When a firm considers FDI as the best way of serving any given market (or set of markets) compared with other modes of supplying that market, the strategists or decision makers in a firm believe that the costs of engaging in FDI are lower than either those of engaging in the same activity in the home country and exporting its output from there, or of concluding licensing agreements with a local firm in the foreign country. However, other firms in the same industry could perceive FDI differently, and then they may choose different strategies rather than engage in FDI. Whichever strategies the firms choose within the same or similar circumstances, their growth and profits are generated successfully or unsuccessfully by their chosen strategies.

The process of a firm's internationalisation is well elaborated by Dunning (1993). He explains this process by introducing five phases. In phase one, firms initially enter foreign markets. The first reason is to acquire intermediate products at lower real costs than they can from domestic markets, or to prevent competitors from gaining access to these intermediate products. The second reason is to protect existing markets or seek out new markets for their products manufactured domestically. In both cases, however, the decision to become global is only one of a number of strategic choices a firm may pursue. As discussed above, there are always unknown costs or uncertainties involved in entering into a foreign market related, such as relating to size, stability, and future prospects of that market. For this reason, the strategic decision about foreign market entry is an important one for any firm.

The mode of a firm's entry into a foreign market differs according to the reason for that entry. It could be an export, or FDI, or a licensing agreement. There is no single initial mode of entry into a foreign country because this will depend on the characteristics of the targeted market, the kinds of goods and services being produced and traded, the market structures in which firms compete and the nature of the cross-border transactional mechanisms. The importance of these variables will be significantly influenced by country-specific factors (economic, legal, political, institutional, and cultural) and firm-specific factors (technical capabilities of the trading firm, its experience of foreign markets, its potential market share in the local market, and its knowledge about potential buyers and sellers) factors. Then, these factors will influence the determinants of cross-border economic activities.

Phase two consists of investment in trade-related facilities. This investment in foreign trade-related activities may be regarded as a first step towards FDI. Purchasing a warehouse in a foreign country where a firm trades is an example. Then, the internal and

external factors affecting the strategy of a firm influence acquiring marketing or purchasing facilities of their own. Through this FDI, a firm can obtain an advantage of securing management control over the form, quality and terms of those activities, and the risks in relation to the invested resources.

If phase two is a critical step in the evolution of an MNE because it can lead to further FDI, then phase three can be explained as the firm's involvement in foreign production (goods and services) by forward or backward linkages. As explained in phase one, there are many variables which are country, industry and firm-specific, influencing the form of the internationalisation process of firms. Dunning points out some of these variables: (1) the experience factor (whether the firms have experiences in foreign valueadded activities); (2) economies of size (as and when local or regional markets enlarge, the economic viability of establishing or acquiring a foreign production facilities is likely to increase, the extent to which this actually leads to FDI depends largely on the types of intermediate or final products supplied, the nature of production processes utilised and the quality of the local supply capabilities); (3) the dynamics of supply capabilities and flexibility of the production process (the more that value-added activities can be adapted to supply capabilities and changing market needs of the foreign country, then the more is the likelihood that foreign production will increase); (4) import barriers and / or export incentives (these can encourage or discourage firms to establish production facilities); (5) behaviour of competitors (as discussed in the earlier sections above, oligopolistic behaviour of firms can lead their competitors to engage in foreign production); (6) cross-border transport costs; and (7) cross-border administration costs (these will vary depending on the size of the investing firm and its experience in foreign markets, and the kind of foreign value-added activities being considered.

In phase four, a deepening and widening of the value-added network can proceed. As the foreign subsidiaries accumulate experience in the local market and their production increases, the parent companies may invest more in secondary processing operations. In other words, if the initial foreign production is successful, sequential investment either or both in the form of vertical or horizontal integration is likely to take place.

In phase five, MNEs co-ordinate a distribution of value-added activities between the home and foreign countries, the so-called regional or global integration of the value network. Reaching phase five will depend on various factors: the range and types of products it is supplying, the extent to which product or process specialisation may lead to economies of plant size or scope, the countries in which the investment is currently being made, the ease with which intermediate or final products can be traded abroad, the intra-firm transaction costs involved, and the attitude and strategy of the MNE towards the management of its foreign value-added activities. The five phases of this internationalisation process of the firms can cease at any phase depending on all of the plausible variables discussed above. For example, a phase one entry may progress into phase two and then end there, or alternatively the initial entry could occur at phase three.

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2.7.1 Research Questions and Hypotheses

In order to find out the motivations for Daewoo Motor's FDI in East Central Europe through this research, it is necessary to address the following questions: why did Daewoo Motor commence FDI in the first place?; why didn't Daewoo Motor choose to export its finished products to these countries or establish a technology agreement with car manufacturers in these countries for exporting auto parts and components for assembling cars in local markets without capital investment?; what are the advantages of FDI over exports in terms of securing or cultivating export markets?; and did changes in car output, domestic market conditions, and export performance affect Daewoo Motor's FDI decision?

There are many variables which in theory could have influenced Daewoo Motor's decision on FDI. Firstly, as Lall (1983) explained (refer to section 2.5), Daewoo Motor must have possessed firm-specific advantages which led the company to FDI in East Central Europe. He argues that developing country MNEs can have those advantages with some conditions: (1) localising technologies; (2) manufacturing a specific product to a specific sector of the market with localised technologies; (3) being efficient in terms of prices, quality, and market demand conditions; (4) having experiences of serving a diversity of domestic users (large market); and (5) being supported by favourable government policies. Those firm-specific advantages can be strengthened by (1) cheaper labour; and (2) being an affiliate of large conglomerate groups. As a subsidiary of a large group, such as the Chaebols in South Korea, the firm can be supported by the parent company's financial, managerial, and technical resources

more strongly than those of small and medium size companies. Daewoo Motor's firm-specific advantages and conditions, as well as its strengthening factors, which could have constituted the impetus of the company's FDI, will be examined throughout Part B of this thesis (chapters 3, 4, 5 and 7).

Hypothesis (1)

Daewoo Motor possesses firm-specific advantages strengthened by its relatively cheaper labour, and by it being a subsidiary of the Daewoo Group, which enabled the company to commence a program of FDI in East Central Europe.

The theory of the firm (Dunning, 1993 and Rumelt, 1974) can be employed to explain Daewoo Motor's FDI in East Central Europe. Market imperfections (causing transaction costs), and a subsequent need for the firm's strategy decided by its managers were discussed in section 2.6. Each firm could choose different strategies in the same circumstances because variables which affect the firm's strategy are country-, industry-, and firm-specific. Rumelt defines a diversification strategy as the firm's commitment to diversity per se, together with the strengths demonstrated by the way new activities are related to old activities. This diversification strategy serves to insulate the firm from the risks.

Daewoo Motor must have its own particular strategy for diversifying its production locations. The company believes that FDI is considered an effective strategy for gaining higher net benefits over other modes of foreign market entry. By testing the hypothesis (2), variables affecting Daewoo Motor's FDI in East Central Europe and the net advantages of the company's FDI in the region can be identified (Chapters 5 and 7).

Daewoo Motor has its own diversification strategy and it chose the FDI method for entering the East Central European market because more net benefits are gained through FDI than by other market entry modes (export and technology licensing agreements).

The question of the choice of location is significant. Why did the company invest in Poland and Romania in East Central Europe instead of in countries within Western Europe? Therefore, what are the benefits of investing in Poland and Romania which are not found in other European countries?

The car industry is quite complex. It demands a great deal of specialised equipment which requires intensive capital investment in production facilities and a highly trained intensive labour force (particularly in R & D). On the other hand, a cheaper labour force is important to maintain competitive assembly plants. The car industry is also scale-sensitive. In order to survive, market demand must meet the minimum viable size of production plant.

Auty (1993) explains a locational shift of scale-sensitive industry through the income-driven product cycle model. Producers located within the dynamically youthful stage of a large regional market generate competitive advantages over producers in other stages of the product cycle, as countries with high growth rates and export-oriented strategies exhibit a high level of total factor productivity and high income elasticity as well as a rapid growth in market demand. Therefore, producers shift from markets in which demand is decreasing to regions of lower per capita income whose markets have crossed the minimum viable plants threshold size, and which are in the dynamic and youthful stage of the product cycle. In addition, cheaper operation and construction costs in those regions can reduce production costs.

If Daewoo Motor assumes that South Korea has achieved successful economic development and is going through a phase of structural change, which can lead the South Korean market to the mature stage where the market demand is decelerating and where car producers are losing competitive advantages, then the company may seek the transfer of its car production to a new area in order to gain competitiveness. If the company presumes that East Central European countries (particularly Poland and Romania) have large regional markets, that those markets are in the dynamic youthful stage of the product cycle where high growth rates and high income elasticity are demonstrated, and that the minimum viable size of production plants is met by their market demand, then East Central Europe could be an area where Daewoo Motor can retain its competitiveness and reduce production costs by saving on the costs of operation and construction by utilising the region's cheaper labour force.

Host countries' government policy toward FDI is one of the important variables which can sway the locational decision. Government policies can powerfully distort the market system, outweighing any of the other variables and consequently affecting the firm's economic activities. The governments of the East Central European countries may adopt favourable industrial policies or investment incentives towards the car industry and / or FDI. This may attract Daewoo Motor's FDI to the region.

The income-driven product cycle model will be tested in order to find out the reasons for Daewoo Motor's locational decisions, and the government policies of East Central European countries will be examined as a significant variable (Chapters 6 and 8).

Hypothesis (3)

Daewoo Motor undertook FDI in Poland and Romania because:

- (1) those markets are in a dynamic youthful stage of the product cycle
- (2) the market demand meets the minimum viable size of a plant
- (3) the government policies were favourable

2.7.3 Research Methodology

In order to understand the motivations for Daewoo Motor's direct investment in Poland and Romania, the first step is to analysis the existing data and information on the Daewoo Motor company. The aim of this is to scrutinise the background and the current circumstances of Daewoo Motor and to identify potential factors that have affected its FDI decisions. This data and information has been collected from the Daewoo Group, Daewoo Motor, as well as other car manufacturers, the governments (of South Korea, Poland and Romania), and from research institutes.

In order to test the proposed hypotheses, a quantitative and a qualitative method are used in this research. A car production cost model based on consultancy estimates is used as a quantitative approach. In order to build up a production cost model depending on different types of production, the principles of the value-added chain are established and, according to the level of value-added chains, the break-even point (the minimum viable size of units) will be analysed. This model will help to demonstrate the sensitivity to the economies of scale of different types of car production and to different locations in which the costs of inputs differ. This model will also allow to observe a valuable insight into the manner in which the government policies can affect production costs significantly.

Based on the proposed hypotheses, the analysis from the following chapters, and information and data collected from various sources, the contents of an interview are formulated. An in-depth interview rather than a structured questionnaire is used in this research as a core method as this research is needed in order to shape the understanding of the case study phenomenon by focusing on the context, although the information collected can be biased and / or laden with values based on the researcher's view.

In order to carry out an in-depth interview, informants (see the lists of interviewees in Appendix) for this research are selected. As identified in Chapter 5, the decision-making process of the Chaebols, including the Daewoo Group, is top-down style. Large investment projects within the group are usually decided by the chairman of the group rather than the personnel who is in charge of the projects. Therefore, interviews are necessarily conducted with top management of both Daewoo Corporation (the headquarters of Daewoo Group) and Daewoo Motor. Major informants are selected within the group of top management of both Daewoo Corporation and Daewoo Motor. Government officials in the countries concerned (South Korea, Poland, and Romania), other car manufacturers, relevant academics and industry experts are also interviewed in order to cross-check and analyse the determinants of Daewoo Motor's direct investment in Poland and Romania critically.

Selected Interviewees Categories:

- (a) Senior executives of Daewoo Corporations
- (b) Senior executives of Daewoo Motor
- (c) Relevant academics & industry experts
- (d) Government Officials
 (South Korea, Poland, & Romania)
- (e) Daewoo & joint venture plant managers

(f) Senior executives of joint venture partners

(g) Other car manufacturers

The data collection procedure consists of (a) selecting informants; (b) collecting information through observations, face-to face interviews, and documents; and (c) establishing a protocol for recording information using audio tapes and narrative descriptions of such recordings. In order to update the information and data and to support the validation of interviewees' statements, documents and other available data are collected both from the Daewoo Group and other public sources.

In order to validate data interpretation and analysis of findings from field work, convergence among sources of information by the researcher, different interviewers' sources, feedback from informants, and experts in this subject who can provide an audit of key decisions made during research process are exercised.

The contents of the conducted interviews are analysed by each question. In each question, comments and analyses are attached in detail. The proposed hypotheses are compared with the findings from the primary research. The findings are used to conclude the determinants of Daewoo Motor's FDI in Poland and Romania.

Part B

Understanding of the World Car Industry

Chapter Three

History of International Trade and FDI in Cars

3.1 Introduction

Since the automobile was invented, the global auto industry has evolved for almost a century. Despite a long history, major players in the world car industry have been limited to a few manufacturers from only three primary regions: North America, Western Europe, and Japan. These regions accounted for 78 per cent of the world's automobile production in 1994 (KAMA, 1995, pp. 68-9). However, emerging car manufacturers from developing countries have rapidly increased car production and attempted to integrate themselves into the world car market.

The purpose of this chapter is to explore the development of the car industry and to gain a deeper understanding of the global industrial web by examining existing major car manufacturers, as well as new participants in the industry from emerging economies. This chapter is divided into four sections to correspond with chronological transformations.

Section 3.2 includes information on how the automobile industry evolved and the achievements of American car manufacturers in production technology from the mid 1880s. This section also tracks the expansion of American car producers throughout the world through exports and FDI. In addition, the European governments' reaction to car trade, which mainly affected American car manufacturers, is examined.

In Section 3.3, changes in world trade after the Second World War, reflecting the trade flow and FDI, are investigated. European car manufacturers' recapture of their competitive advantage over the Americans and the growth of the European car market are scrutinised. This section also describes the cross-FDI between Europe and the United States achieved by the production expansion of both manufacturers.

Section 3.4 examines the success of the Japanese car industry gained through the development of new production systems from the mid 1970s. As the world leader, the Japanese car producers' competitiveness in car manufacturing and in exports is observed in this section, in addition to the determinants of Japanese car manufacturers' FDI in the United States and Europe, and the reappearance of trade barriers.

The final section introduces the development of the car industry outside the three major regions. Section 3.5.1 discusses the entry barriers of emerging car manufacturers by looking at the requirement of car manufacturing entry. In the section, the production costs and industrial policies affecting the development of car manufacturing are examined. Section 3.5.2 examines the capabilities of car manufacturers in developing or transitional countries to become major players in the world auto industry through FDI and their export performance. In particular, these emerging car manufacturers are investigated by the comparison of each car manufacturer's ability to acquire advanced production and product development technology to become global players.

3.2 The First Generation: The Dominance of American Car Manufacturers

The first workable automobile was invented in the mid 1880s in France and Germany. Although automotive development proceeded steadily and production volumes increased gradually, the automobile was not commonly used during this period.

The automobile was considered a luxury product and was manufactured in small batches for discerning customers, not for a mass market. Even by 1906, two decades after its invention, a total of only 50,000 vehicles were produced annually in all of Europe¹ (Altshuler, Anderson, Jones, Roos, and Womack, 1984, p. 14).

There are a few reasons why European automobile producers did not develop appropriate techniques for mass production. Firstly, European car manufacturers concentrated on luxury designs for a tiny market in which technology innovation for mass production was not required, and identical vehicles were seldom produced. Secondly, the policy of a number of European governments encouraged buyers to purchase such automobiles for military use in the event of war, resulting in this design tendency. Finally, the infrastructure was not developed enough to support the wide use of automobiles. Roads were primitive and other service facilities, such as petrol stations, and repair shops, did not yet exist or very few existed (Hoffman and Kaplinsky, 1988, p. 74).

It was in the United States techniques were for mass production were invented and standardised automobiles developed. The origins of the American car industry date to the 1890s. By 1906, several manufacturers developed completely interchangeable auto parts on a commercial scale, and this established a foundation of mass production for a radical transformation of the world automobile industry.

In 1908, Henry Ford introduced the Model T, using a new system of production that came to be known as 'mass production' or 'Fordism'. In 1909, the first full year of Model T production, Ford built 12,292 cars. When the moving assembly line, a major innovation in modern manufacturing history, was first operated in 1914, Ford's car production increased to 260,720 units (Dyer, Saltier, and Webber, 1987, p. 25). The key

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¹ By 1906, French and German manufacturers still accounted for 58 per cent of world-wide automobile production (Altshuler, Anderson, Jones, Roos, and Womack, 1984, p. 14).

to mass production is a standardised automobile assembled from interchangeable parts by interchangeable workers, accompanied by a division of manufacturing skills and the creation of a routine for complex jobs.

Some ten years after the introduction of the moving production line by Ford, total American car production reached over 2 million units per year, representing over 90 per cent of global output (Hoffman and Kaplinsky, 1988, p. 74). By the early 1920s, American dominance of the world car industry was obvious and the automobile had been recognised as a mass consumption product. In addition, the infrastructure essential to use cars, such as service stations and roads, expanded rapidly. The United States thus became the largest car production country and market per se in the world.

In automobile exports, the American auto manufacturers took a large share of the world market. In 1929, they exported 10 per cent of their production, equivalent to 540,000 units (more than European car production in the same year), capturing 35 per cent of the world car market outside the United States (Altshuler, Anderson, Jones, Roos, and Womack, 1984, pp. 15-6).

Due to the primitive transportation systems of the early twentieth century, transporting finished cars resulted in high cost for packaging and repair of damage en route, compared with the costs of establishing low-volume production lines close to markets (Altsheler, Anderson, Jones, Roos and Womack, 1984, p. 16). American car producers started to set up regional assembly plants, while auto parts such as stampings, engines and other parts were shipped to final assembly plants around the country to save transportation costs. For instance, by 1926, Ford cars were assembled in more than 36 cities (Womack, Jones and Roos, 1990, pp. 34-5).

For similar reasons, American car manufacturers also became multinational enterprises by setting up overseas production lines. The first foreign assembly line was

established by Ford through licensing manufacturing operations in Canada in 1904, soon followed by General Motors (GM) and Chrysler; these car producers used Canadian factories as export bases to the British empire in addition to operating closely with factories in the United States (Dyer, Salter, and Webber, 1987, pp. 31-2). By 1929, Ford and GM had assembly plants in 21 countries and 16 countries respectively, while Chrysler had factories in several European countries and Canada² (Hoffman and Kaplinsky, 1988, p. 75).

However, in Europe in particular, there were more fundamental reasons in addition to reducing the high transportation costs to persuade American car manufacturers to set up assembly operations differently from those in other countries.

Firstly, before the mid 1910s, the European governments allowed nearly free trade in automobiles³. After World War I, the European governments adopted a series of policies to reconstruct war-devastated economies and, in the same context, also imposed high tariffs on imported automobiles to protect and promote domestic automobile manufacturers (see *Table 3.1*) (Altsheler, Anderson, Jones, Roos and Womack, 1984, p. 16). In order to avoid trade barriers, Ford established fully integrated plants in the United Kingdom in 1931 and Germany in 1934, where direct investment was most open. GM entered the same markets by acquiring foreign subsidiaries, Vauxhall in the United Kingdom and Opel in Germany in 1925 and 1929 respectively⁴ (Dyer, Salter, and Webber, 1987, pp. 31-2).

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² Chrysler expanded its overseas operations in the world. However, in the late 1970s, the company started to sell its European subsidiaries to Peugeot-Citroen and also sold its South American operations to GM and VW (Hunker, 1983, p. 38). As a result, Chrysler's operations are concentrated mainly in the United States, Canada and Mexico.

³ As late as 1913 the tariff on cars was 3 per cent in Germany, and in Italy and France it was 4 to 6 per cent and 9 to 14 per cent respectively. The United Kingdom imposed no tariff on car imports (Altsheler, Anderson, Jones, Roos and Womack, 1984, p. 16).

⁴ Elsewhere in Europe, due to restrictions on American direct investment (France and Italy) and the underdevelopment of the markets in other countries, setting up assembly plants by American car producers was impeded (Dyer, Salter, and Webber, 1987, pp. 31-2).

Table 3.1 Tariffs on Passenger Cars, 1913-83 (presented in per cent of customs value)

Year	U.S.	Japan	France	Germany	Italy	U.K.
1913	45.0	n.d.	9-14	3	4-6	0
1924	25-50 a	n.d.	45-180	13	6-11	33.3
1929	10.0 b	50	45	20	6-11	33.3
1932	10.0	n.d	45-70	25	18-123	33.3
1937	10.0	70 c	45-74	40	101-111	33.3
1950	10.0	40	35	35	35	33.3
1960	8.5	35-40	30	13-16	31.5-40.5	30.0
1968	5.5	30	0 / 17.6	0 / 17.6	0 / 17.6	17.6
1973	3.0	6.4	0 / 10.9	0 / 10.9	0 / 10.9	10.9
1978	3.0	0	0 / 10.9	0 / 10.9	0 / 10.9	0 / 10.9
1983	2.8	0	0/10.5	0 / 10.5	0 / 10.5	0 / 10.5

Notes: Ranges in this table indicate that tariffs varied by type of vehicle or reciprocally with foreign tariff. '/' indicates the elimination of tariffs within the European Economic Community (Common Market) and a common external tariff after 1968 (1978 in the case of the U. K.). a: 1992. b: 1930. c: 1940. n.d.: no relevant data available.

Source: Altsheler, Anderson, Jones, Roos and Womack, 1984, p. 17.

Secondly, apart from high import tariffs, many European governments also adopted other kinds of energy tax, road-building policies, and tariffs on tyres and other auto components that discouraged customers from purchasing those large cars favoured in the United States (Altshuler, Anderson, Jones, Roos, and Womack, 1984, p. 16). To market American cars, Ford and GM needed to run European subsidiaries independently from those operations in North America in order to satisfy local market conditions (Dyer, Salter, and Webber, 1987, pp. 31-2).

The view of European car producers was that this FDI by American car manufacturers in Europe, particularly in Germany and the United Kingdom, was the channel through which to obtain American manufacturing know-how, which stimulated indigenous European car manufacturers to emulate American manufacturing skills. In addition, after World War I, the governments' industrial promotion policies in Europe played a complementary role to provide their local car producers with room for growth.

During the 1930s, the manufacturing know-how of European car producers became equal to that of American manufacturers (Altshuler, Anderson, Jones, Roos, and Womack, 1984, p. 18). However, the small size of individual European markets with various car preferences did not provide economies of scale in automobile production to car manufacturers in Europe.

Before World War II in Europe, tariffs on automobiles increased and small domestic markets stagnated. Despite modern manufacturing facilities and know-how, European car manufacturers had difficulties producing a proper automobile during this period.

By the outbreak of World War II, American car producers were dominant players in the world and concentrated more on the American market where the largest number of customers purchased their products rather than on the global market, although they established overseas production facilities for some local markets.

3.3 The Second Generation: Competitive Balance and Integration of the Car Industry between Europe and the United States

After World War II, European car manufacturers commenced production of cars due to Europe's economic recovery, but still only produced a small volume. In the early 1950s, European production accounted for 13.6 per cent of world auto production, compared with North America's 85 per cent (see *Table 3.2*) (Altshuler, Anderson, Jones, Roos, and Womack, 1984, p. 18).

Table 3.2 Passenger Car Production in the Three Major Regions ('000 of units)

Year	North America	Western Europe	Japan	Total
1929	4791	554	•	5355
1938	2143	879	•	3074
1950	6950	1110	2	8168
1955	8295	2486	20	11015
1960	7000	5120	165	12985
1965	10016	7519	696	19282
1970	7491	10379	3179	22756
1975	7762	9326	4568	24957
1980	7222	10372	7031	28639
1985	9077	10849	7647	31970
1990	7021	13152 a	9948	35318
1991	6331	11352 a	9573	34158
1992	6685	14252	9379	36959
1993	7335	12131	8494	35707
1994	7817	13590	7801	37085

Notes: Figures in this table are rounded off to one decimal place. North America includes the United States and Canada. Western Europe includes Austria, Belgium, France, Germany, Italy, the Netherlands, Spain, Sweden and U.K. a: Figures exclude Belgian production.

Sources: Altsheler, Anderson, Jones, Roos and Womack, 1984, p. 19, United Nations, 1992, pp. 608-9, and KAMA, 1995, pp. 68-9.

The large number of small European car manufacturers developed advanced technologies by differentiating engines, engine arrangements, cylinder layouts and body designs. This trend was mainly attributed to very different national market conditions such as various income levels, vehicle taxes, fuel taxes, infrastructure (often narrow streets and limited parking places), climate, demography and geography among the European countries.

It was in the late 1950s and early 1960s when European car manufacturers had an opportunity to become competitive and expand their production, particularly with their diverse products. There were favourable changes in the trade environment, affecting European manufacturers' achievement in exports and FDI not only within Europe, but also world-wide after this period.

Firstly, European tariffs on automobiles started to decrease from the late 1950s onwards, as seen in *Table 3.1*. Tariff reductions in Europe provided easy access to all the region's markets and to each small manufacturer. In particular, due to the establishment of the European Economic Community (EEC Common Market), tariffs on cars were removed within the community in 1968⁵. This led to European producers expanding their domestic output rapidly and reaching full production economies, resulting from the growth of inter-producer car trade in major car producing countries in Europe: France, Germany, Italy, Spain, Sweden, and the U.K. (see *Table 3.3*). The number of cars traded among European countries increased by over 500 per cent in 1960, compared with 1950. By the early 1970s, the total European market was equal in size to the North American market (Altshuler, Anderson, Jones, Roos, and Womack, 1984, p. 22).

Table 3.3 Car Trade within Western Europe

Year	Inter-Producer Trade in Western Europe		
	'000 units	as per cent of production	
1929	13.9	2.5	
1938	17.0	1.9	
1950	67.1	6.0	
1960	360.5	7.0	
1970	1277.0	12.3	
1980	2250.0	21.6	

Notes: Inter-Producer Trade means trade between the major car producing countries in Western Europe: France, Germany, Italy, Spain, Sweden and U.K.

Source: Altsheler, Anderson, Jones, Roos and Womack, 1984, p. 22.

Secondly, another contribution to increased production and car trade was the liberalisation of trade in Europe. Spain in particular provided foreign car manufacturers with an attractive location. In the late 1960s, American car producers engaged in FDI in

⁵ In the case of the United Kingdom, tariffs on cars were removed in 1978 (refer to *Table 3.1*).

Spain, where wages were low and direct investment was open to foreigners, in order to increase their European market share (Altshuler, Anderson, Jones, Roos, and Womack, 1984, pp. 21-2). At that period, other European car producers, such as Fiat and Renault, also established their Spanish production facilities (Hoffman and Kaplinsky, 1988, p. 79). This Spanish production added to the increase in inter-European car trade. Output increased from 40,000 units in 1960 to just over a million in 1980, with 45 per cent of total production exported to other European countries (Altshuler, Anderson, Jones, Roos, and Womack, 1984, pp. 21-2).

Thirdly, as the pre-war American tariffs were also largely reduced by the 1950s, European exports to the American market grew rapidly. The European share of the American market increased from 0.3 per cent in 1950 to 10.2 per cent in 1959 (Altshuler, Anderson, Jones, Roos, and Womack, 1984, p. 25). The European car producers' success was initially based on their wide range of products. They provided products from small and intermediate segments of their European production line which were new segments to the American market. In contrast, American manufacturers had concentrated on a large car⁶ because of their intention for volume production. For example, Volkswagen (VW) served the American market speciality demand for small, utilitarian vehicles, such as the Beetle, successfully accounting for over half of the total imports to the country in the 1960s (Hunker, 1983, pp. 19-21).

Fourthly, in the early 1970s, the first cross-FDI was made by European manufacturers. European producers made FDI in the American market due to the increased demand for small European cars and the openness of the American market. During this period, VW established factories to assemble its low-priced models for the

⁶ North American producers concentrated on a large, 6- or 8-cylinder, front-engine / rear drive, gasoline-fuelled, chassis-on frame design (Altshuler, Anderson, Jones, Roos, and Womack, 1984, p.

21).

North American market in the United States and Renault obtained a controlling share in American Motors (Altsheler, Anderson, Jones, Roos and Womack, 1984, p. 29).

Finally, tariffs fell throughout the world, resulting in relatively free marketplace competition while the world economy continued booming. In particular, the world automobile market rapidly expanded between 1950 and 1973. European manufacturers again took a major share of world car exports in the world market during this period, with various products that could adapt to different market conditions successfully. Exports of European cars increased from 375,700 units in 1950 to 1,212,600 units in 1960, while North America exported 116,700 units, equal to 31 per cent of European exports in 1950. American export volume decreased to only 8.8 per cent of European exports in 1960 (see *Table 3.4*). This trend was in fact accelerated by the size of American cars that were not suitable to different consumer incomes, energy prices, and the infrastructure in any other world market.

Table 3.4 Car Exports from the Three Major Regions ('000 units)

Year	Exported from		
	North America	Western Europe	Japan
1929	400.0 (est.)	55.9	•
1938	149.2	96.3	-
1950	116.7	375.7	•
1960	107.3	1212.6	7.0
1970	76.0	1889.1	725.6
1980	170.6	1276.4	3947.2
1991	2109.1	9049.1	4772.2
1992	1213.0 a	9228.0	4655.0
1993	1975.1	8928.9	3910.5

Notes: North America includes the United States and Canada. Until 1980, Western Europe includes Austria, Belgium, France, Germany, Italy, the Netherlands, Spain, Sweden, and U. K. From 1991-3, Western Europe includes Austria, Belgium, France, Germany Italy, the Netherlands, Portugal, Spain, Sweden, and U. K. a: Statistics of American exports are not available.

Sources: Altsheler, Anderson, Jones, Roos and Womack, 1984, p. 23 and KAMA, 1995, pp. 82-4.

In the 1970s, as a response to the rapid growth of European car makers' share of the United States market, and in particular the small car segment, American car manufacturers introduced new small models. Rising European wages and the dollar devaluation of 1971 added to the competitiveness of American small cars, which have a large price sensitivity, resulting in a decrease in the European share in the domestic market.

However, the European car manufacturers proved their strength in the United States market by presenting other models. Larger cars, focusing on luxury, high quality, sporty performance as well as fuel-efficiency through the use of diesel engines, were introduced and they again gained a majority share in the luxury market (above \$ 20,000 price range) in the United States (Altshuler, Anderson, Jones, Roos, and Womack, 1984, p. 26).

Overall, between the 1950s and the early 1970s, the competitiveness of European auto producers was relatively balanced with that of American car manufacturers in two major car markets- Europe and the United States. In FDI, direct investment in car manufacturing facilities was made both from the United States to Europe in the 1960s, and from Europe to the United States in the 1970s. In trade, while European car exports to the United States and the rest of the world increased, American car manufacturers' European subsidiaries were in a strong position to trade within the European market. European output was more than that of the United States and the volume of car trade to North America was significant. It should, however, be noted that a sizeable proportion of European production was contributed by American MNEs' subsidiaries in Europe. During this period, this trend was mainly aided by the fact that European and American markets were open both internally and to each other and car demand was boosted by the recovery of the world economy.

3.4 The Third Generation: The Breakthrough of the Japanese Car Industry and FDI

In the mid 1970s, the history of the world automobile industry was transformed by Japanese car manufacturers. As a new entrant, Japanese auto manufacturers grasped an opportunity to enter the world auto market by taking advantage of the global free trade environment and the rapid growth of international car trade. The Japanese finally took a leading role in the world car industry in the early 1980s. In addition to favourable trade circumstances, Japanese car producers pioneered a new system of production which successfully pushed their cars into international markets.

The Japanese car industry had produced cars for as long as the United States with its first product available in 1902 (Hoffman and Kaplinsky, 1988, p. 75). In fact, the early development of the Japanese car industry was helped by the Americans⁷. However, due to the government's desire to establish an indigenous Japanese car industry and their concern about foreign domination, by 1939 both Ford and GM were compelled to close their operations under the Law Regarding Automobile Manufacturing Enterprise of 1936 (Altsheler, Anderson, Jones, Roos and Womack, 1984, p. 30).

In the early 1950s, Japanese car producers had difficulties in establishing an independent domestic car industry, although the government promoted the car industry with low-cost bank credit, preferential tax treatment, and protection of the domestic market⁸ (Altsheler, Anderson, Jones, Roos and Womack, 1984, p. 30). Japanese car

⁷ Ford and GM built Japanese assembly facilities in 1924 and 1927 respectively (Altshuler, Anderson, Jones, Roos, and Womack, 1984, p. 30).

⁸ The Japanese Ministry of International Trade and Industry limited the import of engines to only 1,000 units a year and also restricted foreign ownership of stock in existing Japanese companies to 7 per cent per investor. In automobile manufacturing, both joint ventures with foreign firms and 100 per cent foreign owned subsidiaries were prohibited (Flink, 1988, p. 331).

manufacturers started to export in the 1960s. The first shipment of Japanese cars to the United States was not successful due to problems with low quality, despite the products' low price. As a result, Japanese cars were withdrawn (Hoffman and Kaplinsky, 1988, p. 75).

During this period Toyota, the largest car manufacturer and exporter in Japan, developed a new approach to car production, organisational systems and a new labour-relations model in order to improve quality and productivity. Despite the fact that the Japanese Ministry of International Trade and Industry (MITI) recommended mass production of a few standardised models, as American producers had done, Toyota developed production techniques in small lots, using just-in-time (JIT) supply of components. This system was known as flexible specialisation or 'lean production'. In addition to production in small lots and JIT, lean production included production to order rather than for stock, multi-skilled worker participation in teams and the concept of total quality. Other Japanese car manufactures applied this production organisation to their conventional system. By such flexible specialisation, Japanese car producers increased the productivity of labour and capital and also the quality of their products over mass production.

In the mid 1970s, a second wave of exports, mainly to the United States, was remarkably successful. The share of Japanese exports to the United States market accounted for over 57 per cent of total exports during the 1970s (see *Table 3.5*). There were several factors that led Japanese car manufacturers to this breakthrough in exports and enabled them to reach volume production.

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⁹ Workers are able to do the job of any member of their team, so any worker can stop the production line at any time that a problem is spotted (refer to James P. Womack and Daniel T. Jones, 'From Lean Production to the Lean Enterprise, Harvard Business Review, March-April 1994, and Michael A. Cusumano, 'The Limits of Lean', Sloan Management Review/Summer 1994).

Table 3.5 Japanese Car Exports by Major Area (millions of units)

Imports to	Exports from Japan		
	1970	1980	1992
North America	0.4	2.0	1.8
Western Europe	0.1	1.0	1.4
Rest of the World	0.2	0.9	1.2
Total	0.7	3.9	4.4

Sources: Altshuler, Anderson, Jones, Roos, and Womack, 1984, p. 28 and KAMA, 1995, pp. 86-7.

Firstly, as observed in *Table 3.1*, trade barriers were reduced within Europe and the United States from the 1950s, and by 1973, tariffs on automobiles had been reduced substantially. This provided Japanese car manufacturers with an opportunity to penetrate two major markets (Europe and the United States), changing the shape of the world auto industry.

Secondly, since the 1973 oil shock and a second sharp gasoline price increase in 1979, demand waned for large cars and shifted to small cars, where the Japanese manufacturers specialised in production and exports. This was due to the increase in fuel costs of total auto-ownership costs, coupled with economic slumps and stagnation, particularly in the United States. In addition, the government of the United States started regulatory intervention in the fuel economy¹⁰. Fuel-efficient Japanese small cars benefited from this favourable environment. In 1975, Japanese manufacturers became the largest exporters to the American market, overtaking European producers. Japanese cars took 9.3 per cent of import share of the American market in 1975, while the European products accounted for 8.9 per cent in that year. Since then, Japanese manufacturers increased their share to over 20 per cent in the 1980s, mostly at the cost

¹⁰ The 1975 Energy Policy and Conservation Act provided mandatory fuel-economy standards for the average mileage attained by each auto maker's model-year fleet (Hunker, 1983, p. 19).

of European small-car imports (Altsheler, Anderson, Jones, Roos and Womack, 1984, p. 30).

Finally, in addition to the above conditions, the success of Japan's car industry was also attributed to high volume production with high quality and low labour content, which were refined and continued to progress over many years since the lean production system was applied.

In 1980, over 54 per cent of North American car imports came from Japan, and total Japanese motor vehicle production exceeded that of the United States (Hunker, 1983, p. 69). Since the beginning of car production, U.S. production had never been exceeded by any national car industry. Concern about the rapid expansion of Japanese production began to grow in the United States and Europe.

After observing Japanese success in the world auto market in the mid-1970s, European and American governments started to retreat on the subject of open trade in the specific case of Japanese imports. The first sign of restriction on Japanese cars came from the British government in 1975, when Japanese manufacturers agreed to limit their exports to 11 per cent of the British market, and the French government soon followed by limiting the Japanese market share to 3 per cent of its market in 1977 (Altsheler, Anderson, Jones, Roos and Womack, 1984, p. 33). Under U.S. government pressure in 1981, the Japanese government established "voluntary" restraints limiting exports of motor vehicles, first to 1.68 million, then to 1.85 million units a year (Flink, 1988, pp. 342-3). After the agreement between Japan and the United States in 1981, the governments of other European countries, including Germany, Belgium, the Netherlands and Sweden, established similar agreements to protect their auto markets from Japanese imports throughout the early 1980s (Hoffman and Kaplinsky, 1988, pp. 86-7).

Under this growing protectionism by major export markets, Japanese car producers responded by upgrading their model mixes to larger and more luxurious cars, in particular for the United States, in order to create maximum values with lower volume (this actually increased their American profits from \$8.2 billion in 1980 to \$12.4 billion in 1984 on 150, 000 fewer units) (Flink, 1988, p. 343).

Meanwhile, Japanese manufacturers began to establish production plants in those markets in the 1980s. In 1981, the first direct investment of \$250 million was made by Honda in a new plant to build cars in the United States, and other Japanese manufacturers, such as Nissan and Toyota, followed with investment in the United States and Western Europe during that period (Hoffman and Kaplinsky, 1988, p. 89).

There is an interesting feature in the formation of Japanese production facilities in foreign countries. It is said that flexible specialisation, or lean production, per se had even more profound implications for international trade and the location of production. In mass production, although the cars are typically assembled in the market, components are manufactured at a central location so auto parts can be sourced from low-cost manufacturers globally. Like mass production, with lean production the plants are located close to main markets, but more components are sourced from nearby component plants (a maximum of two hours' transport). Geographical proximity is very important in lean production as it enables JIT production. Flexible specialisation thus logically implies a higher concentration of car production, including components, compared to mass production (*The Economist*, 15 April 1995, pp. 57-8).

The first Japanese FDI movement was initiated by rising trade barriers in major import markets, at which time Japanese car producers built assembly plants in those markets, like the FDI by American car manufacturers in Europe in the 1920s and 1930s. When Japanese car makers started to increase local content and manufacture cars, rather

than simply assemble automobiles abroad, they moved production facilities to enable JIT production of components. For example, when Japanese car producers manufactured cars in North America, they carried the JIT system of supply with them to North America, where more than 300 Japanese manufacturers of original equipment invested \$26 billion in plants constructed alongside the new Japanese facilities¹¹ (Sadler, 1994, pp. 41-59). Japanese auto makers would eventually have moved production to their main export markets, but because of protectionism this shift took place sooner.

Since the 1970s, Japanese auto manufacturers dramatically increased their production as well as exports and took the lead in the world auto industry. Moreover, in the 1980s, the continued success of Japanese auto makers initiated protectionism in the major car markets (Western Europe and the United States) where FDI from Japanese car producers was instigated and those Japanese firms thereby became MNEs.

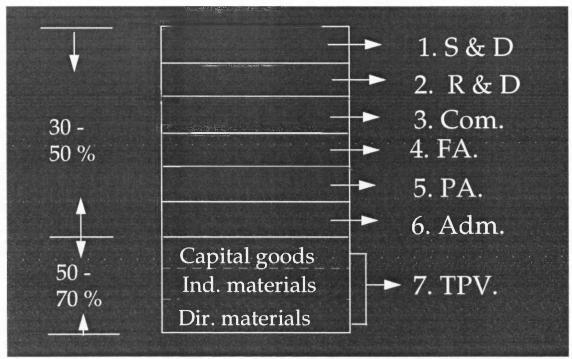
3.5 The Fourth Generation: Emerging Car Manufacturers

3.5.1 The Entry Barriers of LDC Car Manufacturers

In order to discuss the entry barriers of LDC car manufacturers, it is essential to understand the structure of car production costs and the different break-even points which indicate minimum size of plant volume for maintaining a car manufacturing operation. Before establishing a production cost model, it is also important to know how value chains (or value-added activities) of car production are built as a first step.

¹¹ However, this is not the case in Western Europe, where Japanese car producers rely on existing suppliers (Jones and North, 1991, p. 118).

Figure 3.1 Value Chains of Car Production Costs



Notes: 1. S & D: sale and distribution costs; 2. R & D: research and development costs, including product development costs; 3. Com.: component manufacturing costs; 4. FA.: final assembly costs; 5. PM.: pre-assembly costs; 6. Adm.; administration costs; and 7. TPV.; total purchased volume costs, including the costs of capital goods, indirect material costs and direct material costs.

In this research, the value chains of car production costs are divided into seven stages (see Figure 3.1). First, in order to sell cars in the markets, any producer needs to establish sale and distribution networks (S & D). These tend to heavily depend on local conditions because subsidies from governments, such as incentives for increasing employment and tax grants or restrictions on S & D activities, can reduce or increase the total costs in addition to the principal costs for setting up S & D networks (costs for labour, land, building, equipment of information systems, etc.). The total S & D costs can also be reduced or increased by operating costs (labour costs).

Second, R & D costs include investments in developing new products (product development costs) and general research on material performance, or fuel, or engine performance. R & D is labour-intensive and particularly a requires high-skilled labour

force. R & D also needs large capital investment. It is difficult to estimate R & D costs because investments in R & D by car manufacturers vary, but in general, costs of developing a car from a concept to a commercialised model are equal to US \$ 1bn. This implies that it is difficult for car producers from developing countries to develop an indigenous car model to compete with manufacturers from developed countries due to the requirement of a large capital investment and a lack of accumulated technologies, unless the R & D costs can be covered by a large demand for their cars domestically and / or internationally, in other words, unless there are large markets for their cars. One of the major reasons that developing country car manufacturers tend to establish strategic alliances with main car producers in developed countries is to reduce or share high R & D costs.

Third, more than 20,000 parts and components are needed to produce a car and the less complex ones are normally purchased from part suppliers. Component manufacturing in the final assembly or manufacturing plant is largely divided into three parts: (1) electric (alternators, batteries, coils, wires and steel); (2) power strain (engines and transmissions); and (3) air conditioner (climate control) component manufacturing. The costs of component manufacturing can vary depending on to what extent production is vertically integrated, as these components can be purchased at lower prices globally. Component manufacturing is highly labour-intensive, except for the power strain component manufacturing, thus a cheaper labour force can contribute to the reduction of total component manufacturing costs.

Fourth, final assembly includes paint-shops and assembly. To establish paint-shops, manufacturers need a large capital investment (approximately US \$ 250m). The cost of building paint-shops takes a large proportion of the total final assembly costs. Assembly lines are the least automated process which requires an intensive labour force.

A cheaper labour force can reduce the costs of the assembly processes, as well as those of constructing paint-shops.

Fifth, pre-assembly includes pressing and wielding shops. Pressing and wielding shops are highly automated (above 85 per cent of the process). Relatively few of the labour force can operate the system. The major costs of pre-assembly consist of the purchasing expenses of the machinery for the process.

Sixth, administration costs include the expenses of the whole range of activities connected with organising and supervising the plants as well as the administration of the actual companies (the offices).

Seventh, and finally, total purchased volume costs are divided into three parts. Firstly, the capital goods which include the expensive machinery and equipment for pressing, wielding, paint-shops and R & D (the R & D centres require testing equipment for bumping and crash simulation, and an information system for modifying and storing data). Secondly, the costs of indirect production materials include any expenses of purchasing materials unrelated to car manufacturing (as a simple example, stationary), the advertisement fees, insurance, and consulting fees. Finally, direct production materials literally include any materials related to production, such as steel, coils, seats, window glass, components, tyres and car audio systems. As mentioned, the costs of purchasing these materials and components can be different depending on the manufacturers' production system and their desire to outsource. Major car manufacturers like GM purchase materials and components at competitive prices internationally so that they can reduce the costs. The costs of total purchased volume are heavily affected by external factors, such as the government requirement of a local content ratio, import tariffs, logistical costs, local market constraints, and the structure of auto part suppliers.

Among those factors affecting the costs, local governments' industrial policies can significantly reduce or increase the total purchasing costs. The importance of these costs to the total manufacturing or assembling of cars is highly recognised by manufacturers because these costs take 50-70 per cent of the total costs of manufacturing or assembling (final assembly) cars. This implies that the governments play a significant role in the survival of car manufacturers.

Before gaining an appreciation of how industrial policy affects the growth and character of car producers, it is important to build production cost models based on the value chains of production costs in order to seek the minimum viable size of a plant. Three production cost models are suggested here: (1) SKD (semi-knocked down) / CKD (completely-knocked down) assembly; (2) final assembly; and (3) final manufacturing (see Figure 3.2).

An SKD / CKD assembly can be operated with a very small volume. That is to say, in places where market demand is small, this operation is suitable. The SKD / CKD assembly costs consist of (1) S & D, (2) assembly lines, (3) administration and (4) construction (land and building) costs. As identified, this operation is highly labour-intensive, implying that cheaper labour can reduce the total costs. An SKD / CKD producer is not restricted by the economies of scale because a large sum of initial capital investment in an SKD / CKD plant is not necessary. Even the minimum viable size of the plant can be just a couple of units. For example, if a firm already possesses a plant or a warehouse which can be converted to an assembly plant, and an existing staff who can sell and distribute cars, it requires only a small investment to set up assembly lines to assemble simple cars whenever there is demand. As another example, if a firm already engages in a similar business, such as motor cycle manufacturing, and wishes to produce cars by SKD / CKD kits, then it just imports and assembles them without it causing any

significant costs. Therefore, the range of break-even point 1 (BE1) can vary. In this cost model, in addition to cheaper labour costs, an import control policy plays an important role because it can affect the firms' decision on whether they import finished cars or establish the SKD / CKD plant. A high import tariff (over 30 per cent) is likely to lead firms to the investment of setting up this type of assembly.

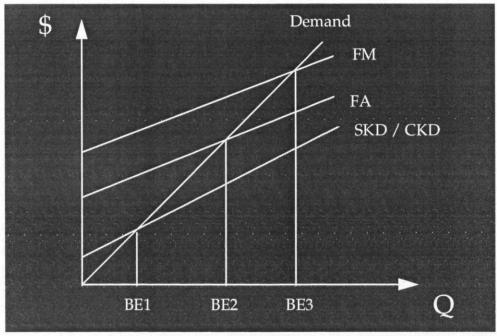
A final assembly cost model includes (1) S & D, (2) R & D, (3) component manufacturing, (4) paint-shops and assembly, (5) administration, and (6) total purchased volume (TPV). Unlike the SKD / CKD plant, this assembly requires a large capital investment. Based on data from manufacturers and consultancy estimates, a plant needs to produce the minimum 30,000 unit volume (BE2) at the level of the firm in a particular location. However, this minimum survival size is calculated without the consideration of the R & D costs (particularly product development costs) under the condition that once models are developed these models can be used in all final assembly plants owned by a manufacturer domestically and internationally. In other words, the costs of R & D can be spread over all the operations (normally, an affiliate pays technical licence fees to the parent company for using product models), thus if R & D costs are included to generate the minimum survival size, a manufacturer's total production in the world has to be considered. Needless to say, if a manufacturer owns only one final assembly plant, then the minimum size of unit volume of this plant will be much larger than 30,000 units, as in this case the R & D costs cannot be shared with other subsidiaries. For example, a firm producing a basic income-spanning three model range needs a one million unit volume (Lucke, 1988; Auty, 1996).

However, this minimum unit volume of each manufacturer can be very different due to firms' different strategy, productivity, technology, governments' policies, and locations. There are many variables affecting the costs, the minimum viable size of unit

volume can be lower or higher than 30,000 or one million units (including the R & D costs). For example, if a producer is located in the place where cheap labour is available, especially the costs of (1), (3), (4) (assembly lines), and (5) can be reduced, or if a manufacturer establishes a strategic alliance with developed country producers so that it can adopt the car models of its partners, (2) costs can be reduced significantly. Alternatively, if government policies are favourable to manufacturers' cost reduction plans, (6) TPV costs, which take a large proportion of the total production costs (up to 70 per cent), can be reduced. What ever the minimum viable size of units (whether 20,000 or 30,000, or one million), there is the existence of the survival size of units. In other words, without a certain level of required market demand for cars, setting up this operation is not feasible.

A final manufacturing cost model includes the whole value chains of production costs: (1) S & D; (2) R & D; (3) component manufacturing; (4) final assembly; (5) preassembly; (6) administration; and (7) TPV. Clearly, this operation needs more capital investment in purchasing machinery for a pre-assembly process, and more labour than that of a final assembly plant. The minimum viable size of unit volume (under the condition that this final manufacturing operation is an affiliate of a manufacturer) is above 30,000 units (BE3), but could be smaller because all the variables affecting the costs, which are discussed in the final assembly cost model, can also be applied to the costs of this operation. As the break-even point indicates in Figure 3.2, a certain level of minimum market demand is needed to set up this manufacturing plant.

Figure 3.2 An Example of Break-even Analysis



Note: FM: final manufacturing; FA: final assembly; and SKD / CKD assembly; \$: production costs; Q: quantity of units.

Given the discussion of the structure of production costs, it is found that car manufacturing is quite complex and government policies have a great deal of effect on the production costs. If LDC firms wish to be SKD / CKD producers, or component manufacturers, they can be competitive by using a cheaper labour force. However, if they want to enter car manufacturing, there are many barriers. A formidable barrier to enter car manufacturing is a lack of economies of scale. Unlike SKD / CKD production, final assembly and manufacturing operations need market demand to survive, although due to the development of technology, as well as the effects of government policy, the minimum viable size can be reduced. The development of technology has brought LDC entrants one positive and one negative side: the technology innovation in car manufacturing lowered the minimum survival size, therefore, LDC firms, particularly in the dynamic youthful markets, can enter the car industry, but major car manufacturers in the mature markets cut export opportunities of LDC entrants because they can be

competitive with the advanced technology and high productivity. It is very important for LDC firms to decide which type of car operation they wish to enter based on local market demand as well as the awareness of international competition with major car manufacturers.

When firms in LDC countries decide to enter car manufacturing, different LDC governments' policies can affect the development of their car industry, as industrial policies have a significant influence in car production costs which are directly related to the survival of car entrants. There can be three policy options for LDC governments (Auty, 1996, p. 424). Firstly, LDC governments can adopt strong intervention policies to encourage domestic manufacturers, such as restrictions on entry and incentives to domestic entrants. In this case, local entrants could rapidly close the scale and technology gap, but it is difficult to assess the direct benefits of government intervention to them. Meanwhile, the direct costs of support fall on the domestic consumer in the form of restricted model choice and higher prices (Auty, 1996, pp. 424-425). This could lead employees to form strong trade unions or groups which can alter industrial policies and hamper the development of the car industry, as has been seen in the United States and the EU. The domestic entrants may need to be protected by the government for a certain period of time in order to mature, but if this period is too long, this may cause negative effects.

Secondly, LDC governments can adopt the policy of free competition within an open economy. There are some empirical studies which show the benefits of free trade in mature economies. However, these benefits of free competition in the mature economies can be negative to the LDCs. If there is no restriction on entry, in other words private firms will take the full risks of entry, then all producers in an LDC would suffer because the potential economies of scale would be wasted by low capacity use

(the LDC domestic market is too small to be shared by many producers). This would also squander much of the domestic R & D potential that had been built up. This implies long-term losses for the domestic economy, as well negative consequences for the development of the domestic car industry. In the perspectives of domestic (and foreign) consumers, they would have more models to choose from and at reasonable prices due to the high competition created by the many producers, but these gains would be obtained at the expense of the infant LDC manufacturers.

Finally, LDC governments can intervene to encourage strategic alliances between domestic and foreign firms. As observed in the production costs above, by establishing strategic alliances with foreign partners (major manufacturers from developed countries), the R & D costs can be reduced substantially through access to technology, and consequently to the economies of scale. This will reduce risks for existing producers and new entrants to overcome the barriers to entry. If an LDC manufacturer wishes to develop an indigenous model, it has to make a huge capital investment in R & D. Even if the manufacturer is able to make this investment, there is no guarantee that the new models that are developed will be successful in the market. If the government provides an environment where domestic manufacturers can obtain benefits of limited (and monitored) co-operation with each other and with foreign firms which market liberalisation allows, it can play an effective role for promoting the industry. In addition, the government can help manufacturers improve competitive advantages by subsidising R & D activities through tax incentives and investment in expanding the country's skilled workforce.

By obtaining an understanding of the structure of production costs and of the importance of the government's policies, the barriers of LDC entrants were identified. Despite the entry problems discussed, there are still many governments of LDCs that

wish to develop a car manufacturing industry because of the economic benefits or spinoff effects from this industry. The following section will discuss about the existing LDC entrants.

3.5.2 LDC Entrants

The three major automobile manufacturing regions - North America, Western Europe, and Japan - have dominated world automobile production and trade, and remained the main markets for almost a century. However, after the 1950s, it was clear that the number of new auto-producing regions outside the three principal ones increased. This is partly due to overseas economic activity by car producers from the three primary manufacturing regions by way of FDI, but also because of the fact that the governments of these new car manufacturing countries promoted their car industry in order to increase production for local markets and for exports (see *Table 3.6*).

Table 3.6 Car Production Outside the Three Major Producing Regions ('000 units)

	1960	1970	1980	1990	1991	1992	1993
Former Sovie & Eastern E							
the former Czechosl- ovakia	56.2	142.9	183.7	195.0	160.0	202.5	219.7 (3.0)
Poland	12.2	64.1	351.0	213.0	140.0	222.0	334.0
Romania	1.2	23.6	_79.3	99.0	84.0	73.0	94.0
the former Yugoslavia	10.5	112.2	255.2	289.0	n.a.	25.3	66.2
the former Soviet Union	138.8	344.2	1327.0	1259.0	n.a.	1052.6	1065.4
Rest of the V	Vorld						
Australia	305.1	330.0	318.0	386.0	218.0	270.2	285.1
Brazil	62.3	343.7	977.7	663.0	705.0	815.9	1100.2
India	19.1	37.4	30.5	177.0	193.0	153.8	201.1
Malaysia	0	7.5	81.0	n.a	n.a	136.4	145.5
Mexico	24.8	136.7	303.1	611.0	730.0	776.1	835.1
South Africa	87.4	195.0	277.0	n.a.	n.a.	183.0	194.0
South Korea	0	14.5	57.2	964.6	1128.7	1255.9	1512.8

Notes: () indicates the production of the Slovak Republic. n.a.: Statistics are not available.

Sources: Altsheler, Anderson, Jones, Roos and Womack, 1984, pp. 36-7, United Nations, 1992, pp. 608-9, and

KAMA, 1995, pp. 68-69.

Since the 1960s, Australia and South Africa have developed substantial car industries, promoted by the governments for local production. However, these countries have not cultivated export markets due to a lack of competitive advantages: (1) relatively small domestic markets and high wage rates did not encourage them to increase capacity; (2) high transportation costs and long shipping distances to primary car markets and; (3) low labour productivity, compared with Japanese car manufacturers, reduced those two car industries' competitiveness (Altsheler, Anderson, Jones, Roos and Womack, 1984, pp. 34-5).

In communist regimes - the former Soviet Union and East Central European countries - the development of the car manufacturing industry has traced a rather different path from that of the West. The general political orientation of the region and government officials' priorities within the motor vehicle manufacturing industry determined production, export and import volumes, and did not depend on demand - supply relations in the marketplace.

Since the 1930s¹², the former Soviet Union had manufactured motor vehicles with Ford's technical assistance. Most East Central European countries developed their car industries in the 1950s (except Romania, which started its car development in the 1960s). However, indigenous production systems and products were not competitive compared with Western cars due to the lower quality caused by obsolete production technology and the shortage of new product development.

In the late 1960s and the early 1970s, some of Western technology, especially from Fiat, was transferred into the former Soviet Union and East Central European car industries¹³. In order to modernise existing facilities and create new capacity, these

¹² Between 1936 and 1943 approximately 60,000 units of the first former Soviet passenger car model, Emka, were manufactured (EIU, 1989, p. 16).

¹³ The former has an indigenous car manufacturer, Skoda, which was established in the mid-1950s. The Skoda factory was one of the few East Central European car manufacturers with relatively high technical standards, exporting an average of over 60, 000 units in the mid-1980s (EIU, 1989, p. 58).

countries purchased Western technology: (1) the largest industrial investment was made to build the Fiat-designed Lada at Volga motor works (VAZ) plant between 1966 and 1970 in the former Soviet Union; (2) The FSO company in Poland produced the Polski Fiat under technology licensing agreement with Fiat in 1965, and in the later 1970s the Polonez model, which was basically identical to the Fiat 125, was developed; and (3) Renault entered an agreement with the Romanian company, Pitesti, in 1966, and produced the Romanian Dacia model, which was actually Renault 12. In 1982 another French car producer, Citroën, produced a Romanian version of one of its own models, the Oltcit under the licence (EIU, 1989, pp. 22-81 and EIU, 1991, pp. 24-31). Although such models began to be produced with Western co-operation, they were obsolete designs and at least four to five years behind current Western models.

In fact, these technology imports created West-East car trade through a buy-back payment arrangement. For instance, Ladas produced in the former Soviet Union were exported to Western Europe. Likewise, East Central European countries, such as Poland and Romania, followed the Russian model: by manufacturing Western models obtained from Fiat, Renault, and Citroën, and then in return for payment of necessary shipments of components or for foreign currency, these manufactured cars were exported back to the Western companies for sale in the Western market (Altsheler, Anderson, Jones, Roos and Womack, 1984, p. 38).

Although this trade proved that a niche market existed in the West for very low price, low quality and outdated cars (the former Soviet Union and East Central European countries' exports accounted for 1-2 per cent of the new car market in Western Europe during 1979-1982), their production and export performance was not significant enough to be ranked as global players¹⁴ (Altsheler, Anderson, Jones, Roos

¹⁴ There was a boom in exports of the former Yugoslavian cars to Western Europe in the late 1980s. In 1987, a company in the former Yugoslavia exported 127,440 units to the West (*International Motor*

and Womack, 1984, p. 38). Even these small exports had problems due to their low quality in the West, resulting in a deterioration of the regional car industry in the late 1970s and early 1980s (EIU, 1989, pp. 28-30).

Since 1989, the development of the former Soviet Union and East Central European car industry has fundamentally changed. The initial impact of the transition from a planned economy to a market system in these countries was a fall in production. The most significant problem was the chronic shortage of hard currency that restricted opportunities to import advanced Western technology (EIU, 1991, pp. 31-4).

Moreover, the process of transformation of large State automotive enterprises in these countries has been seen as problematic because they are too large to enjoy full transformation based on only the free market system, but not large enough to compete with Western car manufacturers in the open economies of the region. The governments in the region have thus promoted the car industry by attracting foreign car manufacturers through investment incentives, privatisation, and liberalisation programmes since 1991.

Coinciding with the concerns of regional governments, foreign car manufacturers have shown interest in the regional car industry. Many leading car manufacturers, such as Fiat and Mercedes-Benz, have considered direct investment in Russia, but due to political and economic difficulties, have not become involved in Russian production (*Motor Business International*, 1st quarter, 1996, pp. 44-45).

In the former Czechoslovakia, VW obtained a majority stake in both the Skoda and in the Bratislava (Baz)¹⁵ factories in 1990. VW plans to manufacture 450,000 units annually and assemble its Passat and Golf models from semi-knocked down (SKD) kits

Business, January 1992, pp. 62-3). However, due to quality problems and current conflicts in the country, further development of trade relations is restrained.

¹⁵ Skoda is located in the Czech Republic, while Baz founded itself in the Slovak territory after the former Czechoslovakia was split in 1993.

in Baz (Business Central Europe, March 1995, p. 7 and Ward's Automotive International, August 1995, p. 13). Skoda has undergone a transformation with new models and facilities since VW's involvement began and even plans to establish an assembly plant in Russia in 1995 (Financial Time, October 6, 1995). However, the company's production has not increased (in 1994 its production decreased to about 173,000 units) and its export performance is very limited (Motor Business International, 3rd quarter, 1996, pp. 173-4). It seems that although Skoda has ambitious plans to be a major car producer in the world auto industry, it has not yet shown significant performance.

In Poland, Fiat has a long history of co-operation with Polish car manufacturers. Fiat acquired a 90 per cent stake in the FSM plant in 1992 and became fully operational in 1993 (*European Motor Business*, 1st quarter, 1994, pp. 55-58). Unlike the case of the FSM company, which focuses on the domestic market and exports to Fiat for sale in the West, the largest Polish car manufacturer, FSO, chose Daewoo Motor as a joint venture partner to become an exporter in 1995¹⁶ (*Financial Times*, October 27, 1995).

The Romanian company that has produced the Oltcit, also established a joint venture company, Rodae Automobile, with Daewoo Motor to innovate its technology and production facility in 1994 (*International Motor Business*, 3rd quarter, 1995, p. 111). The largest car manufacturer, Pitesti, which manufactured the Dacia, still seems to be waiting for a transformation, which would require foreign capital and technology.

In general, despite the fact that most car manufacturers in the former Soviet Union and East Central Europe began restructuring their production operations and modernising manufacturing technology in the form of joint ventures with foreign car producers in the early 1990s, they have shown little capacity to develop new designs and

¹⁶ Daewoo Motor also decided to invest \$350 million in the FSL to assemble 50,000 cars and 40,000 vans per year in 1995 (*Financial Times*, September 6, 1995).

production systems in order to increase competitiveness in the world market. In addition, current performance in production and exports of the car manufacturers in the region has been modest. However, the potential to participate in the world car industry in the future should not be ruled out.

Among Latin American countries, the Brazilian car industry already began assembling cars by Ford and GM from the 1920s, but the development of a national car industry was launched in the 1950s by national decree (Mukherjee and Sastry, 1996, p. 76). The car industry basically began as part of the government's goal of import substitution. Foreign auto manufacturers, such as VW, GM, and Ford, participated in Brazilian car manufacturing with full management control and favourable government investment incentives under a totally protected growth market, and continued to expand production facilities.

Due to the government's import substitute policy, the average car sold in Brazil had over 90 per cent local content on the basis of manufacturing value added by 1962 (Altsheler, Anderson, Jones, Roos and Womack, 1984, p. 39). During this period, however, it was found that Brazilian cars were not competitive due to the high production costs per unit. This was largely attributed to the lack of a scale-economy exploitation, resulting from a small market shared by a large number of car manufacturers, excess plant capacity as well as low labour productivity. In 1967, the cost of the Brazilian car was 60 per cent more than similar models manufactured in the United States and Europe with much lower wages (in fact, labour costs in car manufacturing does not have any important merit as these costs are a small proportion of total costs) (Altsheler, Anderson, Jones, Roos and Womack, 1984, p. 38). Brazilian labour productivity also lagged behind the United States and Western European annual

average of 11.6 vehicles per worker, at Ford-U.S., and 14 at GM-Opel in 1970 (Flink, 1988, p. 352).

However, the government adopted policies to create a demand for expensive domestic cars by: (1) establishing a nation - wide financing system for car purchases at lower interest rates; (2) imposing low taxes on cars; and (3) prohibiting imports of motor vehicles produced elsewhere. Owing to these policies, car production rapidly increased in the early 1970s. Car production was 343,700 units in 1970, and increased to 600,100 units in 1973.

In 1972, the government also endeavoured to export cars by initiating the Special Fiscal Benefits Program for Exports, a programme which included granting MNEs that operated in the Brazilian auto industry large tax breaks on domestic sales, and the right to add new product lines or total capacity for domestic market with agreements for exporting a pre-determined number of finished units and components over the next decade (Altsheler, Anderson, Jones, Roos and Womack, 1984, p. 40).

Table 3.7 Brazilian Car Exports ('000 units)

Year	Exports	Exports / Production (%)
1972	14	2.8
1973	25	4.2
1974	66	9.3
1975	73	9.4
1976	80	9.7
1977	70	9.1
1978	96	10.4
1979	105	10.9
1981	135	21.7
1993	250	22.7
1994	277	22.1

Sources: Altsheler, Anderson, Jones, Roos and Womack, 1984, p. 40 and KAMA, 1995. p. 85.

The Brazilian economy is heavily dependent on imported oil. In 1973, imported oil accounted for 80 per cent of total Brazilian consumption, and 60 per cent of this imported oil was used by motor vehicles (Flink, 1988, p. 353). The Brazilian automotive industry thus faced serious difficulties when the 1973 oil crisis occurred. The government attached more importance to car exports, hoping that earnings from exports would cover imported oil costs, while initiating inconsistent policies to slow the growth of the domestic market by tightening credit terms and raising gasoline prices. Between the 1970s and the early 1980s, Brazilian exports, mainly to developing countries, increased sharply from 2,000 units in 1972 to 135, 000 in 1981 (see *Table 3.7*).

Meanwhile, the government tried to replace petroleum-fuelled engines with ethanol (ethyl alcohol)-fuelled engines in order to reduce oil consumption. This provoked other investments to establish ethanol distillation plants. A new optimal-sized ethanol distillation plant with a daily capacity of 120,000 litre's was built every four days, costing about \$15 billion between 1980 and 1984 (Flink, 1988, p. 353).

Despite the government's efforts since the 1950s, the Brazilian car industry was not very successful. The domestic market stagnated, and production and exports did not increase to meet the government's expectations during the 1980s. Many multinational car producers faced large profit losses in Brazil. By adopting government intervention without consideration of the barriers of entry, the economies of scale, the development of the Brazilian car industry was heavily deterred by the losses of resources. This implies that the Brazilian government launched car manufacturing prematurely and adopted inappropriate policies to encourage the car industry. The government could have adopted industrial policies to promote component manufacturing along with SKD / CKD assembly by using cheaper labour force as a first step, and then as the market grew, it could enter car manufacturing with more success.

up the market to imports, and tried to improve competitiveness by introducing supportive policies such as tax reductions and a different taxation by car segment (in order to promote small cars). In addition, production facilities have changed to lean production in order to improve productivity and quality to meet world standards. Current production has increased steadily, mainly caused by the growth of small car demand and price reduction, although export performance has not been impressive.

In the 1990s, the government changed its import substitution policy by opening

Overall, the Brazilian auto industry faces many disadvantages in its quest to be a major exporter. First, no indigenous Brazilian car manufacturer possesses product development capabilities. Second, the Brazilian car industry has not invested in R and D for new products to compete with foreign car producers in the world auto market (Mukherjee and Sastry, 1996, p. 77). Third, although the lean production system has been adopted by the Brazilian car industry, productivity and product quality do not have competitive advantages, compared with major global players such as the Japanese and the Western Europeans. Fourth, no alcohol-fuelled engines are in use anywhere outside of Brazil, clearly presenting a difficulty in finding markets for such engines. Finally, government policies have been rather inefficient in developing the car industry in Brazil. More consistent, supportive and stable policies may be needed for the development of the industry.

In India, the automotive industry was regulated and FDI in the car industry was prevented by the government since the country's independence from the United Kingdom in 1947 (Flink, 1988, p. 350). The expansion of production capacity was restricted by government licensing. In addition to restrictions on imports, collaborations and equity ventures, and technology transfer from foreign companies was subject to

government approval, resulting in delays of technological development in the car industry.

In 1968, the government approved the establishment of the Maruti industrial complex in order to manufacture a small, so-called 'people's car'. Despite the introduction of a prototype in 1972, the Maruti factory never entered production. The factory went bankrupt in 1977 and its assets were nationalised in 1980 (Flink, 1988, p. 351).

In 1981, the government abruptly changed its policy towards the car industry, seeking a joint venture from foreign car manufacturers and decided to set up Maruti Udyog¹⁷ in collaboration with Suzuki Motor, a Japanese car producer, which became the first MNE to operate in the country. Maruti started to produce Suzuki-designed small cars. The domestic market, in particular, for small cars has grown incrementally since production started. Between 1982 and 1989, the average rate of production growth was equivalent to 22.9 per cent (United Nation, 1992, p. 608).

The Indian government began liberalising markets in 1991, although duties and taxes remained high¹⁸. This policy included free entry to foreign companies in the car industry. Foreign car manufacturers, such as Peugeot, GM, Ford, Fiat, Mercedes - Benz, and Daewoo set up joint ventures with Indian partners. As of 1995, 18 automobile manufacturers, which include local and foreign joint venture car producers, have been set up in the country (Mukherjee and Sastry, 1996, p. 76). However, Indian production constituted a negligible 0.17 per cent of total world car production in 1995 (Shimpi, 1995, p. 284).

¹⁷ India's largest assembler, Maruti, is a 50-50 venture between the government and Suzuki. However, government involvement is absent in all other joint venture companies.

The import duty on car components was increased from 40 per cent to 75 per cent between 1984-91 (Mukherjee and Sastry, 1996, p. 77).

Although many automobile firms, mainly MNEs' subsidiaries, have been established, it seems that no car manufacturer has prepared to become a significant exporter, except Telco¹⁹ which plans to introduce indigenously designed vehicles in the international auto market with technology assistance from Diamler Benz (Mukherjee and Sastry, 1996, p. 76). While no car producer in India possesses capabilities in product and technology development, however, in the future, significant exporters may emerge in this car industry.

In China, the automotive industry developed differently from those of the former European communist countries. The development of the car industry was co-ordinated by government policies with a degree of autonomy given to provincial governments without the consideration of the economies of scale and market demand which is essential for manufacturers to survive. The car industry in China has been marked by its high fragmentation and low productivity (as of 1979, there were 130 assemblers, producing 186,000 units and most of them produced only a few hundred of vehicles) (Mukherjee and Sastry, 1996, p 76). With some successes in the government's effort to consolidate the fragmented industry, by 1993 there were only 40 assemblers producing 500,000 units.

Since the government opened up its market in 1986, it has tried to attract FDI to improve productivity and technology. Five MNEs (VW, Citroën, Chrysler, Daihatsu, and Peugeot) entered the Chinese market in the form of a joint venture and became key car manufacturers. These car manufacturers have managerial control and have, by and large, focused on the domestic market, but car production has been a very small percentage of total production, accounting for just 15 per cent in 1992.

¹⁹ Daimler Benz had acquired 10 per cent stake in Telco in 1969 as part of a technology transfer agreement, but its stake fell to 9.74 per cent in 1995-96. The company increased its stake back to 10 per cent in 1996-97.

relations. Small local car assemblers do not have the capabilities to invest in product development, and joint venture car manufacturers have some way to go before they acquire product development technology from their foreign partners. Due to rapid economic growth and a large population, the domestic market may grow rapidly in the near future. However, it appears difficult to become an active global player with indigenous products in a short period of time.

The car industry is still in the process of restructuring the manufacturer - supplier

The Malaysian car industry began with the assistance of a Japanese car manufacturer, Mitsubishi Motor, when a joint venture, Perusahaan Otomobil Nasional (Proton), was established in the mid-1980s. The government protected the domestic market to give it room to grow, although currently it plans to loosen restrictions on the car industry. The Malaysian government adopted industrial policies which encouraged strategic alliances with foreign partners, meanwhile it intervened to restrict entry. Since Proton engaged in car manufacturing, the car production in Malaysia increased from 81,000 units in 1980 to 136,400 units in 1992.

In the case of Proton, it took advantage of its strategic alliance to obtain necessary technology and reduce the risks of entry. Proton has undergone restructuring of its organisation to reduce its dependence on Japanese auto parts, and attempted to acquire new production technology in order to increase exports by reinforced competitiveness of its indigenous products. The company has been relatively successful with its own products, tooled by Japanese technology, compared with other emerging car manufacturers in the world auto market (about 20,000 units were exported in 1993) (Far Eastern Economic Review, April 28, 1994, p. 77).

As seen in Chapter 4, South Korean car manufacturers are eager to play a significant role in the world auto industry through both exports and FDI. Among

emerging car producers, South Korean car manufacturers have achieved the most impressive growth among car producers from developing countries, and in 1994 ranked as the seventh top major exporter in the world (see *Table 3.8*). Currently, they produce more cars than car manufacturers in developed countries such as the United Kingdom and Italy. The South Koreans produced over 2 million units and exported 856,368 units (42.8 per cent of total production) in 1995 (*Motor Business International* 2nd quarter, 1996, pp. 187-191).

Table 3.8 Major Passenger Car Exporters in the World (units)

Rank	Country	1993	1994
1	Japan	3,910,584	3,360,676
2	Germany	2,079,144	2,269,895
3	France	1,815,668	1,975,436
4	Spain	1,187,454	1,343,927
5	Belgium	1,033,547	1,131,143
6	Canada	959,583	850,911
7	South Korea	572,402	648,385
8	United Kingdom-a	561,351	618,700
9	United States	488, 932	585,043
10	Mexico	445,587	487,654 (11)
11	Italy	403,736	541,527 (10)
12	Brazil	249,607	276,561
13	Sweden	245,567	267,169

Notes: () indicates ranks in 1994. **a**: British exports are estimated. Sources: KAMA, 1995 and Ward's Automotive International, 1995

The Brazilian and Indian governments adopted industrial policies, such as the import substitute policy, which discouraged their car manufacturers to obtain competitiveness. The initial intention of these governments was to develop the domestic car industry, however, by adopting improper policies the development of the car industry was deterred. Like other governments in emerging economies, the South

Korean government has promoted and protected its infant car industry with foreign car manufacturers' technology support since the 1960s. But the government did not adopt the import substitute policy, instead it adopted an export-oriented policy and encouraged car producers to build up strategic alliances with foreign partners in order to obtain advanced technologies.

However, the car production in 1970 was 14,500 units. This volume of production was much smaller than all LDC entrants (except Malaysia) in that year, implying that the South Korean manufacturers did not enjoy the full economies of scale. The government could have encouraged component manufacturing and SKD / CKD assembly in 1960 and 1970 until market demand reached the minimum threshold volume in the mid-1980s.

However, South Korean car manufacturers have distinct differences from other emerging car producers. Firstly, although South Korean car manufacturers began their operations with foreign MNEs' collaborations, they have always held managerial control²⁰. This may give South Korean car producers an opportunity to develop indigenous models and to set their own export targets, while MNEs' subsidiaries are by and large operated by decisions at headquarters in their home countries. In particular, decisions about the selection of production models and where products are sold are made by MNEs in their home country.

Secondly, it is only the South Korean car makers that have invested heavily in Research and Development (R and D) for product development among the emerging car producers, except for Telco in India²¹. Other car manufacturers in emerging economies

²⁰ Daewoo Motor was a 50-50 joint venture with GM, but it became a wholly-owned company in 1992.

²¹ Three major South Korean car manufactures, Hyundai, Daewoo, and Kia have increased R and D investment. For example, Hyundai plans to increase R and D investment from 5 per cent to 7 per cent of total sales; Kia expanded R and D activities, including setting up the overseas technology centres; Daewoo has invested \$235 million on a new R and D centre and set up a technical centre at Worthing in the United Kingdom, and is planning to establish more centres in Munich and the United States (Hyundai Motor, 1995 and Kia Economic Research Institute, 1995, pp. 20-27).

have either low capability or lack capability of production development technology due to the shortage of R and D investment. The South Korean car manufacturers' efforts to improve capabilities to develop new products may contribute to widening their export markets.

Finally, South Korean car producers have begun to make direct investment overseas and become the only MNEs in car manufacturing from an emerging economy, although Skoda from the Czech Republic is planning to invest in Russia. Through both exports and FDI, the South Korean car industry is more fully integrated into the world auto industry.

The experience to date with emerging car manufacturers in the 1990s is varied. Based on the income-driven product cycle model (refer to Chapter 2), scale-sensitive industries can have comparative advantages by being located in a dynamic local market where demand has surpassed the minimum viable size for car manufacturing. In general, domestic markets in these emerging economies are rapidly growing and will continue to increase in the future, implying that LDC entrants can obtain comparative advantages. In addition, the adoption of proper industrial policies will encourage LDC entrants to become significant global players.

However, only South Korean car manufacturers have actively developed the ability to become global players in the international market, not only as exporters of finished units, but also as MNEs by establishing subsidiaries in foreign countries. However, the potential of other car producers in developing countries to become global players in the car industry should not be dismissed.

By examining how the various car manufacturers (particularly those outside North America, Japan, and Western Europe) developed their car industries, several key features become evident. Firstly, without the development of a large domestic market as a first step, it seems difficult for local car manufacturers to improve competitive advantages, although they possess advanced production technology. For LDC entrants, the economies of scale is required to become successful manufacturers. Without the domestic market demand, entering car manufacturing cannot be developed efficiently, although the markets of LDCs are in the dynamic youthful stage of product cycle. For major manufacturers, this may be true in particular with the past experience that Western European manufacturers were not able to develop competitiveness when trade barriers were high. If restrictions on car trade are reduced, car manufacturers that have a varied production range can expand globally by tailoring their products according to changing local market conditions.

Secondly, home governments have intervened in terms of promotion and protection in most car industries. This phenomenon is observed particularly in car industries in developing countries when their car industries were in an infant stage and needed room to grow. However, the prolonged domestic protection can cause trade conflicts with foreign trading partners and undermine the development of global competitiveness of domestic producers. In developed countries such as the European countries and the United States, the governments' policies have reflected trade regulations when local car manufacturers' strong position in the world car industry have been threatened. These trade conflicts can impede exporting opportunities of LDC entrants. If LDC governments pursue market liberalisation with the policy of monitoring

competition and restricting entry, and if necessary not to squander the potential economies of scale by low capacity, they can play an effective role in the promotion of the car industry. In addition, they can encourage strategic alliances with major manufacturers so that domestic producers reduce risks of entry and obtain opportunities to train skilled labour and improve technologies.

Finally, global car manufacturers have had a tendency to be located near markets in order to reduce production costs by decreasing transportation costs, to avoid trade barriers and to adjust to local market conditions quickly, although car producers in developing or transitional countries have not reached the stage of setting up their overseas production facilities for these reasons. Each FDI by major car manufacturers (the Americans, the Europeans, and the Japanese) for local production in the United States and Western Europe has different motivating factors. The American car manufacturers made FDI in car manufacturing in Europe mainly due to high transportation costs, high import tariffs and taxes on cars, and different market conditions during the first FDI flows in the 1920s. The second American FDI flow into the European car industry in the 1960s was due to their intention to expand market share in Europe. Whereas European car producers' FDI in the United States resulted from increasing demand for low-priced and small European cars during the 1970s. In the case of Japanese car producers' FDI in car manufacturing, the new production system, flexible specialisation or lean production, itself and local content requirements may necessitate the transfer of manufacturing facilities close to major markets, initiated by high trade barriers especially on Japanese cars.

Currently, the world auto industry has been increasingly interrelated and new car manufacturers are actively cultivating not only domestic markets, but also overseas markets and also trying to improve competitiveness. In the future, like a precedent of

Japanese breakthrough, one or more of the car manufacturers from developing countries may become a major car producer in the world car industry.

Given examining emerging car manufacturers, the South Korean car manufacturers may be the first successful entrant in the world car market and have a relatively high potential to be one of the major players in the world car industry by the integration with the East Central European car industry and other manufacturing operations in developing countries, where future market growth obviously exists.

Chapter Four

South Korean Export-Oriented Industrialisation and Car Industry

4.1 Introduction

In Chapter 3, it is observed how international production and FDI in cars have developed over the last century in order to comprehend the car industry in the global context. The aim of this chapter is to set the contextual framework to understand the development of the case study of a car manufacturing company. In order to do that, the chapter traces the recent industrial history of South Korea, relating trends in structural adjustment of industries in general, and then focuses in more detail upon the development of the car industry.

South Korea has achieved remarkable economic growth in the last thirty years, with per capita gross national product (GNP) increasing from U.S. \$ 87 in 1962 to U.S. \$ 8,483 in 1994, and an average annual GNP growth rate of over 5 per cent from 1962 to 1994 (Song, 1990, pp. 60-1; *Korean Business Review*, December 1995, p. 59). This economic growth has been made possible by a variety of transformations in South Korean industry fostered by the government support.

Section 4.2 examines the recent history of economic development in South Korea. Firstly, it is shown how export-oriented industrialisation and the success of exporting labour-intensive products led to the rapid growth of the South Korean economy during the 1960s and 1970s. Secondly, the process of upgrading from labour-

intensive to capital-intensive industry is explained. Such a process was promoted by the South Korean government in 1973, and led to the foundation of heavy and chemical industries. Finally, the section explores the importance of capital-intensive industry as the core industry of economic growth and the increase in exports of capital and high-technology goods. The subsequent diversification of export markets is explained. It is observed that since the 1990s, there has been a rapid increase in foreign direct investments (FDIs) by South Korean companies.

In the final section of the chapter, the development of the South Korean car industry, its increasing output, and fluctuating export performance are explained through examining the economic activities of three major car producers, Hyundai Motor, Kia Motors, and Daewoo Motor. In addition, FDI by these companies through setting up joint ventures for local production is also described.

4.2 Changes in the structure of South Korean Industry

4.2.1 Export of Labour-Intensive Products: 1962-72

The Republic of Korea (South Korea) is a relatively small country with few, if any, raw materials and a large population. In aggregated land area, the peninsula is 220,000 square kilometres, and about 70 per cent of this total area is mountainous terrain. In 1945 when the Japanese lost the Second World War, this small country was divided into two territories on the grounds that the former Soviet Union and the United States liberated the Korean peninsular and disarmed the Japanese military force in North and in South Korea, respectively.

Although the country was liberated from Japan, the existing industries, which were established by the Japanese government or companies during the colonial period (1910-45), were not large enough to foster economic growth without assistance from foreign countries. After 1945 the South Korean economy was supported by the U.S. military and civil aid. South Korea received more than \$13 billion (in current prices) between 1946 and 1976 (see *Table 4.1*). However, in 1950 the Korean peninsular went into war, nullifying the foreign aid for economic development. The most basic infrastructure and manufacturing capacity was destroyed during the Korean War (1950-53). South Korea depended more upon U.S. assistance to sustain itself during this critical time.

After the Korean War, South Korean policy makers thought that the importsubstitution industrialisation policy from 1945 was not appropriate to achieve economic development of the country due to the limited domestic market. Through the importsubstitution industrialisation policy manufacturing industries were only able to produce enough goods to meet the demands of the domestic market. Primary industry was dominant and its output was at 47.3 per cent of total output in 1953, with this share being maintained until the mid-1950s (Kim, 1994, p. 7).

In addition to the import-substitution industrial policies which did not contribute to economic development, the South Korean government faced another difficulty. In the late 1950s, U.S. aid started to decrease progressively, aggravating the shortage of foreign exchange. The South Korean government had to find a way of earning enough to import the goods the country needed.

Table 4.1 U.S. Economic and Military Aid to South Korea (million U.S. \$ in 1978 price)

	Economic Aid	Military Aid
1946-1965	3,958.8	4,765
1966-1970	496.1	2,026
1971-1975	60.6	2,120
1976-1977	2.6	345

Sources: Pae, 1992 p. 71, Farley et al., 1978, pp. 16-7; Lim, 1985, p. 63.

A series of five-year economic development plans began in 1962. Initially designed to increase exports, the plan met with some success, and evolved into an export-oriented development strategy. Policies were prepared to raise export competitiveness by increasing the output of labour-intensive manufactured products, such as textiles and clothing, capitalising upon the availability of cheaper educated labour¹. *Table 4.2.* shows how such products dominated the export market in the 1960s and early 1970s.

During this time, there were many incentives to support export activities such as tax exemptions, a supply of credit at preferential interest rates, and government funds to export industries. The most significant incentives provided to promote exports included exemptions from import duties on raw material, intermediate goods, parts and components, and capital equipment for export production. These incentives were available to all export activities regardless of the industries (Koo, 1986, pp. 5-6).

Table 4.2 South Korea's Major Export Items

	Major Export Items		
1962	Rice, Marine Products, Raw Silk, Iron Ore, Cotton Fabrics		
1967	Plywood, Sweaters, Wigs, Raw Silk, Clothing, Cotton Fabrics		
1972	Clothing, Plywood, Electronics, Sweaters, Fabrics, Cotton		
	Products, Wig, Footwear		

Source: Economic Planning Board (EPB), Individual Years.

¹ By 1975, South Korea's literacy rate was about 93 per cent (World Bank, 1980, p. 111), compared with, for example, that of 76 per cent in Brazil. The proportion of the population with any formal education rose from 13.4 per cent to 79.7 per cent between 1944 and 1974 (Lim, 1985, p. 121).

After 1962, when the economic development plans were adopted, the South Korean economy grew rapidly. According to the Economic Planning Board (EPB) (1984), South Korea's exports grew from US \$55 million in 1962 to U.S.\$ 1,624 million in 1972 (current prices), marking a 40 per cent annual growth rate. During the same period, manufactured goods, which accounted for only 27 per cent of total exports in 1962, came to account for 88 per cent in 1972. The growth rate of GNP increased dramatically from 2.2 per cent in 1962 to 9.1 per cent in 1963 (EPB, 1979), and the average annual growth rate from 1963 to 1972 registered at over 9 per cent. In contrast, the average annual growth rate of GNP was at 3.9 per cent during the 1950s (Kim, 1994, p. 6).

During this period (1962-72), in addition to fostering manufactured exports, the government also continued to protect the domestic economy. Import substitution was accomplished in the key raw material supplying industries, with restrictions on imports changing according to the needs of the domestic economy. For example, a ban on transportation equipment and machinery (Harris, 1986, p. 36). On the basis of both export promotion and import substitution, by 1972 the foundation had been laid for an industrial base ready to exploit the continued increase in world demand for labour-intensive goods, and to provide for sustained growth in the South Korean economy.

4.2.2 Foundation of Capital-Intensive Industry, 1973-85

In 1973, the government shifted its industrial policies from labour-intensive export industrialisation to the development of heavy and chemical industries by promoting import substitution for intermediate materials and capital goods. The 1973 Heavy Industry and Chemicals Plan (HIC) was introduced to force the growth of

capital-intensive industries such as shipbuilding, steel, machinery, petrochemicals and transportation equipment, with public finance institutions, such as the Korean Development Bank, providing long-term loans to the so-called 'strategic' industries.

The South Korean government was, at that time, the largest shareholder in the commercial banks, and remained so until in the early 1980s (Hong, 1993, p. 424). The government had much leverage to allocate resources for supporting its economic development policies. In 1983, the manufacturing sector in South Korea financed 9.9 per cent of its business through retained earnings and capital increases, and the remainder of capital was highly subsidised and was greater the more capital - intensive the industry (Amsden, 1989, p. 85). The differences in subsidisation by industry are shown in *Table 4.3*, with the loan to value-added ratio likely to be much higher in capital - intensive industry.

Table 4.3 Loan / Value-Added (VA) Ratio, 1963-82

Industry	1963-71	1972-78	1979-82
Labour intensive			
Clothing & footwear	0.6	0.7	0.7
Miscellaneous manufactures a	0.4	0.6	0.6
Non-metallic minerals b	0.7	0.6	0.5
Metal products	0.4	0.5	0.8
Electrical machinery	0.6	0.6	0.7
Textiles	1.0	1.2	1.1
Wood products	1.4	1.9	2.0
Capital intensive			
Synthetic fibres	1.1	1.4	1.3
Rubber tires	0.9	1.1	0.9
Glass & products	1.0	0.6	0.9
Pulp & paper	0.7	1.0	1.1
Sugar refining	0.9	0.8	1.1
Petroleum products	1.6	0.7	0.9
Cement	1.8	1.3	1.2
Shipbuilding	2.7	1.6	1.1
Automobile & parts	1.3	1.2	1.6
Industrial chemicals	1.4	1.1	1.2
Iron & steel products	1.7	2.0	2.0

Notes: a: Includes precision instruments (watches and optical instruments), leather products, plastic products, and furniture. b: Includes glass and cement.

Sources: The Bank of Korea; Korea Traders Association; Hong and Park, 1986; Amsden, 1989, p. 86.

In 1974, a newly established National Investment Fund (NIF) was also made available to develop the capital goods industry and finance import of inputs of intermediate products. The NIF provided low-cost financing for purchases of domestic machinery, construction of domestic heavy machinery plants, purchases of domestically produced ships, and provided additional funds for exports on deferred payment² (Koo, 1986, pp. 8-9). Investment as a share of gross product increased between 1976 to 1979 from 25 to 35 per cent, and four fifths of this investment went to the heavy and chemical sectors (Harris, 1986, p. 36).

Firms, which were generally large business groups with financial capability to invest in 'strategic' industries, were normally provided with tax incentives, such as, exemption from corporate taxes for the first three years after the establishment of the plant, a 50 per cent reduction in corporate taxes for the following two years, tax credits of 8-10 per cent of the investment amount, and accelerated depreciation of up to 100 per cent of the normal depreciation allowances (Koo, 1986, p. 9).

In addition to providing policies and incentives favourable to heavy and chemical industries, the government protected these industries to preserve the domestic market share for South Korean companies. High tariffs imposed on HCI products and the proportion of items which could be imported without prior government approval decreased from 61.7 per cent in 1968 to 50.5 per cent in 1976. In most of the 'strategic' industries, such as industrial machinery, electronics, automobiles, shipbuilding and metal products, the imports declined from 55.9 per cent in 1968 to 35.4 per cent in 1976 (Koo, 1986, p. 8).

The government's support policies and investment in capital-intensive and heavy industry began to be rewarded. From 1972 the heavy and chemical industries grew

² Power generation and agriculture were also financed by the NIF.

rapidly and the share of those industries to total manufacturing value added, which was already 37.8 per cent in 1972, increased to 54.0 per cent in 1983. The proportion of those products in total exports also increased from 21.3 per cent to 51.3 per cent in 1972 and 1983 respectively (see *Table 4.4*).

Table 4.4 Share of Heavy and Chemical Industries, 1964-83 (unit: percentage)

	1964	1972	1979	1983
In Total Manufacturing Value Added (Constant Price)	31.4	37.8	52.6	54.0
In Total Exports (Current Price)	9.4	21.3	38.4	51.3

Source: Ministry of Trade and Industry; Koo, 1989, p. 10.

However, in 1979, oil prices increased and the onset of a world slump reduced external demand for South Korea's exports, generating negative growth in 1980. From 1979 to 1980, the government borrowed heavily to finance the heavy and chemical industries and achieve its aims of promoting and protecting the sector. The accumulation of a heavy debt burden, coupled with excessive supplies of capital in the economy, resulted in an increase in inflation, and due to rising domestic prices, the competitiveness of the South Korean exports decreased. Heavy losses were incurred and shipbuilding and heavy machinery manufacturing declined.

However, regardless of the negative external factors affecting the growth of HCIs, there were more fundamental problems for the development of HCIs in South Korea. When the government launched the development programme for its HCI in the 1970s, it was too ambitious to not consider whether domestic market demand was large enough to develop such scale-sensitive industries. As discussed in the income-driven

product cycle model, LDC scale-sensitive industries can have comparative advantages when the markets of LDCs meet certain conditions. The South Korean economy was growing rapidly and per capita income rose, in other words, the market was in the dynamic youthful stage of the product cycle. However, the South Korean firms could not secure access to a large market so that they could amortise their investments. Without crossing a plant of the minimum viable threshold size, the South Korean HCIs were forced to be developed by the government.

After the government adopted its policy for the HCI, the industries seemed to grow rapidly, but then started to decline due to over-capacity. This trend indicated the fact that the development of HCI in South Korea was premature and the government had no choice but to borrow funds for declining HCIs. Despite the government's effort, many entrants declared an insolvency status. As a result, the South Korean economy experienced heavy losses and inflation, as mentioned above, and the government was forced to pursue a consolidation of the HCIs.

Due to the premature timing of HCI entry supported by the government, many firms in the HCIs had to pay the penalty, resulting in making a dent in the growth of the South Korean economy as well as wasting resources, although the consolidation of the HCIs was eventually effective. If the government encouraged firms' entry in the 1980s, the HCIs could have been developed more efficiently.

However, the government's HCI policy was somehow an incubator for the development of capital- and technology- intensive products which could be exported to foreign markets. The production of automobiles, ships, and intermediary industry products required strong support from the heavy and chemical industries, and during the 1973 to 1985 period, the government built the foundation on which future export could grow and the industrial structure could be upgraded. The share of the manufacturing

sector increased from 9.1 per cent of GNP in 1962 to 29 per cent in 1983, while that of the agriculture, forestry and fishery sectors decreased from 43.3 per cent to 16.3 per cent (see *Table 4.5*). The South Korean economy experienced its first structural change from a primary-product-based economy to a newly industrialising developing country (NIC).

Table 4.5 Changes in Industrial Structure (unit: % of the GNP in constant prices)

Sector	1962	1972	1979	1983
Agriculture, Forestry and Fishery	43.3	26.5	17.5	16.3
Mining and Quarrying	2.0	1.8	1.4	1.4
Manufacturing	9.1	16.9	27.6	29.0
Services	45.6	54.8	53.5	53.3
Total	100	100	100	100

Source: EPB, 1984.

The growth of the economy in the 1970s and early 1980s depended largely on market demand in the U.S. and Japan. Despite sluggish growth in these two countries during the period, the South Korean economy grew sharply through an export-led boom. Unlike dependency theorists³, neo-classical economists⁴ argued that close attachment of a small national economy to a large, more advanced one, such as that of the U.S. or Japan during the 1950-73 period, would ensure demand for exports (Barrett

³ Dependency theory originated among Latin American scholars who sought national economic disengagement from the advanced industrial countries. They argued that linkages between the Third World and the industrialised countries of an evolving world capitalist system resulted in exploitation and economic stagnation rather than growth in the developing countries [Third World refers to late-developing countries in the world capitalist system] (Jalée, 1968, p. 5). Third World includes the developing countries of Asia, Africa and Latin America, as compared with the First World of advanced capitalist countries and the Second World of advanced socialist countries (Horowitz, 1966)].

⁴ Some adherents of neo-classical economic theory have examined the case of economic growth and structural change in Korea, such as Kuznets (1977), Kim and Roemer (1979), Kreuger (1979) and Ban et al. (1980).

and Chin, 1987, p. 33). During the 1967-72 period, the U.S. took more than 48 per cent of South Korean manufactured exports, and on average the U.S. and Japanese markets together absorbed over 70 per cent of total exports from South Korea during the same period, and over 50 per cent during 1973-83, although the rate of concentration has gradually declined since 1973.

However, heavy dependency on exports to only a few countries may have led to difficulties in creating a stable economic growth on a long-term basis. This concentration on those markets with cheaper labour-intensive goods, which were the majority exports of South Korea during that period, could not be a permanent means of achieving the continuous growth of the South Korean economy.

Given the lesson from the policies for the HCIs in the 1970s, it was found that the government intervention, particularly with sectoral targeting industrial policies, could impede the economic performance and cause efficiency losses. On the other hand, it was observed that the government played a significant role in supporting the economic development by adopting export-oriented policies and monitoring the performance of the private sector. If the government could be involved in the economic development successfully, the controversy is about how much it should actually intervene.

In terms of the sectoral targeting policy, in addition to the South Korean experience, Japan found encountered the inefficiency of enhancing sectoral productivity. In fact, most state assistance went to lagging sectors with low growth and decreasing returns to scale (Auty, 1994, p. 421). Brazil and India which favoured the autarkic industrial policy were associated with mounting efficiency losses and a deteriorating economic performance. This showed that sectoral targeting by using credit which could distort the financial market, and that the autarkic industrial policies, should be limited. Based on the successful policies adopted by the high-performing Asian economies which

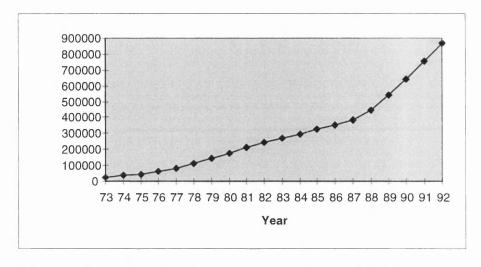
achieved high growth by getting the basic conditions right, the government should encourage macroeconomic stability and openness to foreign technology and make high investments in human capital, as well as stabilise and secure the financial system. Overall, the main concern for the South Korean government should be to provide a competitive climate for private enterprises.

4.2.3 The Transformation of South Korean Industry after 1986

According to the Korea Trade Promotion Corporation in 1990, the average total exports volume during 1986-89 was equal to 33.7 per cent of GNP, while the average trade volume (export and import) during the same period was equal to 64.3 per cent of GNP. These figures show the dependence of the South Korean economy on foreign trade, but while export-oriented development has continued to be pursued, the economy has experienced three major transformations from 1986.

Firstly, the economy suffered both internal and external problems which eroded the competitiveness of some of the industries after 1986. Internally, real wages in the manufacturing sector have increased sharply. Before 1987, the average wage level of South Korean workers was relatively lower than those of Asian NICs. In South Korea, the average monthly wage in the manufacturing industry was U.S. \$334 in 1986, while those in the U.S., Japan and Singapore were U.S. \$1557, U.S. \$1812 and U.S. \$448, respectively (ILO, 1993). However, over the next two years, 1988 and 1989, there was about a 20 per cent nominal wage increase in South Korean manufacturing industry due to the shortage of labour availability (see *Figure 4.1*).

Figure 4.1 Average Real Wages in South Korea, 1973-92 (won)



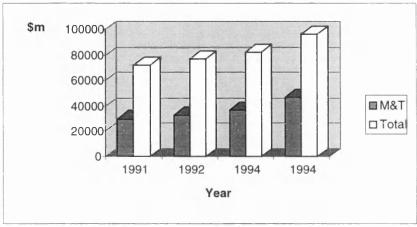
Sources: Korean Automobile Manufacturers Association (KAMA) and Kia Economic Research Institute, 1995.

Externally, due to the result of the Plaza Accord of September 1985, which sought an orderly appreciation of the major non-dollar currencies, the currencies of the New Taiwan dollar and the South Korean won continuously appreciated. The official foreign exchange rates against the U.S. dollar in 1986, 1987 and 1988 were 861.1 won, 792.3 won, and 684.1 won, respectively (National Statistical Office, 1993, p. 327). These endogenous and exogenous difficulties reduced the export competitiveness of South Korean companies which depended on the old products.

Secondly, the capital-intensive products have increased due to exports of machinery and transport equipment because the comparative advantage of the South Korean products changed as income rose. As shown in *Figure 4.2*, the growth of the South Korean exports has shifted from dependence on labour-intensive to capital-intensive industries, and by 1994 the proportion of capital-intensive products in total exports was 49 per cent. The 'Three Low Period', when interest rates of major foreign banks dropped, the exchange rate of the U.S. dollar against the Japanese yen fell, and

the price of crude oil fell from 1986, allowed South Korean companies to upgrade their products and gain market strength.

Figure 4.2 The Exports of Machinery and Transport Equipment, 1991-94

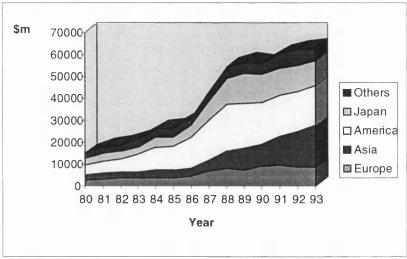


Note: Machinery & Transport Equipment (M&T) includes cars, ships, power-generating equipment, office machinery, radio & television receivers, sound & video recorders, telecommunications equipment, and electronic components.

Source: EIU country report 3rd quarter, 1995, p. 56

In addition to this shift, the export market for South Korean products has diversified in contrast to the 1970s and the early 1980s (see *Figure 4.3*). Economic ties with the European Union (EU), Asia-Pacific countries, China and the former Soviet Union have been expanded. The volume of exports to the European market has increased remarkably by 321 per cent from 1980 to 1993, and by 863 per cent to Asian markets over the same time period (Bank of Korea, 1989 and 1994, pp. 208-221). This diversification of export markets diminished a source of vulnerability from the dependence on a few concentrated export markets as well as the small domestic market.

Figure 4.3 Diversification of Export Markets, 1980-93



Notes: Asia includes Taiwan, Hong Kong, India, Indonesia, Malaysia, Singapore, and Thailand. Europe includes the U.K., Sweden, Norway, Italy, Germany, France, and Belgium. Others include Australia, Canada, New Zealand, Panama, and Middle East countries.

Source: Bank of Korea, 1989; 1994.

Finally, since South Korea started to experience a balance of payments surplus in 1986, outward foreign direct investment (FDI) has been growing rapidly. According to Bank of Korea (1987-94), the average annual growth rate between 1987 and 1990 for the amount involved in actual investment was 80.3 per cent. The increase in actual FDI in 1994 was almost 20 times that of 1987. Recent outgoing FDI is dominated by the manufacturing sector, with 55.1 per cent of the approved FDI and 65.9 per cent of total cases of FDI in 1994 (see *Table 4.6*).

Table 4.6 FDI of South Korean Industry in 1994 (U.S.\$,000)

Ar	ea	Manufacturing industry	% M /T	Total
Asia	Case	2,845	78.4	3,631
	Amount	3,261,228	70.7	4,615,745
Europe	Case	94	32.2	292
	Amount	820,092	61.1	1,342,510
North	Case	201	28.7	707
America	Amount	1,247,239	40.2	3,104,986
South	Case	131	55.5	236
America	Amount	168,820	54.2	311,376
Africa	Case	23	46.0	50
	Amount	86,431	28.7	301,024
Others	Case	49	31.6	155
	Amount	71,915	12.2	589,919
Total	Case	3,343	65.9	5,071
	Amount	5,655,725	55.1	10,265,160

Notes: Others include the Middle East and Oceanic countries. % M /T: % Investment of Manufacturing industry / Total Investment. Source: Bank of Korea, 1994.

The interesting features are that (1) FDI has taken place in almost all industries simultaneously, although FDI by the companies in capital- and technology-intensive industries has been more intensive after the 1990s, and (2) FDI by different industry has concentrated on particular regions only. For example, labour-intensive industries, affected by rising production costs, are being relocated to China and the Association of South East Asian Nations (ASEAN) among others, while firms producing capital- and technology-intensive goods such, as electronics, vehicles, and steel, invested in major export partners in Asia, North America, and European countries (including Eastern Europe).

As such, the South Korean industry is currently undergoing industrial restructuring, with comprehensive advances being made in outward oriented industrialisation (both exports and FDI). The government also fostered FDI by abolishing nearly all regulations on the introduction of foreign commercial loans in 1997 (*Korea Herald*, October 18, 1997). This measure will allow South Korean companies involved in FDI to set up banks abroad, making it easier to raise funds for overseas

investment projects. Overall, this FDI trend is expected to continue over the coming years.

Having explained the macro economic issues in South Korea, and the transformation of the country's economy, the discussion will now focus on the kernel of the research, which is the South Korean car industry.

4.3 South Korean Car Industry

4.3.1 History

During the Japanese colonial period there was no motor industry in South Korea, except for some agencies and maintenance shops for regenerating and repairing cars, buses and trucks used by the Japanese, or for manufacturing parts on a small scale.

After the liberation from Japan in 1945, most motor vehicles left in South Korea were Japanese military vehicles and U.S. military surplus vehicles. Small-sized car companies assembled cars manually with obsolete and disposed auto parts from those motor vehicles, but in 1957, due to the shortage of foreign exchange caused by the rapid decrease in U.S. aid, the government imposed restrictions on possessing cars to reduce crude oil imports. This caused the decline of domestic demand for cars. Consequently, car manufacturers manufactured only about 3,000 units annually until the early 1960s, and production was suspended soon thereafter. It was not until 1962 that the main development plan for the South Korean motor industry was finally drawn up.

In 1962, the Motor Industry Protection Law was enacted as a part of the government's first five year development plan (1962-66). A plan for promoting the development of motor manufacturing industry included restricting the import of vehicles

and their parts, while obtaining advanced technology through license agreements, and supporting local manufacturers. The restrictions on imports of finished cars were aimed at giving favourable conditions for local assembly to protect the domestic motor industry. Under this law, the company Saenara was established as a joint venture with Nissan, the Japanese car manufacturer, to assemble cars from imported semi-knock down (SKD) kits from Japan. In 1964, the new company Shinjin was instituted by a take-over of Saenara, and it began to assemble a Toyota model with technical assistance from Toyota in 1966. In 1967, Hyundai Motor was established, and commenced car assembly with the technical co-operation of Ford after 1968.

However, foreign models assembled with imported KD kits did not contribute to the development of the South Korean car industry. In 1969, the government finalised a basic auto industry localisation plan. The purpose of the plan was to increase the localisation of auto parts, in order to reduce domestic car prices at the international level, to boost domestic manufacturing industry, and to prepare for a mass production system. As an example of the government's attempt, a Ford model was produced by Hyundai Motor in 1971 with a local content ratio of 50 per cent.

Through the mid-1970s, all three major motor vehicle manufacturers (Hyundai, Kia, and Shinjin (later Daewoo Motor)) had entered the passenger car industry. In 1971, Kia Motors began to produce Fiat and Peugeot models, and in 1972 Shinjin instituted a joint venture, GM-Korea⁵ with General Motors (GM) in which both invested 50 per cent of the capital.

As revealed in the previous section, it was at this time that the government industrial policy shifted its emphasis towards heavy and chemical industrialisation and, in consequence, a long-term auto industry development plan was implemented in 1973,

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⁵ The GM-Korea changed its name to *Saehan* in 1976, then to Daewoo Motor in 1983 (Daewoo group's took over of *Saehan*'s domestic capital in 1978), and in 1992, GM withdrew from Daewoo Motor completely.

aimed at developing a completely South Korean car model. Under the plan, the car industry was given the status of a strategic industry, with a new environment having to be fostered for its development. In this new government enhanced environment, the car producers enlarged the scale of production and localised auto parts production. In 1975, Hyundai Motor began to produce its own model, the Pony, with a local content of 80 per cent, and in 1976 the Pony became the first car to be exported to the United States in the history of the South Korean car industry.

It is, however, apparent that a number of contradictions existed in the government's policy since the government initiated a plan for the development of a car industry. For example, during the years 1969, 1970, 1979, and 1980, the government adopted inconsistent policies with its aims for the country's car industry, which impeded the development of the car industry and caused domestic demand to dwindle. Such questionable policies included an increase in the price of oil, taxes on cars and auto parts, the prohibition of foreign loans for facility innovation, and the limitation of new car registrations.

The second oil crisis marked the onset of a depression in the motor industry, as it did in the HCI. The increase in investment to enlarge manufacturing facilities in the early 1970s resulted in over-capacity problems in the motor industry, and in 1981 the government initiated the rationalisation measure⁶ to limit the number of motor vehicle manufacturers through mergers, and by restricting each of them to specialisation in particular types of motor vehicle production. Although the original rationalisation measure did not go exactly according to plan, some success was achieved, with a reduction in overlapping facilities' investments within the same types of motor vehicles.

⁶The measure dictated the merger and specialisation of passenger car producers, with cars to be produced only by Hyundai Motor, resulting from a merger of Hyundai Motor and Saehan; and small trucks and buses to be produced only by Kia Motors. However, due to the failure in negotiating between Hyundai and GM, which had 50 per cent shares in Saehan, the merger of Hyundai Motor and Saehan was not realised.

Under the rationalisation, Hyundai Motor and Daewoo Motor were allowed to produce passenger cars, while Kia Motors was permitted to manufacture commercial vehicles.

Since the South Korean firms' entry into the automobile industry in the 1970s with the government support, firms in the industry finally went through the rationalisation process. This was because the basic problems of entry into the car industry were not taken into account. Although the government contributed to the success of localising auto parts and components as well as technologies by fostering the car industry with technical assistance from the major car producers, firms' entry into the car industry was too early because the domestic market was too small to support such a scale-sensitive industry, in addition to the deteriorating external situation in the 1970s (the second oil crisis).

Like HCIs, firms in the car manufacturing industry need to reach the minimum viable size of a plant as discussed in the income-driven product cycle model. Without securing access to a large domestic market, it was obvious that problems caused by over-capacity rose, resulting in the massive economic losses not only for the car industry, but also for the whole country despite the fact that South Korea was in the dynamic stage of the product cycle.

In terms of industrial policy, the government had to pursue the sectoral targeting policy to protect the car industry as one of 'the infant sectors' because entry into the industry was premature. The government should have supported the auto part industry by using cheaper labour force in the 1970s, and then fostering entry by a domestic car producer in the 1980s when the manufacturing technology advanced to reduce the minimum viable size of a plant, thereby allowing NICs to enter into the car manufacturing industry. Furthermore, during the 1980s, the domestic market grew large enough to meet the minimum threshold size of a plant.

Throughout the 1980s, foreign co-operation with major South Korean car producers was strengthened through capital investment in car manufacture. Mitsubishi took 10.3 per cent of Hyundai Motor shares in 1982, and Mazda and Ford had 7.52 per cent in 1983, and 9.39 per cent of shares in 1986, respectively, in Kia Motors (Lee, 1995, p. 194). Unlike the relationships with technology licences for KD imports in the 1960s and the early 1970s, during this period the main contents of agreements consisted of technology co-operation for the designing of new car models and the supply of original equipment manufacturers (OEMs) to foreign partners.

By the late 1980s there were signs that the government was losing some of its authority over the car companies' new participation in production, and the government relaxed restrictions on vehicle production by terminating the rationalisation programme. Beginning in 1987, Hyundai Motor and Daewoo Motor were allowed to produce small commercial vehicles, and Kia Motors engaged in producing passenger cars. In 1989, producers were allowed to manufacture any kind of vehicle. Hyundai Motor and Kia Motors became involved in jeep production, and in 1991 Daewoo Motor began producing mini-vehicles, as a kind of 'people's car', in co-operation with Suzuki. Currently, Ssangyoung Motor⁷, which had exclusive permission to produce jeeps until 1989, is preparing to produce medium- and large-size cars beginning in 1997. Samsung, the largest conglomerate in South Korea, is soon to enter both the domestic and foreign car markets after having obtained approval from the government in 1994.

Despite the short history of the South Korean car industry, car manufacturers have made significant progress in technology development. In 1990, producers started to develop indigenous models: Hyundai Motor made the 'Elantra' and the 'Scoupe', the 'Espero' was manufactured by Daewoo Motor, and the 'Sepia' was launched by Kia

⁷ Ssangyoung Motor was established in 1988.

Motors in 1992. Even car engines have been developed by Hyundai Motor and Kia Motor, beginning in 1990 and 1992, respectively.

4.3.2 Production

When car production began in the 1960s, with technical assistance from foreign partners such as Japanese, American, and European car manufacturers, output increased only gradually. In the 1970s, most car manufacturers increased their facility investments for mass production in accordance with the government's promotion. The annual production capacity of car plants increased from 70,000 units in 1974 to 280,000 units in 1979 (Lee, 1995, p. 197). During the mid-1970s, domestic demand expanded due to a reduction in oil prices and car taxes, and car exports started. As a result, production of cars increased from 13,668 units in 1970 to over 100,000 in 1979 (KAMA, 1995, p. 22).

Despite the oil crisis, the world-wide economic depression and the government's unfavourable policies towards the car industry in 1979 and early 1980, the production of cars continued to grow. Although the car industry was originally promoted to increase exports, the domestic sales of cars have contributed to the overall growth in production. Increased incomes and radical changes in the taxation of the industry boosted domestic sales in the 1980s, and with the government's protection of the domestic market with high tariffs⁸ on imported cars, local car producers have remained dominant in the domestic market. Despite the fact that from 1986 to 1988 car manufacturers enjoyed rapid production growth, with increases in exports accounting for more than 60 per cent of total production, exports fell dramatically in 1989 (see *Table 4.7*). However, during

⁸ Until 1988, import duties on cars were 60 per cent, then lowered to 30 per cent in 1989. Current imported duties on cars are 8 per cent.

the 1990s the growth of domestic sales has more than offset the fall in exports and lifted overall production.

The heavy dependence of the car manufacturers on the domestic market can be explained in two ways. First, since the domestic car manufacturer intended to export their products under their own brand names, lack of brand recognition, compared with the major global producers which have a history of car production for almost a century (except the Japanese), has persisted. It was, therefore, easier to sell cars to the domestic than to foreign customers with 'unknown' products. Second, the domestic market was highly protected for the domestic producers. They did not have to make an effort to increase 'the competitiveness' of their products because the domestic market was less competitive, compared with the open world market. In addition, the domestic car producers were well aware of the needs and preferences of the domestic customers.

Table 4.7 Proportion of Car Exports and Domestic Sales, 1980-96

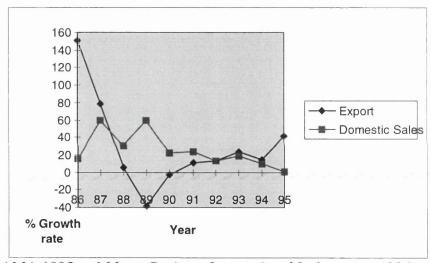
Year	% E/P	% D/P	Total Production
1980	20	80	57,225
1981	25	75	68,760
1982	16	84	94,460
1983	14	86	121,987
1984	32	68	158,503
1985	45	55	264,458
1986	65	35	457,383
1987	68	32	793,125
1988	65	35	872,074
1989	40	60	871,898
1990	34	66	986,751
1991	33	67	1,158,245
1992	33	67	1,306,752
1993	35	65	1,592,669
1994	36	64	1,758,213
1995	43	57	2,003,146
1996	46	54	2,239,497

Notes: Figures include sport-utility vehicles. The proportion of export and domestic sales in the table are round figures. % E/P: % Export/ Production, % D/P: % Domestic sales/ Production

Source: KAMA, 1995-96.

In the 1990s domestic sales have grown to take a larger share of total production than those of exports, but currently growth seems to be sluggish (see *Figure 4.4*). The previously huge growth rate of domestic sales declined to less than 1 per cent in 1995, but domestic sales still have room to grow despite the limitations of the domestic market and current economic slump. Car ownership in South Korea is lower than that of countries that have similar income levels (see *Table 4.8*), with South Korea having only approximately just over 50 per cent of the ownership found in these countries.

Figure 4.4 The Growth Rate of Export and Domestic Sales of South Korean Cars, 1986-95



Source: KAMA 1995 and Motor Business International 2nd quarter, 1996

Table 4.8 Comparison of Car Ownership in Upper-Middle-Income Countries

Country	GDP per capita in 1995	Automobiles per 1000 inhabitants
Argentina	8,030	133.3
Greece	8,210	181.8
South Korea	9,700	99
Portugal	9,740	208.3
Spain	13,580	344.8
New Zealand	14,340	476.2

Sources: KAMA, 1995 and World Development Report 1997.

Among the three car manufacturers⁹, Hyundai Motor has taken a majority share, with an average of over 60 per cent of total production since 1985 (KAMA, 1995, pp. 30-1). Kia Motors used to be the second largest producer, overtaking the production of Daewoo Motor in 1989. By 1994, Kia Motors had 24.9 per cent of total production, while Daewoo Motor's share had fallen to 18.9 per cent in 1994. However, Daewoo Motor has regained its position as the second largest car manufacturer from 1995. The share of Daewoo Motor's production increased from 25.1 per cent of total production in 1995 to 27.2 per cent in 1996, and Kia accounted for 22.8 per cent in 1995 and 23.0 per cent in 1996 (*EIU Motor Business Asia-Pacific*, 2nd quarter 1997, pp. 14-15).

With regard to domestic market share, Hyundai Motor has led the domestic market since the development of the car industry. Its market share, on average, accounted for more than 60 per cent of the total domestic market share until the 1980s. Since then, its share has decreased gradually, but still accounts for over half of total domestic sales. Kia Motors has taken second place in domestic sales after Hyundai Motor (except for 1994), while Daewoo Motor has been the worst performer in domestic sales (KAMA, 1995, p. 42).

Currently, all three car producers recently revealed plans for future expansion of production capacity in order to be one of the top 10 biggest car manufacturers in the world through achieving ambitious export targets (see *Table 4.9*). Hyundai Motor was the thirteenth biggest motor vehicle manufacturer in the world in 1994. Kia Motors and Daewoo Motor were the seventeenth and the twenty-third biggest world motor vehicle producers respectively in that year (see *Table 4. 10*).

⁹ Ssangyoung has only produced sport - utility vehicles (4WD), which are included as passenger cars in this research, but the company only introduced its first passenger car in 1997. The company's car production has taken a very small proportion of total production (its production was only 2.3 per cent of total production in South Korea). In this research, three car manufacturers, Hyundai Motor, Kia Motors, and Daewoo Motor are considered as the South Korean car manufacturers, although all the figures used in the research have included Ssangyoung's performance (total production and exports).

Table 4.9 Production Capacity Expansion Plan by 2000 (unit: vehicles)

Company	Production Capacity
Hyundai	2,420,000
Kia	2,000,000
Daewoo	1,240,000
Samsung	500,000a
Total	6,160,000

Notes: Figures include the production capacity of commercial vehicles. a: A capacity of 500,000 will be achieved by 2002.

Sources: KAMA, Daewoo Motor Co.,. Ltd. and Automotive International, October 1994.

Table 4.10 The World's 25 Biggest Motor Vehicle Manufacturers in 1994 (unit: vehicles)

	day	19	94	
Rank	Company	Domestic Production	Overseas Production	Total Production
1	GM	4,445,888	3,175,662	7,621,550
2	Ford	3,734,282	2,857,711	6,591,993
3	Toyota	3,508,456	1.051,668	4,560,124
4	VW	1,601,002	1,440,600	3,041,602
5	Chrysler	1,693,535	939,331	2,632,866
6	Nissan	1,558,121	1,059,172	2,617,293
7	P.S.A.	1,892,548	525,912	2,418,460
8	Fiat	1,468,010	773,414	2,241,424
9	Renault	1,655,903	468,381	2,124,284
10	Mitsubishi	1,306,185	606,868	1,913,053
11	Honda	997,726	701,823	1,699,549
12	Mazda	985,821	229,100	1,214,921
13	Hyundai	1,134,611		1,134,611
14	Suzuki	777,643	252,090	1,029,733
15	D-Benz	720,686	163,992	884,678
16	Isuzu	376,788	263,865	640,653
17	Kia	619,875		619,875
18	Daihatsu	482,242	108,000	590,242
19	BMW	550,251	22,832	573,083
20	VAZ (Lada)	528,845	-	528,845
21	Fuji Heavy	434,091	58,000	492,091
22	Rover	486,828		486,828
23	Daewoo	340,707		340,707
24	Volvo	306,192	•	306,192
25	GAZ (Wolga)	190,549	•	190,549

Notes: 1. Overseas production includes assembly operations. 2. Each motor vehicle manufacturer's total production is added with all production in the following countries: GM: the U. S., Canada, the U. K., Germany, Spain, Brazil, Mexico, and Australia; Ford: the U. S., Canada, the U. K., Germany, Belgium, Spain, Argentina, Brazil, and Australia; Toyota: Japan, the U. S., Canada, Australia, Brazil, Germany, and Taiwan; VW group: Germany, Spain, the former Yugoslavia, Brazil, Mexico, Argentina, and the Czech Republic; Nissan: Japan, the U. S., the U. K., Spain, Mexico, Australia, and Taiwan; P. S. A. (Peugeot): France, Spain, the U. K., and Italy; Renault: France, Spain, and Argentina; Fiat group: Italy, Brazil, Turkey, Poland, Germany, the U. K. and Spain; Chrysler: the U. S., Canada, Mexico, and Turkey; Honda: Japan, the U. S., Canada, the U. K., and Taiwan; Mitsubishi: Japan, the U. S., Australia, and Malaysia; Mazda: Japan and the U. S.; Suzuki: Japan, Canada, India, and Spain; Daimler - Benz: Germany, Spain, Mexico, Brazil and Argentina; Fuji: Japan and the U. S.; Isuzu: Japan and the U. S.; Volvo: Sweden, the U. K., the Netherlands, and Brazil.

Source: KAMA, 1995, p. 72.

The total production capacity of the South Korean motor industry was estimated at about 2.8 million units in 1993, but by the end of 1996 it had reached 4.2 million units (an increase of 50 per cent). South Korea was ranked the sixth largest motor vehicle manufacturing country in the world in 1994 (see *Table 4.11*). If each producer completes their plans successfully, annual world-wide production capacity will be about 6 million units by the turn of the century, which may lead the South Korean motor vehicle industry to the third or fourth largest motor vehicle industry in the world.

Table 4.11 The Top 10 Largest Motor Vehicle Manufacturing Countries in 1994 (unit: 000' vehicles)

Rank	Country	Total Production
1	the U.S.	12,250.0
2	Japan	10,554.1
3	Germany	4,356.1
4	France	3,558.4
5	Canada	2,321.8
6	South Korea	2,311.7
7	Spain	2,142.3
8	the U. K.	1,694.6
9	Brazil	1,582.9
10	Italy	1,534.5

Source: KAMA, 1995, p. 85.

However, there is concern that a production over-capacity in the motor vehicle industry could take place due to excessive production expansion, as happened in the early 1970s. Recently, this worry was reaffirmed by Kia Motor's crisis, which clouded the future of the South Korean car industry. In September 1997, the Kia Group was declared insolvent by defaulting on an 8.5 trillion won loan (*International Herald Tribune*, September 27-28, 1997). Despite the fact that the company was not able to fund the large investment projects due to a decline in its domestic sales caused by an economic slump in recent years, it pursued the expansion of its production facilities

(such as building a new \$ 1.1 billion speciality-steel plant). In the late 1980s, the government removed entry restrictions on the car industry through the case of Samsung entry into the industry and existing firms into the full-range of car production. This seemed to suggest that the intense rivalry between new domestic entrants created too much domestic capacity (particularly this severe competition has been often identified as oligopolistic behaviour between the South Korean firms). Although customers might gain some benefits, such as a wider model choice at lower prices, the result of free competition in the domestic market was wasting vital financial resources. This implies that the government should have regulated more efficiently by using anti-trust mechanisms to prevent abuses of market power, in other words, the monitoring of competition, apart from its role to promote new competitive advantages by supporting R and D and human capital investments (Auty, 1994).

4.3.3 Export Performance

Since South Korean car exports commenced in 1976, exports did not exceed more than 120,000 units until 1985. The following year, however, car exports increased sharply to 298,879 units, doubling previous export figures, and this upward trend continued until 1988. Despite increasing demand in international markets, exports dropped from 564,511 units in 1988 to 347,273 units in 1989, and then to 339,672 units in 1990 (KAMA, 1995, p. 24). This fall was mainly attributed to the poor quality of products and the shortage of after service spare auto parts in the export markets.

Recent years have seen car exports rise again, with increases from 23.3 per cent in 1993 to 41.7 per cent in 1995 (see *Table 4.12*). In total, between 1990 and 1996 exports grew rapidly, by around 311 per cent. In terms of units, exports increased by

144,889 units in 1993, by 252,053 units in 1995, and finally exceeded 1 million units in 1996. This trend looks set to continue for some time.

Table 4.12 South Korean Passenger Car Exports, 1985-96 (unit: vehicles)

Year	Total Exports
1985	119,210
1986	298,878
1987	535,231
1988	564,511
1989	347,273
1990	339,672
1991	378,600
1992	427,513
1993	527,402
1994	604,315
1995	856,368
1996	1,056,400

Note: Figures include sports-utility vehicles.

Sources: KAMA 1995-96 and Motor Business International 2nd quarter 1996.

Among the three main car producers, Hyundai Motor has shown the best export performance. Since the first export of the model Pony in 1976, exports grew by more than 70 per cent of total production in 1986 and 1987. Since 1989, however, exports have declined to around 40 per cent of total production, and this figure has changed little since then (although since 1994 the export share of total production has gradually increased) (KAMA, 1995, p. 49). Nevertheless, Hyundai Motor's share of total exports has still averaged 73 per cent over the last 13 years (see *Table 4.13*).

Table 4.13 Passenger Car Exports of Hyundai Motor, 1985-96 (unit: vehicles)

	Hyundai Motor					
Year	Export	Production	% E/P			
1985	118,853	225,970	52.6			
1986	297,964	408,177	72.9			
1987	403,419	544,648	74.1			
1988	404,881	584,339	69.2			
1989	213,639	525,857	40.6			
1990	225,263	557,683	40.3			
1991	254,108	644,356	39.4			
1992	281,966	725,918	38.8			
1993	337,363	811,032	41.6			
1994	354,643	936,022	37.9			
1995	415,398	1,007,423	41.2			
1996	478,611	1,072,722	44.6			

Note: Figures include sports-utility vehicles.

Source: KAMA 1995-96.

Beginning in 1987, Ford imported Kia Motors's cars by means of OEM, and since then Kia Motors has increased its car exports gradually. In 1989, the company began its first KD exports to Asian countries, shipping 14,791 unit (Kia Motors, 1996). In 1996, exports reached more than 40 per cent of total production (see *Table 4.14*). However, despite the increase in the number of its export units, its share of total exports has decreased since 1994, achieving just 19.7 per cent in 1996 due to Daewoo Motor's good export performance. Now, apart from the declines in its share of total exports, Kia motor has an even more uncertain future for its contribution to the South Korean car exports due to the bankruptcy in 1997.

Table 4.14 Passenger Car Exports of Kia Motors, 1985-96 (unit: vehicles)

	Kia Motors					
Year	Export	Production	% E/P			
1985	-	-	•			
1986	26	26	100			
1987	60,336	95,532	63.1			
1988	73,813	133,602	55.2			
1989	89,981	182,332	48.4			
1990	79,758	222,125	35.9			
1991	71,838	259,794	27.7			
1992	84,138	315,459	26.6			
1993	120,532	405,081	29.8			
1994	169,337	437,936	38,7			
1995	164,149	451,769	36.3			
1996	208,175	512,514	40.6			

Note: Figures include sports-utility vehicles.

Source: KAMA 1995-96.

Daewoo Motor also increased its exports to GM using OEM methods beginning in 1987. Its exports, however, dropped sharply in 1989 and 1992. It is said that the decline of exports was a reflection of the products' poor quality due to a lack of technical know-how and production methods. Daewoo Motor had the poorest export performance compared with the other two car manufacturers, but in 1993 its exports almost doubled 1992 the levels following its separation from GM. In 1996, Daewoo Motor shipped 57.7 per cent of its production, and its share was equal to 33.0 per cent of total exports (see *Table 4.15*). This achievement has made Daewoo Motor the second largest exporter after Hyundai Motor since 1995.

Table 4.15 Passenger Car Exports of Daewoo Motor, 1985-96 (unit: vehicles)

	Daewoo Motor						
Year	Export	Production	% E/P				
1985	516	36,805	1.4				
1986	712	47,082	1.5				
1987	71,082	149,639	47.5				
1988	85,284	147,744	57.7				
1989	43,215	147,944	29.2				
1990	33,947	184,795	18.4				
1991	50,700	227,639	22.2				
1992	57,098	238,800	23.9				
1993	108,086	347,390	31.1				
1994	105,798	385,206	27.5				
1995	260,352	497,761	52.3				
1996	348,809	604,230	57.7				

Source: KAMA 1995-96.

One interesting feature of South Korean car exports is the concentration placed on the small car segment¹⁰ (1000-1500 cc), a segment that also has represented the largest share in domestic sales. Since car exports began, this market segment has presented a larger share of total exports, growing to 80.6 per cent by 1987. Since then, this segment has presented an average 75.1 per cent of total exports, with other segments of exports increasing, but still amounting to less than 29 per cent of the total by 1994 (see *Table 4.16*).

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¹⁰ Segment is a term used by automobile industry to explain the types of car market.

Table 4.16 Car Exports by Segment, 1987-94 (unit: vehicles)

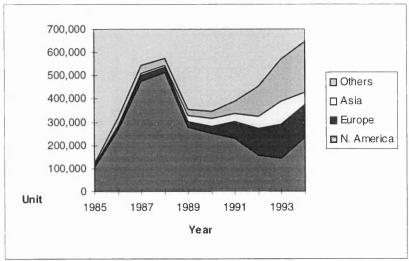
Year	Segments						
	small segment (1000-1500 cc)	medium segment (1500-2000 cc)	large segment (over 2000 cc)	sport-utility (4WD)			
1987	431,234	103,603	-	394			
1988	455,310	108,668	-	533			
1989	260,207	46,323	40,305	438			
1990	268,001	41,627	29,340	704			
1991	243,253	101,071	32,322	1,954			
1992	287,323	104,583	28,098	4,306			
1993	411,906	136,595	11,014	6,389			
1994	458,889	164,195	65	18,607			

Source: KAMA 1995.

In recent years, the destination of exports has changed. South Korean car producers had exported their products mainly to the North American market, with 90.9 per cent of total exports going to this market in 1988. The following year, exports to North American countries dropped and have continued to decrease steadily. By 1992, exports to this market accounted for only 32.6 per cent of total exports.

This decline in market concentration has come about as a result of exports to new destinations, and an increase in the number of cars exported. Recently, exports to developing and European countries have increased rapidly, and in 1994 over 272,000 units were exported to Asia, the Middle East, Oceania and South America, equalling approximately 44 per cent of total exports, compared with around 7.4 per cent in 1988. Exports to the European market increased from 3.7 per cent of total exports in 1988 to 23.4 per cent in 1994 (see *Figure 4.5*). The diversification of export markets has shown that there is the demand for South Korean cars in the world, implying an opportunity to increase the volume of sales in the future.

Figure 4.5 South Korean Car Exports by Region, 1985-94 (unit: vehicles)



Note: Europe includes Western and Eastern European countries as a whole. Others include Middle East, Latin America, Africa and Oceania.

Source: International Motor Business 2nd quarter 1993 and KAMA 1995.

4.3.4 FDI

Since 1994, Hyundai Motor, Kia Motors, and Daewoo Motor have actively set up joint ventures with companies in East Central Europe¹¹, Uzbekistan, South East Asia, China, and India for local car production through direct investments. A preference has developed for establishing production facilities in less advanced countries, while cooperating with car producers such as Mercedes-Benz and Fiat for development of new models.

However, there was an exception from the current trend of FDI in car manufacturing in developing and transitional countries. Hyundai Motor was the first company to invest in building up overseas car plants. It set up car production facilities in Canada in 1986 and commenced operations in 1989, but despite a capacity to produce

¹¹ In the thesis, the East Central European Countries are defined as the following six countries: Bulgaria, Czech Republic, Slovak Republic, Hungary, Poland, and Romania. The former Yugoslavia is not covered in this study.

100,000 units annually, only 14,000 cars were made in Canadian plants due to lack of demand. In 1993, production was suspended (although the plant is scheduled to reopen in the near future).

Given this experience in establishing manufacturing operations overseas, Hyundai Motor may, in the future, be more cautious in setting up further overseas ventures in advanced countries. In 1995, the company established car production facilities in developing countries such as Pakistan and Turkey through joint ventures.

While Kia Motors is the least involved in overseas direct investment, with only one joint venture assembly operation in Indonesia by 1993, Daewoo Motor is the most aggressive in FDI. In 1994, it established a joint venture with DCM in India to produce car components and cars. In the same year, assembly plants were set up in the Philippines, Vietnam and Iran, while three joint ventures were launched in Europe, specifically in East Central Europe. Rodae-Automobile, a joint-venture company, was established in Romania in 1994. In 1995, two joint-venture companies were set up by Daewoo Motor in Poland. Daewoo Motor also decided to invest in manufacturing cars in the former Soviet Union, in Uzbekistan in 1994 and in Ukraine in 1997 (see *Table 4.17*).

The particular difference of the investment in the Ukraine car industry from the other FDI by Daewoo Motor is that GM and Daewoo may link again to build cars jointly in the country, as GM plans to sign a separate deal with the Daewoo-AvtoZaz joint venture to build 25,000 units a year despite the difficult relations resulting from the separation in 1992 (*Financial Times*, May 6, 1997 and *Financial Times*, September 18, 1997).

Table 4. 17 Overseas Production of South Korean Car Producers

Location	Company	Planned Investment (\$M)	Production capacity by 2000	Start-up date	
Canada a	Hyundai Motor	184.028 b	100,000	1986	
India	Daewoo Motor	1,000	100,000	1995	
Indonesia	Kia Motors	30 с	30,000	1995	
Iran	Daewoo Motor	600	50,000	1995	
Pakistan	Hyundai Motor	5.853 с	10,000	1995	
Philippines	Daewoo Motor	20	20,000	1995	
Poland (FSL)	Daewoo Motor	350	90,000	1996	
Poland (FSO)	Daewoo Motor	1,100	220,000	1996	
Romania	Daewoo Motor	360	200,000	1996	
Turkey	Hyundai Motor	22.3 с	100,000	1995	
Uzbekistan	Daewoo Motor	630	200,000	1996	
Ukraine	Daewoo Motor	300	255,000d	e	
Vietnam	Daewoo Motor	32	20,000	1995	

Notes: a: Hyundai Motor's plant in Canada is closed at present. b: Actual investment. c: Approval investment. d: Production capacity by 2014. e: Not available.

Sources: Bank of Korea, 1995 and Financial Times, September 18, 1997.

4.4 Conclusion

In the early stage of the South Korean industry's development, the key driving force was to meet the demand of the United States and Japanese markets. Concentration on those two markets is certainly not the answer to the future economic growth of South Korea. Since the mid-1980s, capital - and technology - intensive products have been major exports in South Korea, and export markets have been diversified.

In this chapter, it is shown that all industry in South Korea has undergone a structural transformation. South Korean companies in manufacturing industry increased exports, while searching for production locations overseas. Car manufacturers are no exception to this phenomena. Since 1994, the three major car manufacturers have engaged in joint ventures with foreign partners for local production through direct

investment, with increases in car exports to diversified markets. They have prepared ambitious production expansion plans at home and in overseas countries, aiming to increase exports. However, reflecting the case of Kia Motor's insolvency, these plans may temporarily slow down the South Korean car industry as well as the whole economy in the future as the car industry is linked to most manufacturing industries.

Lall (1983) argues in Chapter 2 that LDC firms can obtain firm-specific advantages with some conditions. This chapter suggested that the South Korean firms and Daewoo Motor could possess firm-specific advantages which enable them to make an FDI. According to his conditions to obtain these advantages, first, a firm should localise technologies. The South Korean companies, including Daewoo Motor, were able to localise technologies, resulting in the development of its own car models in the 1990s. Second, with these localised technologies, a firm should manufacture a specific product to a specific sector of the market and be efficient. Like other South Korean car manufacturers, Daewoo Motor has a competitive advantage in the small car segment with lower prices, compared to producers in developed countries. Third, a firm should have experience of serving a large market. The South Korean producers diversified their export markets. This gave them various experiences and know-how of serving different markets. Finally, a firm should be supported by favourable government policies. All producers in the car industry were protected and promoted by the government.

Among Hyundai Motor, Kia Motors, and Daewoo Motor, attention is drawn to Daewoo Motor. Despite the fact that it has registered the poorest performance both in domestic sales and exports (its exports have been in second position only from 1995), it has made the largest FDI in manufacturing cars and its major FDIs were made in East Central Europe, with significant production expansion plans. Daewoo Motor demonstrated that it has a different diversification strategy by choosing FDI in the

region, compared with other South Korean producers. For a deeper understanding of their economic activities, particularly those of Daewoo Motor, it is important to investigate how South Korean groups have evolved, and how their corporate structures became organised over the previous three decades.

Chapter Five

The Chaebol and Daewoo Group

5.1 Introduction

As observed in the previous chapter, South Korea has achieved successful economic development and is now going through a transformation. A noticeable feature of South Korea's economic development is the rise of large Chaebol¹ groups which have played a major role in the process of rapid growth of the South Korean economy. Chaebol groups are involved in almost all industries in South Korea. In the car industry, all motor vehicle manufacturers in South Korea are also characterised as Chaebol groups. The purpose of this chapter is to examine the peculiar development of Chaebol in order to understand the organisation and characteristics of Chaebol groups and how this organisational structure of Chaebol affects the case study of a car manufacturing company's economic activities.

Section 5.2 describes various definitions of the Chaebol, explains their origin, compares them to Japanese *zaibatsu*, and their characteristics as summarised by many commentators. Section 5.3 examines the historical development of the Chaebol. Firstly, the genesis of the Chaebol is traced from the colonial period (1910-45). Secondly, the section shows the growth and diversification of the Chaebol, depending upon changes in

¹ The Chaebol is defined as a large business group that is composed of many corporations, and operated by family members of the founder in South Korea, although there is no clear-cut definition (see Section 5.2).

government policies and goals. Finally, the section explores the global expansion of the Chaebol.

Section 5.4 investigates the organisational and managerial structure of the Chaebol in terms of finance and the management structure. Ownership and interlocking shareholding structures among the member companies of the Chaebol groups are identified and the management system of the Chaebol, designed to control large diversified business units within the group, is examined. In addition, this section introduces how the Chaebols practise management in their organisations.

Section 5.5 scrutinises the advantages and disadvantages of the Chaebol's structure, relating finance, technology, information, human resource management and development, and the alleged synergy of diversified business groups. In particular, the weaknesses of the Chaebol's financial structure are also discussed.

Finally, section 5.6 introduces the development of the Daewoo group, focusing on its history and expansion. This section shows the Daewoo group's characteristics and organisational structure which fosters a deeper understanding of economic activities of member companies within the group, and the strength and weakness of the group's management style. In particular, the implication of the group's so-called 'Globalisation Programme' to its member companies' global expansion is discussed.

5.2 Definitions

A business group is usually described as a corporate form of business organisation. Conventionally, a business group is a set of legally independent firms that may or may not have economic or fiscal relationships amongst them without overarching accounting or management systems that co-ordinate the activity of member firms (Kang,

1996, p. 10). All firms in the group are owned at least partially by a core firm or by an individual or a family. The business group is often referred to by different names in different areas, such as *conglomerate* in the United States, *los grupos economicos* in Latin America, *Konzern* in Western Europe, *zaibatsu* (*keiretsu* after World War II) in Japan, and *Chaebol* in South Korea.

The term Chaebol in South Korea and zaibatsu in Japan use identical Chinese characters, and the term expresses 'wealth or financial clique', usually with connotations of disapproval². In South Korea the terms Chaebol and group have not been defined clearly, whereas *zaibatsu*, which was described as a family enterprise before World War II, has been differentiated from *keiretsu* (post-war business group) as loosely-coupled yet interrelated groups of companies, such as the Sumitomo Group or the Mitsui Group (Steers, Shin, & Ungson, 1989, pp. 46-7). The common features of Chaebols can be identified by the definitions of zaibatsu, although the definition of family is different in Japan and South Korea³.

Hattori (1986) reviewed several definitions of Chaebol and zaibatsu by Japanese scholars and conceptualises a Chaebol as a diversified business management group set up by a family and other relatives, identifying its characteristics as: (1) paternalistic leadership, (2) centralised planning and co-ordination, (3) monopolistic position in the marketplace, (4) dramatic growth based on unrelated diversification, (5) close business-government relations.

There are other definitions of Chaebol in the academic field. Byun (1975) defines a Chaebol as a set of business groups operating under an identical management system with common finance. Jones and Sakong (1980) define it as an organisation that is

² These negative ideas are caused by the perception that some of the Chaebol accumulated their wealth either because of an unfair advantage or government connections (Steers, Shin, & Ungson, 1989, p. 35).

³ In South Korea family members are defined by blood relations, whereas in Japan there are two different meanings of family: one based on blood relationships and the others on household or clan relationships that determine inheritance and succession (Steers, Shin, & Ungson, 1989, p. 47).

controlled by a family and managed centrally by a holding company, with the characteristics of business diversification, heavy dependence on outside resources, and close relationships with government. Chu (1985) similarly defines a Chaebol as a business group that controls multiple firms through a holding company owned by a specific kinship group. According to the definition of Lee and Yoo (1987), a Chaebol is a business group consisting of large companies which are owned and managed by family members or relatives in many diversified business areas. Steers, Shin, & Ungson (1989) describes the Chaebol as 'a financial clique consisting of varied corporate enterprises engaged in diverse business and typically owned and controlled by one or two interrelated family groups'. Kong (1995) depicts it as the gathering of firms engaging in various business areas and a business group that has a strong family-controlled character appearing in the process of economic development.

Based on the existing definitions of a Chaebol, it can be summarised as a large business group (1) engaging in many diverse businesses and exercising significant economic power; (2) closely integrated and co-ordinated by the founder of the business and his family members; (3) depending on external sources of funds; (4) and closely linked to the government. However, not all Chaebols are covered by this definition. For example the Kia group, one of the largest Chaebols, is operated entirely by professional managers and specialises in motor-related business (Kang, 1996, p. 35). The characteristics of the Chaebol is discussed further in the following section.

(A) Origin

The history of the Chaebol is relatively short. The origins of few Chaebol can be traced back beyond the beginning of this century, and many Chaebol have their foundations in the Japanese colonial period (1910 - 45). During this period, several enterprises were already shaped as Chaebols, such as the Samyang group (1938)⁴, Hwasin group (1931), and Doosan group (1898), which is perhaps the oldest Chaebol. Most enterprises were, however, in the embryonic stage before independence. As of 1988, only 6 of the 30 largest Chaebols had been founded before liberation from Japan (Kang, 1996, p 22).

Before the liberation in 1945, the majority of Korea's total economic assets were controlled by the Japanese. Although under the Japanese management control, many Koreans worked in their factories and plants but were rarely promoted to managerial positions. The economic activities of a few existing Korean businessmen were strictly restricted.

At the time of liberation, Koreans who had worked with Japanese-operated companies were allowed to acquire the rights to take over the firms (by 1948, more than 2,500 companies were taken over by them). However, the large number of assets, 166,301 assets including 3,551 operating plants and firms, land, infrastructure, and inventories (accounting for about 30 per cent of formerly Japanese owned national total wealth) were entrusted to the American Office of the Property Custodian (AOPC), and 513 items were later distributed to Koreans; the AOPC handed the remaining properties

⁴ Hereafter () indicates the year of the group's foundation.

over to the government in 1948, and they were distributed by the government up to 1957 (Kang, 1996, p. 26). The vested properties were sold at lower prices than their real value and were accompanied by favourable conditions such as cheap bank loans, import licenses for raw materials, and the granting of foreign exchange at the official rate. As of 1961, 14 of the 23 largest Chaebols, such as Ssangyoung group (1948) and Tongyang group (1956), directly or indirectly purchased the vested properties (Kong, 1995, p. 96). The acquisition of these vested properties was one of the most significant factors that provide a core for the larger Chaebols in later years.

Despite the fact that some Chaebols did not acquire these vested properties, they established business foundations in manufacturing with foreign aid (the majority was American aid) and local credit by the government's promotion (for example, the Samsung group (1953) and Lucky-Goldstar group (LG) (1947) (Kong, 1995, pp. 95-6)). Some Chaebols started through the acquisition of state-owned plants producing textiles, glass, cement, and fertilisers. The Hyundai group (1950) grew to a Chaebol based on the construction business during the reconstruction period after the Korean War.

There were a couple of interesting features of Chaebol growth during the 1950s. First, almost all the large Chaebol actively operated importing businesses during that period. After the liberation, importing was a highly profitable business due to high inflation and a supply shortage in the deficient domestic market. Although import licenses and the necessary foreign exchange (supplied by the inflow of aid from the United States at the official rate) were required, it was not difficult to obtain them (any applicant was issued a license as long as the items were eligible). Although the government in 1948 restricted imports to protect domestic industry, import trading was a profitable business throughout the 1950s due to the continued high inflation, excessive

demand for imported goods, and the overvaluation of the domestic currency. Nine out of the ten largest Chaebols were engaged in importing and here they acquired business training in trading and accumulated their wealth (Kang, 1996, p. 28).

Second, many Chaebols acquired majority shares in the state-owned commercial banks when they were privatised by the government in 1956. During that period, the post - Korean war inflation was high and the government adopted a low interest rate policy. This caused a continuous shortage of financial supply. To operate businesses, it was very important to increase the accessibility to bank loans. As a result, Samsung acquired half of all commercial bank shares, and Samho and several other Chaebols became major shareholders in the commercial banks (Kang, 1996, p. 30). This allowed the Chaebols preferential access to industrial credit, taking advantage of the negative real interest rate.

It is said that most of today's Chaebols were formed, and a few Chaebol had become dominant players in the national economy, during the late 1940s and the 1950s. As of 1988, 16 of the 30 largest Chaebols had started primarily in importing, banking, and the so-called three white industries - the sugar and flour, textiles, and cement industries, during that period. The average number of member companies within a group was 5.1 (Kang, 1996, p. 34).

(B) Consolidation

With the drive for economic growth through a series of Five - Year Economic Development Plans, a number of Chaebols grew and consolidated significantly during the 1960s. The role of the government during this period was significant for the growth of the Chaebols. The government intervened in economic affairs, with direct or indirect

growth strategy policies, and facilitated companies which had demonstrated high achievements during the previous period, in order to achieve its goals for economic development within a short period of time.

The government concentrated its resources on a few large projects rather than many small ones, not only because a small number of entrepreneurs had survived successfully in a limited and underdeveloped market during the 1950s, but also because there was a great deal of need to maximise limited resources available with the least risks. It was those 1950s' Chaebols that had opportunities to engage in a few large projects supported by the government.

There were two ways for smaller Chaebols to become larger during that period:

(1) obtaining a major investment license from the government, particularly to win the major domestic construction projects supported by the government to develop basic industries and infrastructures (for example, a license to build a ten-million-dollar chemical plant, a cement plant, an oil refinery plant, bridges, or motorways), and (2) obtaining credit allocation by the government. In fact, these two factors were closely related. The company that had already acquired an investment license for a project specified in the Economic Development Plans had advantages to receive credit allocation by the government.

The allocation of credit was an essential factor enabling Chaebols to survive with the heavy dependence on borrowing rather than on internal savings or new equity for the rapid expansion of their businesses (the average debt - equity ratio of the manufacturing sector rose from 1.36 in 1961 to 3.94 in 1971) (Kang, 1996, p. 43). As reviewed in *Chapter 4*, the government controlled and allocated financial resources to fund government-approved projects as a major shareholder in commercial banks (after the renationalisation of commercial banks in 1961). Although the government gave

Chaebols a benefit in credit allocation, it monitored closely the economic activities of Chaebols to ensure that opportunities favoured by the government would be used productively to contribute to the country's economic development at the same time (Kang, 1996, p. 39).

Other sources of Chaebol growth were the acquisition of state-owned firms that had been monopolies and were privatised in the mid-1960s, although not all acquisitions of the state - owned companies were to be successful in their growth. There were many favourable incentives, such as long and cheap bank loans, converting outstanding bank loans into equity, and protection of monopoly, attached to the acquisition agreements. With the same reasons applied for investment licenses and credit allocation by the government, Chaebols were at a great advantage in acquiring such companies from the government.

The rapid growth of South Korea's economy and trade was contributed to by the Chaebols' export performance. Many Chaebols built their own transportation and warehousing companies, following the example of the Hanjin group, which purchased Korean Air Lines from the government and became a major Chaebol (Kang, 1996, p. 45).

(C) Expansion

During the 1970s, the Chaebols continued to expand and particularly concentrated on the diversification of their businesses. Chaebols covered almost all areas. As one of the sources of its diversification, the Chaebols took advantage of the government's heavy and chemical industry (HCI) promotion policies and supportive measures for exports. The government planned large-scale projects and designated

participants in selected HCIs such as non-ferrous metals, petrochemicals, general-type machinery, shipbuilding, automobiles and electronics under the strict licensing system. These designated participants enjoyed policy loans, general bank loans, and full protection from domestic competition and imports from the government. The Chaebols, which were large enough to undertake such huge projects, were designated to engage in those industries, and about 70 per cent of all policy loans went to them (Kang, 1996, p. 48).

Another opportunity to diversify Chaebol organisations during this period was the acquisition of ill-managed companies at the government's request. Under the government's supervision, some 62 ill-managed companies were operated. Although a principal restructuring of these ill-managed firms had taken place during the early 1980s, 17 of them were sold to other firms, and among them, 13 companies were acquired by the top 10 Chaebols (Kang, 1996, p. 51).

The acquisition of insolvent companies also contributed to the Chaebols' growth and diversification in other industries. When these ill-managed companies were acquired by other companies including the Chaebols, the government awarded incentives, such as turning the bank loans into equity and providing preferential taxation. For example, Daewoo acquired the Korea Machinery Company, Shinjin Motors, and Okpo Shipyard. This contributed to the establishment of its substantial expansion into heavy industry. Inchon Steel Company was acquired by Hyundai, and this gave the company an opportunity to engage in a so-called strategic industry. Samsung acquired the Korea Engineering Company, obtaining an entry into the overseas construction business.

With the booming construction market in the Middle East during the 1970s, many Chaebols grew rapidly by completing construction projects in the region. During the period, 13.3 per cent of the asset growth of the 10 largest Chaebols was in

construction (Kang, 1996, p. 49). Many Chaebols which did not have a construction company acquired one to engage in overseas contracts. The government also provided subsidies for overseas construction, as it did for exports, because those projects increased foreign exchange earnings and exports of construction and building materials.

The government adopted a system of licenses for the General Trading Company (GTC), aiming at a rapid increase in exports by creating GTC which would be internationally competitive by specialising in international trade. GTC licenses were issued to companies whose products and markets were highly-diversified. It is said that this was one of the sources of Chaebol growth. During the 1970s, twelve of the thirteen issued GTC licenses went to the Chaebols, and the 8 largest GTCs in 1979 were owned by 8 of the top 10 Chaebols. These GTCs increased their share of total national exports from 12.4 per cent in 1975 to 31.5 per cent in 1979 (Kang, 1996, p. 51).

In the financial sector, many Chaebols operated non-bank financial institutions, such as insurance and security companies. Between 1972 and 1978, the 10 largest Chaebols purchased or established 14 financial institutions and incorporated them into their group organisation (Kang, 1996, p. 52). These institutions played an important role in many ways. Firstly, the Chaebols could attract external resources into their business organisations. Secondly, for the interest of the Chaebols as a whole, the financial institutions could allocate the necessary funds to the Chaebols' subsidiaries according to decisions made by the Chaebols. Thirdly, the Chaebols used these financial institutions as a control centre to manage their financial and ownership structure, and even to circumvent government regulations on stock trading and taxation.

(D) Global Enlargement

Compared with the previous two decades, during the 1980s the government changed a few important polices, including increased promotion of the small and medium-sized company sector and the restructuring of industry policy from the strategic industry-favoured policy to a project- or function-specific one, although it provided a consistent economic development policy with the previous one (Kang, 1996, p. 53).

The Chaebols demonstrated rather different growth patterns than those of the past two decades during this period. The diversification of their businesses was no longer significant during this period. As seen in *Table 5.1*, the number of member companies owned by the Chaebols did not change much, and some Chaebols had even reduced the number of subsidiaries since 1979. In addition to the changes in the government policy, increasing internationalisation may force the Chaebols to increase their specialisation (by reducing diversification).

Table 5.1 Number of Member Companies of the 9 Largest Chaebols, 1985

Number of member companies (number of different sectors)									
Chaebol 1972 1979 1985									
Samsung	16 (15)	33 (26)	39 (26)						
Hyundai	6 (5)	31 (15)	43 (23)						
Lucky	18 (14)	43 (24)	48 (24)						
Daewoo	2 (3)	34 (20)	29 (24)						
Sunkyung	5 (6)	14 (16)	14 (17)						
Ssangyoung	6 (7)	20 (13)	14 (15)						
Korea Explosive	7 (8)	18 (16)	21 (19)						
Hanjin	8 (10)	14 (16)	12 (16)						
Hyosung	4 (4)	24 (15)	13 (16)						
Total	72 (8.0 a)	231 (17 9 a)	233 (20.0 a)						

Note: a: indicates average for industries. Source: Kim, 1987; Kang, 1996, p. 61.

In the 1980s, rapid growth of Chaebols continued more through a dominant position in the domestic market and the expansion of exports than through diversification of business activities. During this period, the GTC showed impressive export performance and played an important role in the growth of the Chaebols. The export share of GTCs owned by the Chaebols ranged from 38.6 per cent to 49.7 per cent of South Korea's total commodity exports during the 1980 to 1985 period (Kang, 1996, p. 56).

The Chaebols were already involved in non-bank financial institutions, but they could enlarge their financial businesses into the banking sector in the 1980s. After 1981, when the government began to sell its shares in the commercial banks, the largest Chaebols purchased bank shares through their financial institutions and their family members, and became major shareholders in the banks, despite the fact that the government prohibited the 26 largest Chaebols from the auction, and limited the maximum share of a single person or a corporation to 8 per cent: the 10 largest Chaebols held between 11.9 per cent and 51.6 per cent of total bank stocks as of October 1983 (Kang, 1996, p. 58).

In this period, many Chaebols also expanded by interlocking investment among member companies in order to use less capital to take over other companies and to increase more credit from the banks (the banks awarded credit that was proportional to the borrower's equity at that time), without actual capital injection. As of the end of 1983, the 30 largest Chaebol invested 36.9 per cent of their net stockholders' equity in their member companies, and total interlocking shareholding, including investment in non-group firms, amounted to 45.2 per cent of their net stockholders' equity (Kang, 1996, p. 59). Despite the government restrictions on inter-company shareholding by

amending regulations (the Commercial Law in 1984 and the Fair Trade Acts in 1986), the Chaebols still continued to expand their business by interlocking investment.

With regard to economic concentration, the size of the Chaebols affected the national and local economy. The Chaebols grew faster than the national economy during this period, and the top 10 largest Chaebols accounted for 15.1 per cent of national production in 1974. They increased their share to 67.4 per cent in 1984 (see *Table 5.2*). The 50 largest Chaebols' sales were equivalent to over 90 per cent of GNP in 1986, and among these 50 largest companies, 30 were owned by the top 10 largest Chaebols (Kang, 1996, p. 187).

Table. 5.2 Combined Sales of Top Ten Chaebol, 1974-84 (as % of GNP) #

Group	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
1	4.9	4.3	4.7	7.9	6.9	8.3	8.3	10.5	10.4	11.8	12.0
2	7.2	7.5	8.1	12.5	12.9	12.8	16.3	19.1	19.0	21.2	24.0
3	9.0	9.8	11.3	16.0	16.9	17.6	23.9	27.6	27.4	30.5	35.8
4	10.3	11.4	12.9	18.2	20.7	22.1	30.1	35.2	35.6	38.7	44.3
_ 5	11.6	12.8	14.5	19.8	22.9	24.6	35.0	41.3	42.2	46.7	52.4
6	12.7	14.1	16.1	21.3	24.7	26.6	38.2	44.9	46.0	51.0	56.2
7	13.5	15.3	17.5	22.8	26.4	28.5	41.0	48.0	49.2	54.2	59.4
8	14.3	16.2	18.4	24.0	27.7	30.3	43.6	50.9	52.2	57.1	62.1
9	14.7	16.7	19.3	25.2	28.9	31.6	46.0	53.3	55.1	59.8	64.8
10	15.1	17.1	19.8	26.0	30.1	32.8	48.1	55.7	57.6	62.4	67.4

Note: # means aggregate net sales of the largest ten business group / GNP * 100 for each year.

Source: Kim, 1987; Amsden, 1989, p. 116.

From the 1980s, the Chaebols have shifted into capital- intensive and advanced technology industries as the core for their continued growth and have tried to increase exports of those products. They also began to enlarge those major businesses globally through mergers and acquisitions (M & A) and joint ventures as a means of direct investments along with setting up their branches. In the capital and technology business

areas, for example, as of 1994 the Samsung group set up 33 overseas companies, and the Daewoo group, Lucky-Goldstar group, and Hyundai group had 31 companies, 24 companies, and 12 companies abroad respectively, excluding overseas branches (Bank of Korea, 1994, pp. 672-704).

During the last three decades, each Chaebol seemed to choose its own strategy to consolidate, expand, and become MNEs, although there are some common features of the Chaebols' strategy in their expansion. Some knowledge of the theory of the firm can be applied to explain how the Chaebols have grown. Throughout the growth of the Chaebols, a market imperfection in the form of government intervention, was clearly identified, although there are other imperfections such as a firm's attempt to create new structural imperfections in order to gain larger profits and rapid changes in the external economic environment. These market imperfections opened up the possibilities for firms in making strategic choices.

Under these circumstances, the entrepreneurs and managers have positively played strategic roles which vary according to the nature and extent of the market imperfections. The Chaebols' growth and expansion have shown different paces depending on their strategist's judgement of the probability and time profile of the outcome of alternative courses of action, and their attitudes towards risk taking (refer Chapter 2).

In the course of the Chaebol's growth and expansion, as mentioned above, the government engagement within the private sectors, with its control over resource allocation and incentives which distorted the market conditions, affected the Chaebols significantly. The entrepreneurs and managers of the Chaebols often had to make a decision against their will because of the strong government intervention, although they could partly achieve their goals by their own strategies. This was particularly observed in

the 1970s. The government pressurised some Chaebols to take over ill-managed companies, resulting in the diversification of the Chaebols in non-related businesses (these insolvent companies were the result of over-capacity within the HCI industries due to the implementation of the government's HCI policies), although it is normal to observe that a firm is involved in non-related businesses when it become larger.

As Rumelt (1974) argues, the essence of diversification is taken to be any entry into new products by using the range of skills possessed corporately by a firm, requiring the development of new competences or the augmentation of existing ones. In the case of the Chaebols, they adopted diversification strategies even before developing or increasing the available managerial competence within the firm for a new entry into a new business area. In other words, in a diversification move, the Chaebols took advantages of the government intervention rather than matched an opportunity with their possessed skills and resources as well as strengths.

As discussed in the income-driven product cycle model, HCIs are scale-sensitive. The market demand should be large enough to have economies of scale. The South Korean domestic demand could not meet the minimum viable size of plants, in other words it was too early for firms to enter the HCIs, although the market was in a dynamic stage of the product cycle. The government adopted its HCI policy at an inadequate time so that companies in the HCIs became insolvent due to over-capacity. On the other hand, this policy gave some Chaebols an opportunity to become larger and successful by entering the HCIs, such as the Hyundai and Daewoo Shipbuilding companies. By observing the expansion of the Chaebols, it identifies how market imperfections can affect the corporate strategies.

However, in the 1980s, the Chaebols deepened their businesses, specialising in particular products in order to increase their competitiveness, and prepared to become

MNEs. The globalisation process is also different according to each Chaebol's expansion and diversification strategy. Some Chaebols are more aggressive than others, or some Chaebols decide to be multi-product domestic companies rather than MNEs. For example, Samsung, Hyundai, LG, and the Daewoo Group have expanded their operations globally through FDI, but the Sunkyung Group has taken a rather slow pace in FDI in production (although the group has expanded its trade-related facilities in the world); and the Miwon Group, which produces mainly processed food and seasonings, concentrates on the domestic market. According to Dunning's internationalisation process (1993), the Chaebols, which became MNEs, could evolve forward or backward along the value chains, and a deepening and widening of the value-added network. Finally, they could develop the regional and global integration of the value network.

However, this process can cease at any stage depending on the Chaebols' global expansion and diversification strategies. For example, the international expansion of the Chaebols through FDI was likely to continue in the coming years, but due to the financial crisis in 1997 most Chaebols' globalisation programmes ceased or were temporarily or permanently postponed. Unlike other Chaebols, the Daewoo Group announced that it would pursue its globalisation programmes as planned. It is difficult to evaluate which group's strategies are successful at the present, but it is certain that the Daewoo Group is taking a different position.

5.4 Organisational and Managerial Structure of the Chaebol

As defined in section 5.2, the organisational structure of the Chaebol has different characteristics, compared with other Western groups. The Chaebols have a large number of subsidiaries involved in a variety of business activities, and they are

controlled by families through stock ownership, with the families having strong positions in the management of the member companies.

For a profound understanding of Chaebol's family-oriented management system, it is essential to know how important and strong the family relationship is in the Korean culture in which Confucian values are observed. The Koreans tend to have a notion that only family members can be trusted. Thus, family members of the founders of the Chaebol occupy the key positions in their organisations, although they may be less capable than professional managers (the Miwon Group is a typical example). However, there are exceptions. In addition to the Kia Group, as observed in the previous section, Daewoo Group family members have never been involved in the management of the group except for the founder's wife who operates the group's hotel business unit. This may be because the founder has no grown children who could participate in the group's business, like other Chaebol groups.

According to Lee and Yoo (1987), 31 per cent of the executive officers of the top 20 largest Chaebol groups were members of the owner's family, owning about 30 per cent of the Chaebol groups' shares. Jones (1987) argues that although only 30 per cent of the shares are owned by members of the founding family, that share is enough to insure control because the remainder is widely dispersed with a substantial portion often held by employees.

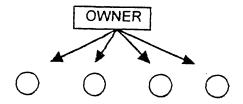
The family ownership is composed of interlocking holdings in affiliated companies rather than direct ownership. In 1984, the average inter-company shareholding for the 30 largest Chaebol groups was 46.5 per cent and this ratio was 50.9 per cent for the top 10 largest Chaebol groups (Kang, 1996, p. 99). This inter-company stockholding reinforces management control of member companies; for example, in 1993, the share of the owner and his family in the Hyundai group was 22.1 per cent and,

if added to the 35.7 per cent of interlocking shares of affiliated companies, the owner controlled a 57.8 per cent of the group's shares (Kong, 1995. pp. 156-7).

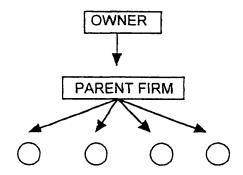
Based on the classification by Hattori (1989), the family ownership structure of Chaebol groups divides into 3 types. He argues that the structure tends to evolve from Type I to Type III. Type I is 'direct ownership' in which the owner or his family directly owns the majority share of the Chaebol group companies. Type II is 'a holding company ownership' and with indirect control by the owner or his family. Type III is 'mutual ownership' where the owner or his family possesses the holding company or an intermediary organisation such as a cultural foundation with interlocking mutual ownership of affiliated companies.

Kong (1995) developed the three-type ownership structure of the Chaebol groups to the five-type control structure (see Figure 5.1). Type 1 is 'owner control' where the owner has strong management control through holding the major share of the stock of affiliated companies, and is consolidated through loose interlocking sharholding among them. The Hanjin group and Lotte group are examples of Type 1. Type 2 is 'parent - firm control' in which the owner has direct management control of a parent firm, and indirect control over affiliated companies through this. The Chaebol groups classified as Type 2 generally expanded their businesses in related areas. Kia Motor group is a typical example of Type 2. Type 2.5-1 is 'complex control' where the owner has Type 2 management control through a holding company instead of a parent firm, but also has direct management control by holding majority shares of affiliated companies at the same time. Hyundai group, Sunkyung group, and LG group are examples of Type 2.5-1. Type 2.5-2 is 'two-step control' where the owner controls member companies through Type 2 and Type 3. Ssangyoung group is a example of this. Type 3 is 'mutual ownership control' where the owner has indirect management control through a holding company and non-profit-making organisation that own affiliated companies. Samsung group and Daewoo group are examples.

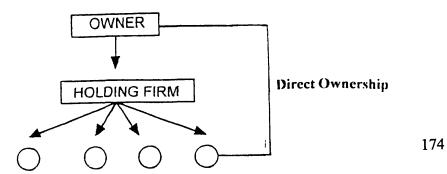
TYPE I (Owner Control)



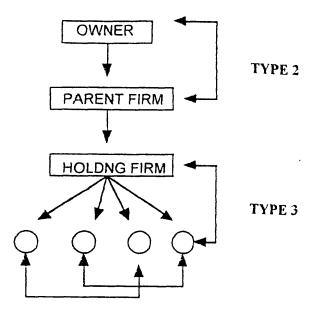
TYPE 2 (Parent Firm Control)



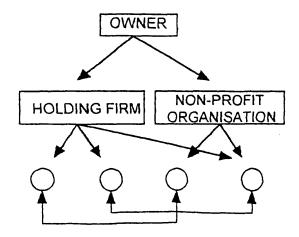
TYPE 2.5-1 (Complex Control)



TYPE 2.5-2 (Two-Step Control)



TYPE 3 (Mutual Ownership Control)



Source: Kong, 1994, pp. 148-56.

organisations, the ownership structure of the Chaebol groups demonstrates strong centralised management control. The group's chief executive officers exercise virtually unchallenged power over all of the group's activities, taking personal responsibility for the performance of the company, and even the well-being of the company's employees. In particular, the role of the chairman is significant and his decisions tend to be absolute.

In addition to the family management control through stock ownership in their

In order to effectively exercise this paternalistic and collective management, and to efficiently manage large non-related business units within the groups, most Chaebols form a central planning and co-ordination office. This collects, analyses and provides information to the group chief executive officers (CEOs) and the chairman for making decisions on new business ventures, developing strategic plans for future corporate actions, and also co-ordinates the allocation of internal resources, such as people, money, and information, throughout the group's affiliated companies.

Another characteristic of the organisational structure of the Chaebol in South Korea which distinguishes it from other business groups is the non-related product diversification, which has been developed, in a way, as a source of growth over the past 30 years.

Some studies have explained the process of diversification of firms in developing countries: Leff (1978) argues that the formation of business groups in the developing countries is (1) to deal with deficiencies in markets for capital and information, (2) to reduce risks and uncertainty resulting from the absence of markets, and (3) to rule out problems from monopoly or oligopoly of intermediate products (by vertical integration); Williamson (1975) explains vertical integration in unrelated areas as evidence of intermediate market failure, and the conglomerate as evidence of capital market failure through a transaction cost approach, although it is not possible to test this study

empirically to see if firms would not pursue a strategy of diversification, but of specialisation in the perfect market empirically; and Amsden (1989) views that firms in late industrialising countries diversify into unrelated business areas because they can not develop related products or processes, or grow by moving into a higher quality niche in their existing markets due to the lack of the technical or marketing expertise in particular industries.

Dunning (1993) argues that the ability of firms to create or acquire technological assets at an economic price is one of the key competitive advantages of firms, particularly MNEs, and that this can be crucial in their success. Thus firms attempt to create or acquire advanced technology by diversifying their businesses into a R & D industry. This can reduce transaction costs of dealing with outside suppliers of technology. In addition, technologies required by firms are not often in the market place. However, a firm may respond to the present circumstances in a variety of ways. Each firm has different motivations for diversifying its business.

The establishment of the Chaebol's diversified business organisation can be identified in two ways, in addition to the basic reasons for diversification of the firm, such as growth⁵ and risk aversion⁶. First, the government fostered the Chaebol to diversify its business with its economic policies and financial support (particularly in the 1970s) as both Chaebols and the government desired to develop larger companies that can (1) compete in the international market, (2) establish an industrial basis for the future economic expansion, and (3) generate employment opportunities for the growing population (Kang, 1996, p. 116).

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⁵ In Chandler's (1989) study of the multi-divisional enterprise in the United States, Britain, and Germany, diversification by business is an integral part of expansion whatever the country.

⁶ Caves (1982) explains that firms in general undertake diversification in order to minimise risks. By doing so, the firms may spread the risks deriving from problems common to various sectors in the same macro-environment, for example problems stemming from economic policies.

This diversification of the Chaebols indicates different motives from the previously discussed theory. Unlike the motives suggested by Leff and Williamson, the Chaebols and the government corporated each other and were motivated to create competitive firms by the diversifications. The government intervention is a clear market imperfection. There are many cases in which government intervention causes serious deficiencies for firms to expand or diversify their businesses successfully. For example, some governments of Latin America adopted an import-substitution industrial policy. This policy resulted in a decrease in the firms' competitiveness in the international market and impeded the firms' globalisation programmes. The South Korean government adopted an export-oriented strategy and supported firms becoming global. The Chaebols took this as an opportunity to expand their businesses under the same goals shared by the government.

Second, the firms in South Korea diversified to avoid increased transaction costs caused by imperfect markets in which the capital market was underdeveloped and distorted by government intervention and credit rationing, and there was a probability of bilateral monopoly or oligopoly arising between demanders and suppliers of intermediate goods in the small domestic market. For example, Lucky-Goldstar (LG) has diversified partly due to the shortage of local input supply, and it needed to acquire its own suppliers, and in other cases the market was too risky to specialise in due to its small size (Amsden, 1989, pp. 126-7).

These are classic cases of the diversification motives for firms from developing countries, which are discussed by Leff and Williamson. In the second motive, it identifies that another type of government intervention creates an imperfection in the market, resulting in the firms' diversification. On the one hand, the government's favourable policies helped firms diversify in order to increase their competitiveness, on the other

hand, the government's distortion of the capital market with its control over bank loans and credit, forced the firms to diversify in order to avoid obstacles.

Amsden argues that firms in developing countries diversify into unrelated business areas because of a lack of capability to upgrade to higher technology or to develop related products. However, the Chaebols' motives for diversification into unrelated business units were to secure their positions in the domestic market by reducing transaction costs, and to reduce the risks of losing the market by being specialised in a particular product. In terms of obtaining technology, the Chaebols established technical agreements with foreign partners from developing countries, so called strategic alliances, while diversifying into unrelated industries. The Chaebols themselves may not have been able to develop related products or process, or upgrade into a higher quality market segment, but by building up strategic alliances with firms from developing countries they could move into capital- and technology-intensive industries. They also achieved a success in exports of capital- and technology-intensive products such as ships, cars, and electronics and broadened their marketing expertise. Therefore, the case of the Chaebols' lack of advanced technology or marketing expertise is a rather insignificant factor affecting their diversification strategies into unrelated industries.

According to Dunning, due to the deficiency of technology- or knowledge-intensive markets, firms tend to diversify into R & D industries. The Chaebols internalised value-added chains in order to reduce transaction costs, however they did not diversify into R & D industries to secure a particular technology in South Korea. Many Chaebols established R & D departments or centres to develop or advance technologies internally by employing highly-skilled personnel trained in developed countries, or by establishing technical agreements with partners from developed

countries. In fact, in South Korea there was a lack of technical expertise to be secured by the Chaebols through diversification.

Internationally, after the 1980s, the Chaebols increased their expansion into R & D industries because there was a limit to obtaining high technologies by technical agreements. As with Dunning's argument, it is necessary for the Chaebols to obtain technologies by expanding into R & D industries in developed countries to be competitive in the domestic as well as international market. The Samsung Group (semiconduct business unit) has an R & D centre in the Silicon Valley in the United States, and the Daewoo Group (motor vehicle business unit) owns technical centres in the United Kingdom and Germany.

5.5 Critique of the Chaebol's Organisation

With its peculiar organisational structure, the Chaebols have grown and obtained international recognition successfully, compared with small and medium size South Korean companies, although there are many debates about the Chaebol's structure. Although there are other reasons for the success of the Chaebols, this organisational structure has provided them with many advantages.

The Chaebols' large and diversified structure facilitates economies in the mobilisation and utilisation of managerial resources. The groups can attract highly qualified human resources better than small firms because they provide better career opportunities (promotion opportunities are also greatest in the Chaebols because the small firms are even more family oriented).

The groups can pay for training facilities to train entrepreneurs and managers through systematic programmes, accumulating good human resources and deploying

entrepreneurial resources to the group members when opportunities arise. Most Chaebol groups have their own training facilities and a human resource department (or a planning and co-ordination department in some Chaebols) to develop particular programmes for their employees.

The Chaebols' involvement in many different businesses increases wide-ranging information flows within the group. Most non-diversified smaller companies find it difficult to set up an information system at acceptable costs. Based on the considerable information collected, the Chaebols can respond and adapt rapidly to environment changes and challenges if collected information is used efficiently. Basically, central planning offices in the Chaebols cross-check the accuracy of the information and use it to prepare for strategic plans and objectives. Once plans and objectives are established, all resources are marshalled to accomplish them.

The group can enter new businesses or new industries easily within a short time, compared with small firms, by task forces formed at the group level and comprising qualified managers and engineers from existing companies within the group because the group's management has accumulated experience in the purchase of foreign technical assistance, training, equipment purchase, new plant design and construction, and operation start-up through diversification of unrelated businesses over the three decades (Amsden, 1989, p. 128). For example, in the Hyundai group, managers from its construction company were transferred to its shipbuilding to aid in project management, and engineers with a knowledge of anti-corrosion from its shipbuilding company were relocated to its automobile affiliate where a new paint facility was starting to operate. Investment costs can be also minimised in the structure of the Chaebol when new affiliates start operations by using such internal resources which are likely to reduce the financial burden.

The Chaebols' size increases the recognition of the group members' products both in domestic and foreign markets. In particular, small companies from developing countries face difficulties to increase the recognition of their products in the world market within a short period of time. That is the reason why the Chaebols focus on the advertisement of their images rather than individual products in the world market. For example, LG advertises its group image rather than individual core products in Europe.

The Chaebols have relatively well-organised marketing and distribution networks both in the domestic and international markets, compared to those of small companies in South Korea. Each group member can take advantage of these networks to sell its products without investing in setting up new distribution networks. Even though new networks are needed, information and expertise from the existing ones, particularly in the case of global networks, can be used. Most Chaebols have a general trading division within their groups to maximise their export performance.

The primary advantage of the Chaebol's structure, when it works, lies in the synergy of diversified business activities. Based on accumulated and integrated technology, capital, and managerial resources among the group members, the Chaebols can develop and invest in new technology, materials and products. Member companies in different industries can co-operate to develop new products, for example an electronics company and an automotive company in the group can invent new components and produce a new car because the share of electronic auto parts will increase more in the future. For the long- term view, a technology integration trend gives more comparative advantages to the Chaebols.

However, the structure of the Chaebols also has a negative side. As reviewed in section 5.4, cross-holding of shares among member companies within a group reinforces the controlling power of the owner. The owner can abuse the concentrated decision-

making power over member companies' business activities. This concentration of management control may cause a lack of consulting and participation of expertise, misleading important business decisions, and also the absence of the owner may result in unnecessary delays or confusion in business.

In addition, this interlocking stockholding financial structure presents a serious problem. Despite prolonged deficits, causing the aggravation of other members' financial situation, ill-managed member companies are difficult to terminate due to the interlocking sharholding among affiliated companies in the group's structure. The allocation of financial resources is, therefore, reduced and the entire Chaebol group could be in danger of bankruptcy by financial failure of one or a couple of subsidiary firms. Recently, due to the weak financial structure aggravated by the economic slump, some Chaebols, such as Kia Group, Jinro Group (which specialises in soju, a traditional Korean alcohol), and Dainong Group, a retailer, became to be protected under a bankruptcy prevention accord set up by the banks in South Korea⁷.

Unfair inter-firm trade and price distortions can be another fault of the structure of the Chaebol. When products or services are purchased among member companies within a Chaebol, they provide products or services at lower prices and purchase them at higher prices than market prices. So-called cross subsidisation and profit distribution causes market distortion and non-competitive behaviour. According to Kong (1995), a Chaebol provides products to affiliated firms at lower prices of from 1.1 per cent to 35.5 per cent of market prices.

As is a typical short-coming of larger organisations, the large size of the Chaebol organisations, with their multi-divisional business units, has the tendency to create a lack of flexibility through its bureaucratic processes which diminish its ability to react to new

⁷ Interestingly, these Chaebol groups have diversified related product lines, unlike other Chaebols.

environments or to develop new projects. Although central planning and co-ordination offices in the group are well-organised and continue to inform and to update changes within the economic environment, in reality the decisions made at the top level can become distorted during the process of implementation at the lower levels of management in larger groups.

In Cho's (1989) analysis of the effects of diversification on corporate performance in South Korea (with data collected from 113 large companies listed on the Korean Stock Exchange between 1976 and 1983), the structure of the Chaebol generally has a positive effect on growth and profitability to a certain point. However, the Chaebols have grown by the government's protection and promotion rather than internal net profit growth, and established its particular organisational structure in uncompetitive markets for more than three decades. Its organisation has not been tested in open market, domestically or internationally, as to whether the Chaebols benefit from the existing diversified structure.

5.6 Daewoo Group

5.6.1 History

The Daewoo group started as a small textile trading company with an investment of \$18,000 and 5 employees in 1967. During its first year, its sales were \$580,000 (Kong, 1995, p. 132). In order to promote exports, Daewoo opened overseas branches in Singapore, Australia, and the United States in 1969 and its sales reached \$4 million in that year. Daewoo was awarded 30 per cent of the total US import quota in textile products in 1972 (Steers, Shin, & Ungson, 1989, p. 64). Until 1972, the company

depended completely on foreign sales. Under the government's export policy, Daewoo grew rapidly through its full export concentration.

In 1973, Daewoo acquired or established 10 companies in textiles, machinery, finance, and construction and was designated as a General Trading Company by the government in 1975 (Kong 1995, p. 134). As a result, Daewoo created the Daewoo group as a Chaebol and was one of the most profitable Korean companies by 1975.

The growth strategy of Daewoo was successful and rather different from other Chaebols from the beginning. Like other Chaebols, the company could concentrate more on the domestic market than exports, and then increase exports, but its strategy was fully matched by the government's export-oriented policy. The government incentives created a market imperfection. If the company wished to concentrate on the domestic market, its growth rate would be much slower. The company, however, took advantage of the government intervention as an opportunity rather than obstacles so that it achieved rapid growth to become a Chaebol group, even as a late starter. In addition, by establishing a General Trading Company, Daewoo could increase exports efficiently and accumulate marketing expertise, which was difficult to be obtained in the small domestic market, through experiences of serving a diversity of larger markets.

Between 1975 and 1978, 5 more firms were acquired in the heavy industrial and chemical sectors. Some of Daewoo's acquisitions were requested by the government to support insolvent companies in those industries. A state-owned machinery plant, which had been losing money for 37 years, was taken over by Daewoo. Within one year, the company broke even and by the second year it began paying dividends. A shipbuilding company acquired by Daewoo when it was almost bankrupt was developed into one of the largest and finest shipbuilding facilities in the world. In 1978, at the government's request, Daewoo also acquired Saehan Motor Company (today's Daewoo Motor

Company) which had experienced serious management difficulties. In general, the Daewoo group had embraced most industries by the end of the 1970s.

This expansion surely benefited from the government's industrial policies of that period. However, if Daewoo had adopted different strategy and management style, it might have gone bankrupt. The government intervention in take-overs of ill-managed companies was creating huge burdens on the Chaebols. Without the government's incentives, such as tax exemption and cheap long-term loans, any firms which took over those companies could not have survived. Based on its own resources, including managerial skills and government incentives, Daewoo overcame difficulties and successfully diversified into various industries.

In the 1980s, Daewoo undertook restructuring in its organisation. In 1982, the parent companies, Daewoo Industrial Company and Daewoo Construction Company merged into 'Daewoo Corporation' as the second foundation of the Daewoo group. From 1984, Daewoo started to reduce its diversification by dissolving more than 7 companies in the light industry sector, such as those in textiles and leather, and focused on the electronics, semi-conductor, and telecommunication industries by acquiring companies in those industries in 1983.

This structural shift has been significant; for example, the share of the electric and electronics products in the total exports of Daewoo increased from 6 per cent in 1985 to 24 per cent in 1987 (Park, 1990, p. 217). In addition, during the 1980s, Daewoo emphasised research and development (R & D) in order to improve competitiveness. As of 1988, the Daewoo group has established 15 R & D centres in the areas of electronics, telecommunication, shipbuilding, construction, and automobiles.

As Daewoo Group expanded rapidly without developing new competences, the group moved from a 'widening' to a 'deepening' process. According to Rumelt (1974),

many companies that had previously had narrow product-market scopes elected to diversify into new businesses related to their past strengths, and then move into lightly related or unrelated businesses. However, Daewoo Group diversified into various industries almost at the same time without experiencing a so-called 'step-by-step diversification process'. The group needed to restructure its organisation in order to gain competitiveness.

Compared to other Chaebols, Daewoo practised a consistent corporate strategy, its concentration on foreign markets, for its growth and development. Daewoo group has developed overseas markets much more aggressively since it was founded, although most Chaebols and smaller companies have grown through exports. Since making a shift to heavy and capital-intensive industry in the 1980s, the Daewoo group has increased its involvement in overseas subsidiaries and joint ventures accordingly.

From the 1990s the Daewoo group has accelerated to pursue this strategy by commencing a new programme. The Group launched its globalisation programme, so-called 'Vision 2000', in 1993. Its programme aims at setting up global operations concentrating on three main businesses: motor vehicles, electronics and trading. This programme includes the ambitious goals of:

- the expansion of its production overseas;
- the localisation of management and operation, including a larger number of non-Koreans in its senior management and emphasis on local decision making;
- achieving the development of advanced technology through the expansion of R and D programmes;
- gaining shareholders around the world; and
- developing a truly global image.

It seems that the Daewoo Group has already launched detailed implementation plans since 1993. Between 1993 and 1994, the Group focused on increasing the number of overseas operations in trade, production, and marketing (see *Table 5.3*). It had set up 137 branch and trade offices, and 253 marketing operations and production facilities in its major business areas in the world by early 1995. It also plans to increase the number of overseas subsidiaries to 650.

Daewoo Group plans to expand its branches particularly in general trading and international finance in order to support its subsidiaries in developing and transitional countries, in terms of gathering relevant information, raising project funds, generating foreign currencies by trading, and marketing its products manufactured in those countries.

In the Daewoo Group's globalisation, it is observed that the group undertook four phases of Dunning's internationalisation process (1993). In Phase 1, Daewoo Group wished to enter foreign markets, and initially did enter the markets by exports. Daewoo Group underwent Phase 2 by expanding its trade-related facilities in foreign markets (branches of a General Trading division which belongs to Daewoo Corporation have widely expanded since its foundation). Daewoo Group evolved into the Phase 3 process by internalising forwards and backwards manufacturing process by FDI. As Daewoo Group's foreign experience was accumulated by investment, it increased investment in foreign countries in order to deepen and widen the value-added network. For example, Daewoo electronics had sales networks in Europe, and then it increased investment in component manufacturing followed by full manufacturing in Europe (France and the U.K.); since Daewoo Motor invested in East Central Europe (the Czech Republic, Poland and Romania), it increased its investment in its other business sectors, including finance, and construction in East Central Europe and in the U.K. (a

commercial car plant and a technical centre). Given the fact that Daewoo Group's global operations have increased, the group is likely to evolve into Phase 5: the establishment of the regional or global integration of the value network. Daewoo Groups' intra-firm product specialisation and integration of markets tends to be accompanied by an increase in the trade between the production units and / or between its affiliates and their parent companies in South Korea.

As observed in the programme, Daewoo Group plans to use local staffs and decentralise its management control to overseas operations. Although its plans are pursued actively, it may be a difficult procedure to decentralise management to foreign operations as this has not been done in South Korea, where the economic activities of the Group have been co-ordinated by the headquarters, rather than the individual business units within the Group running their own organisations separately. The issues of business decentralisation within the Group, as well as in other Chaebols, are still in dispute in South Korea. The company should consider the costs and benefits of management decentralisation and decide to what extent its management can be decentralised.

Table 5.3 Overseas Subsidiaries of Daewoo Group (number)

	Asia / Oceania	Europe / CIS	Africa / Middle East	Middle & South America	Total
Trading	59	10	11	12	92
Construction	22	3	5	5	35
Electronics / telecommun- ication	20	23	1	14	58
Auto industry	19	19	4	7	49
Heavy Industry	4	3	0	2	9
Securities / Others	4	5	0	1	10
Total	128	63	21	41	253

Source: Daewoo.

Table 5.4 Major Member Companies of Daewoo Group (unit: billion Korean won)

_	Business Field & Products	Total Assets
(Heavy Sector)		
Daewoo Heavy Industries Ltd.	diesel engines, rolling stock, construction equipment, industrial vehicles, machine tooling, aerospace	16,938
Daewoo Shipbuilding & Heavy Machinery Ltd	ships, offshore structures, medium-sized vessels, yachts	26,376
Daewoo-Sikorsky	helicopters	85
(Electric & Electronics Sector)		
Daewoo Electric Motor Industries Ltd	motors for electric products	287
Orion Electric Co., Ltd	TV tubes, monitors, VCR heads	3,828
Daewoo Electronic Components Co., Ltd	TV turner, capacitor	1,412
Orion Electric Components Co., Ltd	electric components	497
Daewoo Telecom Co., Ltd	telecom switching system, PCs fibre optics, O/A machines, semiconductors	6,294
Daewoo Electronics Co., Ltd	TVs, VCRs, PCs, audio products, home appliances	23,164
Daewoo Information System Co. Ltd	information system	73
(Automotive Sector)		
Daewoo Motor Co., Ltd	passenger cars, buses, trucks, speciality vehicles	29,668
Daewoo Precision Industries, Ltd	auto parts & components	3,305
Daewoo Automotive Components Co., Ltd	cranking motors, alternators, ignition distributors, ignition coils, gears, axles, brakes, radiators	2,499
Koram Plastics Co., Ltd	polyurethane bumpers	415
(Trading & Construction)		
Daewoo Corporation	trading: export, import, international finance, resource development	61,730
Keangnam Enterprises Ltd	plants, architectural & civil works	10,335
(Hotels & Finance)		
Dongwoo Development Co.	Seoul Hilton Hotel	1,999
Daewoo Securities Co., Ltd	securities brokerage, underwriting dealer operation	22,557
Daewoo Research Institute	economic analysis & survey	54
Daewoo Investment & Finance Corporation	operation of short-term Cp, dealer operation in money markets	69
Total		211,599

Source: the Long-Term Credit Bank, 1994; Kong, 1995, p. 336.

According to Kong's classification (1995), the ownership structure of the Daewoo group falls into Type III, family-oriented ownership relating to management control are restricted, compared with other Chaebol groups. As seen in *Figure 5.2*, the Daewoo Corporation, the holding company, and Daewoo Foundation have sizeable investments in other Daewoo companies and affiliated firms have interlocking shareholding structure.

Firms like Daewoo Group which pursue a policy of product, industrial or geographical diversification are likely to develop a different organisational structure than one which supplies a single product to a single market (Dunning, 1993, p. 212). As a general rule, the firm which produces fewer end products is more vertically integrated and is likely to be organised on a functional basis. By contrast, the more numerous and diversified the end products, the more likely it is that the firm's organisational structure tends to be product based. Although there is no 'right' or 'wrong' form of organisational structure, firms with product-division structures seems to perform better than firms with function-based structures. According to Rumelt's empirical findings (1974), firms with product-division structures do not rely as heavily on current profits to power their growth as functionally organised firms. This indicates that product-division firms are able to achieve a high degree of separation between the goals of current profitability and growth. He also found out that the acquisitive conglomerates achieved above average rates of growth.

The Daewoo Group has grown to a large conglomerate. Its organisational structure has also evolved accordingly. Within the Daewoo Group, each company is in a particular business division, and each division within the group is directed by one chief

executive officer (CEO) who controls management exclusively and takes full responsibility within his own division. The leading company in each division plays a paternalistic role and is strongly linked with other companies of the division in resources such as material, technology, human resources and information (Park, 1990, p. 210).

This Group's product-division structure particularly attributed to its rapid growth over the three decades, and allowed the group to set up a long-term globalisation programme as the group could separate its current profitability from its growth. Although some of the group's subsidiaries have not generated profits, the group continued to expand. For example, Daewoo Motor had not reached a break-even point until the early 1990s, but the group as well as the company has grown under the shield of the group's product-division structure.

Domestically, the supreme decision-making authority of the Daewoo group is the management committee. This consists of 15 board members and CEOs from the major business fields of Daewoo group. The committee is given necessary information and data directly by the planning and co-ordination division and makes decisions on (1) budgets and annual projects; (2) new investments in important projects and facilities; (3) take-overs, mergers, and dissolution of firms; (4) capital increase and stock matters; (5) major manpower and recruiting matters; and (6) other issues considered important by the chairman (Park, 1990, p. 210). Like any other Chaebol, the decision taking is highly centralised. Particularly in the Daewoo Group, the chairman is likely to make a final decision, although the management committee is well operated.

As briefly discussed in the above section, internationally, Daewoo Group pursues the decentralisation of management control, including decision taking. However, it is observed that management control, including decision making is centralised in the group's management committee. It is not an easy task to implement a decentralisation

programme under the group's present organisational structure. Economic theory suggests that there are three main reasons why MNEs should not wish to delegate decision taking to their affiliates: first, when viewed as self-contained profit centres, the goals and objectives of the affiliates may not always be in accord with those of the MNE of which they are a part; second, the real costs of decision making and / or related support services may be higher in the host than in the home country; and third, for one reason or another, the parent company may be more efficient at undertaking these activities than its regional or branch affiliates (Dunning, 1993, pp. 222-223).

Most foreign affiliates of the Daewoo Group were recently established and a majority of their shares (more than 50 per cent) are owned by parent companies of the group. This indicates that the group has not fully appreciated transaction costs of delegating decisions to the management of its subsidiaries, therefore, the group tends to prefer centralisation. As a major shareholder, it is natural that the group tends to exercise its ownership advantage. Particularly, affiliates in strategically sensitive areas like Daewoo Motor and Electronics are likely to be pressured towards centralisation, unless there are factors strongly affecting decentralisation, such as pressure from host governments and the need for knowledge of local set-up.

20% 93% 45% 50% 337% Motor Parts Electronic Engineering Korea Steel Daewoo Daewoo Chemical Daewoo Daewoo Telecom 31.7% Shipbuilding Daewoo Daewoo Heavy FOUNDATION Daewoo Corp. | 10% DAEWOO Industries 15.9% 29.1% 31.9% 32.9% Finance Corp. Daewoo Investment 22% Bank Other Daewoo Korea Development Group Companies 8.8% 29.4% Pungkuk Oil Ca. 50% 3.1% 54.9%|Zymos Daewoo Securities 26.7% Chungbuk Kim, Woo Choong (Chairman) Bank Electronics Sikorsky Daéwoo Daewoo 11.6%

Source: Far Eastern Economic Review, 1988; Steers, Shin, and Ungson, 1989, p. 68.

Figure 5.2 Financial Structure of the Daewoo Group

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Most of today's Chaebol groups began as small companies in the 1950s and then expanded by diversifying into unrelated business areas through the 1960s and 1970s, initially due to the instruments of government policy that maximised effective use of scarce management resources. By the 1970s, the government's intervention began to weaken, and in the 1980s the Chaebols were increasingly independent from the government as the government was partly losing the leverage by privatising its shares in the commercial banks and lifting restrictions on foreign exchanges and loans.

Since the 1980s, the Chaebols have produced and exported a variety of products from textiles to automobiles. With distinctive characteristics of the Chaebols created in the process of economic development, they have contributed considerably to the growth and success of the South Korean economy, although there have been rising negative effects and social disapproval.

The Chaebol groups have now focused on cultivating foreign markets more actively by establishing affiliated companies in capital- and technology- intensive industries, while they have started to specialise in those industries by dissolving affiliates in labour-intensive industry domestically.

The organisational structure of the Chaebol groups, and their ability to survive in the absence of distorted factor markets, especially financial markets, may alleviate overseas business risks and uncertainty, particularly in imperfect markets existing in developing and transforming countries, or its structure may be forced to change to the product specialisation with increased competition in foreign markets. Another feature of the Chaebol's organisational structure is that it allows domestic and foreign affiliates to receive support from parent companies such as in finance, managerial skills, and

technical resources. The advantages of being an affiliate of large conglomerate groups can strengthen firm-specific advantages which enable a firm to engage in FDI. These advantages can be applied to subsidiaries of the Daewoo Group. As an affiliate of a Cheabol group, Daewoo Motor's firm-specific advantages, if obtained, can be strengthened by support from the group. Daewoo Motor will be closely discussed in Chapter 7.

The Daewoo group has experienced relatively unique growth in comparison to other Chaebol groups. Samsung, Hyundai, and the LG groups are typical first-comer Chaebol groups founded in the late 1940s and the 1950s, but the Daewoo group is a rare case, being one of the largest 30 Chaebol groups, but founded relatively late in the late 1960s. The group continued to adopt a foreign market-oriented strategy through exports and FDI. Even though the group lost the advantages of being first-comers, by pursuing an outward diversification strategy which resulted in its rapid growth and development, it could catch up with other Chaebols. Maybe this strategy is one of a few ways to become a large Chaebol as a late starter. In addition to the Daewoo group's fast growth by opening new foreign markets, the successful management of huge insolvent companies in capital and heavy industry also contributed to its diversification. This trait of the Daewoo group can be observed more clearly through the current overseas economic activities of its member companies, such as foreign direct investments of Daewoo Motor and Daewoo Electronics company.

However, there is always a risk that the entire Daewoo Group would collapse under the burden of debt by increasing its member companies' equity participation in foreign projects. To manage overseas affiliated companies, it may need significant restructuring of the group's existing operating system and management control to generate positive synergy effects from its multi-divisional structures, in general, and to

overcome difficulties such as product quality, language and cultural barriers, in particular.

Part C

Motivations for Daewoo Motor's Direct Investment in East Central Europe (Poland and Romania)

Chapter Six

The Transition of East Central European Countries and Its Significance to the Motor Vehicle Industry

6.1 Introduction

In the previous chapters, the world car industry and the development of the car industry in South Korea, as well as the South Korean MNEs were discussed in order to understand factors affecting Daewoo Motor's economic activities in foreign countries. However, a locational question has not been analysed, such as why, therefore, did Daewoo Motor invest in Poland and Romania? Also, what are the benefits of investment in Poland and Romania?

Auty (1993) explains that scale-sensitive industries, including the car industry, shift from the mature market to the markets in a dynamic stage of the product cycle and where the minimum threshold size of a plant is met by domestic demand. The aim of this chapter is to examine whether the markets of East Central European countries (particularly Poland and Romania) are in a dynamic stage of the product cycle, and if market demand is large enough to cross the minimum viable size of a plant so that Daewoo Motor can obtain the competitiveness by moving manufacturing plants into the region.

Section 6.2 examines the liberalisation process and economic growth of East Central European countries. In particular, it looks at the relationships between liberalisation, inflation, and growth. In this section, the potential economic growth in the region is discussed through structural reforms in industries. In section 6.3, factors affecting the viability of the car industry in the region are analysed in terms of the level of wages and productivity as well as the market demand for cars. For a long-term view, the market size by population in the region and further changes in the market size by the establishment of the Central Economic Free Trade Agreement (CEFTA), as well as the European Agreement between the European Union¹ (EU) and East Central European countries, are also examined. The final section introduces policies which can contribute to the further economic development in the region, based on the experience of the high-performing Asian economies as well as the past development of the region.

6.2 Economic Liberalisation, Stabilisation and Growth

After the Berlin Wall was demolished in 1989, the government of every East Central European country underwent dramatic changes. In most cases, the new governments have been devoted to the development of market economies from a centrally planned system by adopting reform programmes. These liberalisation programmes normally consist of six areas: (1) macroeconomic stabilisation; (2) price liberalisation; (3) trade liberalisation and current account convertibility; (4) enterprise reform (especially privatisation); (5) the creation of a social safety net; and (6) the development of the institutional and legal framework for a market economy (Fischer, Sahay, and Vegh, 1996, p. 46).

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¹ The European Community officially became the European Union (EU) in January 1994.

The radical changes during the transition caused by the adoption of economic liberalisation programmes have relatively quickly effected the first three elements of the reform process, whereas the other areas (4,5 and 6) have inherently taken more time. Particularly, when the initial price liberalisation took place, subsequently the prices increased. Although each country in East Central Europe has followed its own path to reform, with different speeds and intensities, most governments of the East Central countries were challenged to slow these rates of price increase, but they have suffered with high inflation. Thus, the question is whether these reform programmes are related to economic growth or the resumption of growth, particularly whether the creation of high inflation could affect the growth rate, and then whether stabilising the inflation would affect growth.

De Melo, Denizer, and Gelb (1996) studied relationships between real GDP growth and economic liberalisation; inflation and economic liberalisation; and growth and stabilisation in 26 Central and Eastern European countries, the former Soviet Union, and Mongolia. They used an index of economic liberalisation which can measure the degree of liberalisation. This index covers the areas of the internal market (I): liberalisation of domestic prices and abolition of state trading monopolies; the external markets (E): liberalisation of the foreign trade regime, including elimination of export controls and taxes and substitution of low to moderate import duties for import quotas and high import tariffs; currency convertibility, and private sector entry (P): privatisation of small-scale and large-scale enterprises and banking reform. It ranges from 0 to 1, where 0 represents an unreformed, and 1 represents a basically-reformed, country.

Their research suggested that the real growth was associated with increased economic liberalisation which led to stabilisation, as the liberalisation of prices resulted in lower inflation when compared with a continuation of price controls. They also found

that advanced reformers were successful in containing the inflationary bursts that followed price liberalisation, while others have endured more severe and longer inflation. In other words, the advanced reformers could attain the real economic growth (the real GDP growth) more efficiently than others due to the stabilisation of high inflation during a short time period.

The research conducted by Fischer, Sahay, and Vegh (1996) also drew a similar conclusion to that of de Melo, Denizer, and Gelb. They found that stabilisation is necessary for the resumption of growth, in other words reducing high inflation is a precondition for the revival of growth. The study suggested that for growth to begin, annual inflation should be a two-digit number, and desirably less than 50 per cent.

Among East Central European countries (see Tables 6.1, 6.2, and 6.3), Bulgaria showed the lowest level of liberalisation as well as the lowest real GDP growth in 1994, although the country's level of liberalisation was similar to other countries in the region prior to the adoption of a liberalisation programme in 1991 (the level was even higher than that of the former Czechoslovakia and Romania). When Bulgaria adopted the reform programme in 1991, the level of liberalisation marked 0.43 and in three years, the level reached 0.70. Since the reform had begun, the real GDP growth was negative until 1994 when inflation showed a two-digit number down from a peak of 333.5 per cent in 1991.

The Czech Republic demonstrated the highest liberalisation level in 1994. When it adopted the reform programme in 1991, the country's level of liberalisation showed a radical process, marking 0.63 of changes. The country's real GDP growth dropped to - 14.2 per cent in the year of liberalisation in 1991. After three years of the reform programme, the country began to grow in 1994. The country achieved successful control over high inflation (the lowest inflation in the region).

Hungary launched its reform programme in 1990. Despite the fact that the country adopted the liberalisation programme one year earlier than Bulgaria and the former Czechoslovakia did, the level of liberalisation did not change much in the reform year and after two years of the reform, implying that the country chose a gradual rather than a radical liberalisation programme. The country reached the level of 0.86 in 1994, but the real GDP growth picked up rather slowly, compared with Poland where the reform started in the same year. In 1994, the country's growth turned into a positive rate. The country had a peak in inflation one year after liberalisation and it gradually decreased to 19.0 per cent in 1994.

Poland was the first country in the region to introduce a liberalisation programme. The country adopted a radical reform in 1990, as did the former Czechoslovakia in 1991. Changes in the reform year were not intense, compared with the former Czechoslovakia (reaching the level of 0.86 in 1994), but the country's real GDP growth increased sharply. Two years after the reform (1992), the country resumed its growth and then continued with high growth rates. In 1994, Poland recorded the highest growth rate in the region. When the reform was applied in 1990, the inflation reached 586 per cent, but within one year inflation was under more control at a two-digit number, and less than 50 per cent was recorded in the following year. This implies that the earlier and radical reformers performed well and recovered from negative growth, which was largely affected by reducing high inflation, compared with the gradual and late reformers.

Romania began the reform programme in 1990, but reform was initially delayed. Changes in the year of the most intense reforms (1990) recorded 0.22 and the level was equivalent to 0.71 in 1994 which was rather low when compared with countries that began reforming in the same year. However, the real GDP growth was resumed three

years after liberalisation in 1993. Although the growth rate showed improvement, it might be difficult to sustain because of postponed liberalisation and unstable inflation. In Romania, inflation was brought down after the peak inflation of 256 per cent, but was still above 100 per cent in 1994 (the highest inflation in the region). Without lowering inflation, the growth would be impeded in the future.

The liberalisation performance of the Slovak Republic was relatively good, although the country was only established recently. As the former Czechoslovakia adopted a radical reform in 1991, the country showed substantial changes and reached 0.86 in 1994. The real GDP began to grow in 1994. The country controlled high inflation well, recording lower inflation at 14 per cent.

Table 6.1 Liberalisation in East Central European Countries (Index.)

Country	Year of most intense reform	Prior level	Change in year of most intense reform	Change over next 2 years	Level in 1994
Bulgaria	1991	0.19	0.43	0.04	0.70
Czech Rep.	1991	0.16	0.63	0.11	0.90
Hungary	1990	0.34	0.23	0.21	0.86
Poland	1990	0.24	0.44	0.14	0.86
Romania	1990	0.00	0.22	0.23	0.71
Slovak Rep.	1991	0.16	0.63	0.07	0.86

Note: The index used in this table was constructed by de Melo, and Denizer, and Gelb, 1996 for the World Bank.

Source: Aslund, Boone, and Johnson, 1996.

Table 6.2 Growth in Real GDP in East Central Europe (% changes)

Country	1990	1991	1992	1993	1994
Bulgaria	-9.1	-11.7	-7.3	-2.4	1.8
Czech Rep.	-0.4	-14.2	-6.4	-0.9	2.6
Hungary	-3.5	-11.9	-3.1	-0.6	2.9
Poland	-11.6	-7.0	2.6	3.8	5.2
Romania	-5.6	-12.9	-8.8	1.3	3.9
Slovak Rep.	-2.5	-14.6	-6.5	-3.7	4.9

Source: European Bank for Reconstruction and Development (EBRD), 1997.

Table 6.3 Inflation in East Central European Countries (% change)

Country	Year of peak	Level in year	Level in next	Level 2 years	Level in 1994
		of peak	year	later	
Bulgaria	1991	333.5	82.0	72.8	89.0
Czech Rep.	1991	56.7	11.1	20.8	10.2
Hungary	1991	34.2	22.9	22.5	19.0
Poland	1990	586.0	70.3	43.0	32.2
Romania	1993	256.0	131.0	33.4	131.0
Slovak Rep.	1991	61.2	10.1	23.0	14.0

Source: Aslund, Boone, and Johnson, 1996.

Overall, it is observed that all East Central European countries achieved economic liberalisation and resumed growth within two or three years after liberalisation whilst managing high inflation well (except Romania). It is noticeable that the earlier and advanced reformers faced high inflation in the reform year, and that one year after reform high inflation started to drop to two-digit numbers, but gradual reformers had a peak in inflation usually one after liberalisation. In other words, the earlier and deeper the country liberalised, the faster it stabilised and began to grow.

After the recovery from the transitional shock, which was the case for East Central European countries, the next question is how to sustain or maintain growth. Achieving macroeconomic stability would seem to be one of the pre-conditions for recovery. Beyond this, sustaining macroeconomic stability and promoting productivity increases require fundamental structural reforms.

During the post-communist regime with a centrally planned economic system, East Central European countries allocated resources to industrial sectors which were over-built. As those countries attempted to move in the direction of a market economy based on private property, the transition process was needed at the level of the firm. This forced large state enterprises to contract, resulting in output decline. This has resulted from the fall in military production, in heavy industry and consumer

manufactures which were uncompetitive with imports. Depending on the extent of disruption caused by the break-up of the previous trading arrangements and the size of the military-industrial sectors, each country experienced different levels of output decline as part of its liberalisation process. Table 6.4 shows how output fell at the beginning of the reforms and over the next two years. Within East Central Europe, Poland has had the best cumulative performance. Its 1995 output was 97.4 per cent of the 1989 level, while other countries had not achieved more than 85 per cent. Although these countries' level of output has not been recovered, compared with that of Poland, the level has nevertheless continued to grow gradually.

Table 6.4 Output Decline in East Central European Countries (Index, % change)

Country	Level 2 years after reform	Level at end 1994	Level at end 1995
Bulgaria	72.3	73.3	74.8
Czech Rep.	78.6	80.7	83.8
Hungary	82.5	83.5	84.2
Poland	84.3	91.9	97.4
Romania	75.0	78.6	81.9
Slovak Rep.	74.3	77.9	81.4

Note: Output is an index of GAP, 1989 = 100 Source: Aslund, Boone, and Johnson, 1996.

The East Central European countries, however, experienced changes in their sectoral structures, despite the fact that their level of output fell. Table 6.5 shows that the share of current price industry in GDP has fallen sharply (except the Czech Republic and Hungary), whereas on the contrary, the share of current price services in GDP has increased. As the service sectors were repressed before liberalisation, this shift reflected higher profitability in the growing sectors and led to faster output recovery (de Melo, Denizer, and Gelb, 1996, p 19).

Table 6.6 shows the corresponding shifts in constant prices. Poland experienced a substantial sectoral shift from industry to services, compared with other countries in the region. The Czech and Slovak Republics have also gone through structural changes in services. According to the study conducted by de Melo, Denizer, and Gelb, growth in services has been concentrated in private trade, finance and other business and consumer services. This implies that these private economic activities generate the accumulation of individual wealth which can be used to acquire industrial assets, precipitating the economic recovery and growth. Medium- and long-run growth in East Central European countries will reflect a combination of capital accumulation and productivity growth resulting from increases in the efficiency of factor use and a change in the structure of economies away from the dominance of industry towards a greater emphasis on services.

The relative performance of agriculture varies among countries. Pre-reform agriculture was inefficiently organised but subsidised, including through credit, energy, and other inputs (de Melo, Denizer, and Gelb, 1996, p. 20). Agricultural performance was affected by privatisation and relative price changes. Among the East Central European countries, Romania, as well as Bulgaria, showed strong agricultural response. The share of constant price agriculture in GDP increased by 6.2 per cent in Romania and by 4.3 per cent in Bulgaria.

Table 6.5 Sectoral Shifts at Current Prices, 1989-94

	Change in share (% of GDP)			
Country	Industry	Agriculture	Services	
Bulgaria	-25.0	1.7	23.3	
Czech Rep.a	-8.7	-2.3	11.0	
Hungary	-4.6	-7.2	11.8	
Poland	-14.6	-7.2	21.8	
Romania	-20.8	5.2	15.6	
Slovak Rep.	-22.5	-1.6	24.1	

Note: a: Change over 1989-93.

Source: de Melo, Denizer, and Gelb, 1996.

Table 6.6 Sectoral Shifts at Constant Prices, 1989-94

	Change in share (% of GDP)				
Country	Industry	Agriculture	Services		
Bulgaria	-10.3	4.3	6.0		
Czech Rep.	-10.5	-0.5	11.0		
Hungary	-0.2	-1.7	1.9		
Poland a	-21.4	-2.0	23.4		
Romania	-6.5	6.2	0.3		
Slovak Rep.	-14.8	0.2	14.6		

Note: Change over 1989-93.

Source: de Melo, Denizer, and Gelb, 1996.

It is observed that the heterogeneity in output developments has progressed and grown across the region at different levels. The deep structural reforms bear evidence to the sustainability of recovery as well as continuing the economic growth. Although East Central European countries are in different stages of recovery and growth, overall they have sustained the economic growth based on liberalisation, macroeconomic stability, and fundamental sectoral shifts. Particularly, Poland demonstrated faster recovery as well as high economic growth rates. Considering the discussed factors affecting the economic growth, the country looks set to grow faster than any of the other countries in the region.

6.3 The Viability of the Car Industry

In the section above, the potential economic growth in East Central European countries has been discussed at the macro level. It is important to explore other domestic conditions of the countries to see if they can support an automobile industry, although some of the countries, such as the former Czechoslovakia, Poland, and

Romania, in the region have already developed a car industry, regardless of their capability to accommodate this scale-sensitive industry during a post-communist system.

Table 6.7 shows considerable changes in wages and productivity in the region between 1990 and 1995. In Bulgaria, the growth of wages has been unstable. The reform year, and one year after reform, marked a sharp decrease in wages by over 40 per cent, and then the level of wages increased in 1992 rapidly, followed by the mixture of positive and negative growth. On the contrary, the country's productivity has increased gradually after 1992. The level of wages in the Czech Republic has increased since 1992, one year after liberalisation. However, the level of productivity has shown a rather slow pace of grow, although there was a leap in 1995 by 20.5 per cent. In Hungary, both wages and productivity have increased steadily. Poland showed a sharp increase in wages one year after reform in 1991, followed by the positive growth. The productivity diminished until 1991, but since then it has increased by the average of 12.2 per cent. Romania had not shown any increase in wages and productivity until 1992, then the growth in both wages and productivity improved. The Slovak Republic has shown impressive growth both in wages and productivity since 1992.

Table 6.7 Wages* and Productivity** in Industry in East Central Europe
(% change, year on year)

	1990	1991	1992	1993	1994	1995
Bulgaria						
Wage in	-44.3	-42.3	85.7	28.1	-21.6	27.8
industry						
Labour	-10.4	-11.1	0.2	5.5	14.2	9.0
productivity						
in industry						
Czech Rep.						
Wage in manufacturing	-17.6	-28.9	22.7	21.4	17.8	28.8
Labour productivity in	-0.4	-16.6	-7.6	-3.5	4.0	20.5
manufacturing						
Hungary					-	
Wage in manufacturing	14.8	6.2	19.2	7.1	6.3	1.5
Labour	0.4	-17.9	10.7	18.5	7.3	11.2
productivity in manufacturing						
Poland						
Wage in manufacturing	-28.2	46.7	6.9	4.5	10.5	26.1
Labour	-21.1	-11.9	17.1	14.5	19.2	9.6
productivity in	-21.1	-11.7	17.1	14.5	17.2	7.0
manufacturing Romania						
Wage in	-22.0	-33.9	-32.2	23.3	6.4	21.5
industry	-22.0	-55.7	-52.2	25.5	0.4	21.5
Labour	-24.6	-18.5	-12.3	9.0	11.6	15.7
productivity	20	10.0	12.0			10
in industry						
Slovak						
Rep.						
Wage in	-	-	21.3	13.1	13.1	24.1
industry						
Labour	-	-	7.4	0.6	6.8	4.0
productivity						
in industry						

Notes: *: Wages are expressed in US dollars. **: Productivity is based on output per employee.

Source: European Bank for Reconstruction and Development, 1997.

For the development of a car industry, an increase in wages has both a positive and negative side. The certain level of wages is required to increase so that domestic people can afford to purchase cars. On the other hand, cheaper wages can contribute to build price competitive cars domestically by reducing production costs, although high production costs caused by a high labour force can be offset by an increase in

productivity. Table 6.8 shows a different level of wages and GDP per capita in the region. The level of average monthly wages in the Czech Republic, Hungary and Poland in 1996 was similar to that of South Korea in 1986 when car production started to increase sharply (refer to Chapter 4). Average monthly nominal wages in Bulgaria were far lower than in other countries in the region, indicating that domestic demand fell. Both income level and GDP per capita in Romania were low, but considering continuing increases in wages, domestic demand will be boosted. The level of GDP/capita in the Slovak Republic in 1995 was higher than that of Poland, and the country's income level in 1996 was lower than other advanced reformers in the region, making the country attractive in terms of cheaper labour force and increasing productivity. Domestic demand rose by more than 20 per cent in 1996 (Business Central Europe, 1996, p. 32).

Table 6.8 Average Monthly Nominal Wages and GDP per Capita (US \$)

Country	Wages (\$) in 1996	GDP/Capita (\$) in 1995
Bulgaria	89	1,543
Czech Rep.	350 a	4,771 c
Hungary	328	4,273
Poland	365 b	3,050
Romania	145	1,570
Slovak Rep.	265	3,409

Notes: a: Figures are based on February 1996 data. b: Figures are based on October 1996 data. c: Figures of GAP/Capita in the Czech Republic is from 1996 data.

Source: Business Central Europe, 1996 and the World Bank, 1997.

Overall, in East Central European countries, the level of income and productivity grow as well as market demand. This implies that the countries in the region can be an attractive location for cars if the minimum threshold size of a car plant can be met by the level of demand. Before discussing car demand in the region, it is interesting to see the tendency of purchasing cars in the region.

One feature observed by looking at car ownership in the region is the relatively higher level of car ownership in comparison to the countries with a similar level of GDP (see *Table 6.9*). This implies that the people in the East Central European countries are familiar with using cars, therefore, there is a high possibility that they are likely to absorb more cars than those countries in the same economic category, if economic conditions are improved.

The other characteristic is that car ownership in the member countries is much lower, compared to those of neighbouring countries of Western Europe (see *Table 6.9*). According to the MIT report (1984), car demand is likely to be most responsive to income growth in the least affluent as the countries with high income levels reach the stage at which most residents of driving age already have a car. This indicates that there is space to grow when the level of income in the region increases.

Table 6.9 Car Ownership, 1993

	Car Possession	Cars per 1,000 persons
Western European Countries (EU)		
Netherlands	5,755,376	384.6
Belgium	4.098,703	416.7
Germany	39,202,066	476.2
Spain	13,440,694	344.8
The United Kingdom	24,071,472	434.8
Italy	29,600,000	526.3
Luxembourg	208,847	526.3
Denmark	1,618,033	312.5
Greece	1,880,851	181.8
Ireland	891,027	250.0
Portugal	2,210,000	208.3
France	24,385,000	434.8
East Central European Countries		
Bulgaria	1,478,700	163.9
Hungary	2,091,623	204.1
The Former Czechoslovakia	3,688,835	238.1
Poland	6,770,557	175.4
Romania	1,793,000	78.7
Countries with	Similar Level of GDP (between \$	3000 and \$ 4500)
South Africa	3,650,000	144.9
Mexico	7,824,613	131.6
Brazil	11,000,000	90.1
Malaysia	2,370,038	156.3
Chile	896,368	105.3

Source: KAMA, 1995, p. 77.

Over the last three years in East Central Europe, the volumes of new car registration per se indicate that there is a continuous and substantial demand for cars, despite unstable economic conditions and low wages in the region (see *Table 6.10*). For example, sales of new cars in Poland in 1993 and 1994 were similar or larger volumes to those of some countries with higher income levels in Western Europe, such as Portugal (249,879 units in 1994 and 244,379 units in 1994)², Greece (147,789 units in 1993 and 106,818 in 1994), Austria (285,162 in 1993 and 273,663 units in 1994), and Switzerland (256,917 units in 1993 and 265,892 in 1994).

As the car industry is one of the scale-intensive industries, demand for cars must cross the minimum viable size of a plant if a country wishes to develop the industry. Based on the production cost model established in this research (refer to Chapter 3), 30, 000 units need to be produced annually as the minimum viable size of a plant for final assembly and manufacturing at the level of a firm, if other factors affecting production costs, such as government incentives, are not considered because these have a significant impact on reducing or increasing the minimum survival size of a plant.

Considering annual demand for new cars (sales), some of the East Central European countries can support the car industry. In Bulgaria and Hungary, new car sales in 1994 were far below the minimum viable size of a plant. Unless demand for cars recovers to the level of 1992 and 1993, imports or SKD / CKD production can be feasible for these two countries. The trend of new car sales in the Slovak Republic clearly shows that it is advantageous to import cars or establishing SKD / CKD plants. In the Czech Republic, the level of new car sales indicated that final assembly or manufacturing was viable. Poland showed the strongest demand for cars among East Central European countries. The minimum viable size of a plant for final assembly or

² Figures in the brackets are the number of new car registrations herein.

manufacturing was exceeded, and demand for cars has been steady unlike other countries in the region. The level of new car sales in Romania met the minimum survival size of a plant for final assembly or manufacturing, despite the fact that new car sales decreased sharply from 96,108 units in 1993 to 45,000 units in 1994.

Table 6.10 New Car Registration (Sales)

Country	1992	1993	1994
Bulgaria	73,630	88,140	14,000
Czech Rep.	225,172 (202,500)	89,860 (216,700)	95,539
Hungary	91,070	90,052	20,271
Poland	203,039 (222,000)	241,800 (334,000)	241,000
Romania	80,150 (73,000)	96,108 (94,000)	45,000
Slovak Rep.	n. a.	21,460 (3,000)	14,936

Notes: *: Figures refer only to sales of new cars. **n.a.**: Data is not available. () indicates car production.

Sources: KAMA, 1995, p. 73 and *Motor Business International* 3rd quarter, 1996, p. 173.

In general, the trend of car demand in the region has diminished. Figure 6.1 presents a sharp decrease in the growth rate of car sales, except those of the Czech Republic and Poland (sales of new cars in 1994 was reduced only by 0.3 %). Hungary and Bulgaria have particularly shown a drastic decline by 77.5 % and 84.1 % respectively in 1994. According to the trend of car sales shown in Figure 6.1, market demand for cars in the region has fluctuated and been unstable despite the fact that the economies of the countries began to grow and wages are increasing.

However, it should not been ruled out that the annual growth rate of car sales is affected rather by the current economic situation than by the long term potential of economic growth. In addition, the decline in new car sales does not mean that an actual decrease in car demand has taken place. The demand for cars may shift from new to used cars, or potential consumers may change their transport modes from privately -

owned cars to public transport, such as buses or trains, due to radical reforms in the government's policies in the region.

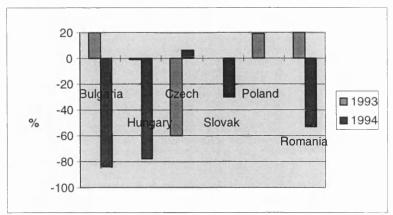
In particular, the individual domestic market in the region had experienced perpetual shortages of cars due to the communist government's suppression of car demand (Altshuler, Anderson, Jones, Roos, and Womack, 1984, p. 107). As of the 1990s, car production³ of some member countries in the region has continuously fell to meet domestic demand (refer to Table 3.6 and 6.10 which shows the difference between car sales (demand) and production). For example, (1) in Bulgaria about 600,000 customers have actually been waiting for a car and deposited the obligatory advance⁴ years ago (EIU, 1991, pp. 27-83); (2) car buyers in the Czech market have to wait between 12 and 18 months for a so-called basic model car, but car production has not increased substantially (International Motor Business, October, 1990a); and (3) long waiting lists for local cars showed unsatisfactory supply for domestic demand in Romania, while car production continued to decrease (EIU, 1994, p. 97). This implies that the level of demand for cars could be underestimated.

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³ Production in Bulgaria has been suspended since 1992 (until 1994, there was no car production) and In Hungary, there was no passenger car production until joint venture companies (GM-Opel and Suzuki) started to produce cars from 1992. Two joint venture companies produced around 10,400 cars in 1992 and over 30,000 units in 1994 (International Motor Business, several issues: 1989-96).

⁴ In Bulgaria, when placing an order, 10 per cent of the purchase price has to be deposited in advance (EIU, 1989, pp. 155-6 and EIU, 1991, p. 83).

Figure 6.1 The Growth Rate of New Car Registration (%)



Note: The growth rate of sales of new cars in the Slovak Republic in 1993 is not available.

Sources: KAMA, 1995 and Motor Business International 3rd quarter, 1996.

In order to have a long-term perspective in the regional car market, rather than current economic conditions, the size of the market in the region is one of the factors used to analyse the viability of the East Central European market. If the countries in the region achieve the high economic growth, (subsequently, people can obtain a certain level of living standard by increasing income, which enables them to purchase a car), access to large markets can be essential to sustain the development of a country's car industry.

In the region, each country does not provide a large market, except for Poland and Romania (see *Table 6.11*). Poland has positive market potential with the largest population and high economic growth in the region. The Romanian market also provides a large market, although the country has not achieved macroeconomic stability, compared with that of Poland. The future Bulgarian, Czech and Hungarian markets will be relatively limited by smaller populations and a continuous decrease in population size (although the population of the Czech Republic has not declined). With the smallest

population, the Slovak Republic would be an attractive car import market rather than a manufacturing and export base.

Table 6.11 Population and Average Annual Growth Rate

Country	1995 Population (million)	Average Annual Growth Rate 1980-95 (%)
Bulgaria	8	-0.45
Czech Rep.	10	0
Hungary	10	-0.3
Poland	39	0.5
Romania	23	0
Slovak Rep.	5	0.45

Source: The World Bank, 1997, pp. 220-1.

However, the potential size of the East Central European market is likely to be enlarged by the establishment of the Central Economic Free Trade Agreement (CEFTA). This free-trade zone will cover an area with a population of more than 95 million, overcoming the small size of each domestic market in the region. The CEFTA was set up by the former Czechoslovakia⁵, Hungary, and Poland in 1992. The CEFTA seeks the establishment of a free-trade zone by 2000, in the case of Poland by 2002 (The Economist, September 16th, 1995, p. 54). For enlarging the membership, the members of the CEFTA agreed to let in Slovenia in 1995 and Romania in 1997 (Business Central Europe, May 1997, p. 68). Bulgaria is preparing to join the CEFTA in near future.

The decisions made during the meeting of the CEFTA Prime Ministers held in Poznan in 1994 allowed to expect further liberalisation of mutual trade. The abolition of tariff barriers or reduction of customs duties on manufactured products will gradually be accomplished. According to the Agreement, the liberalisation process will be completed

⁵ Now, the former Czechoslovakia join the CEFTA separately as the Czech Republic and Slovak Republic after the separation in 1993.

on 1st January 1998. The original liberalisation schedule is different for three categories of goods: A, B and C defined bilateral (see *Table 6.12*). Category A goods have already been exempt from customs duties. Category B goods were exempt from duties on the 1st January 1994. The liberalisation time table for category C will be completed on the 1st January 1998 (The Foreign Trade Research Institute, 1995b, pp. 45-47).

Table 6.12 Process of Liberalisation of Trade of the CEFTA

Category	Year	Contents
A	1st March 1993	Those which do not constitute competition for domestic producers or semi-finished products
В	1994	Those which are of medium competitive significance to domestic producers
С	1998	Sensitive products, such as motor vehicles, steel and textile

Source: The Foreign Trade Research Institute 1995.

Until 2002, when the members can enjoy the CEFTA fully, there is, however, a trade barrier between the member countries. Duties on imports of new passenger cars in Poland are generally higher than in other East Central European countries. In 1995 the import tariff remained at 30 per cent. In the Czech Republic it was 11.4 per cent and in Hungary 11.7 per cent for cars up to 1600 cc and 20.7 per cent for cars over 2000 cc (International Motor Business, 2nd quarter 1995, p. 69). Cars imported into the Slovak Republic faced an import duty of 19 per cent in general (Motor Business International, 1st quarter 1996, p. 62). In Bulgaria the import taxes on cars was 15 per cent of their customs value. In Romania, the government banned car imports.

If the tariff-cutting provisions on passenger cars of the CEFTA are accomplished, the car manufacturers from the member countries and foreign car producers who own production based in the region could have an opportunity to reach

economies of scale by exporting their cars to the CEFTA's member countries, if domestic demand does not cross the minimum viable size of a plant.

There is another important factor which contributes to the increase of market size in Europe, in addition to the CEFTA. The possible creation of a single European market would further enlarge the European Union (EU). European countries have continued to attempt economic integration since the mid-1980s. In 1985, the members of the EU decided to create a single European market and proposed the Single Market Agreement that contained a reduction, or the elimination, of most non-tariff barriers to trade within the EU by 1992, through the implementation of 293 measures which detailed the elimination of technical, physical and fiscal barriers, and the liberalisation of capital and government procurement policies (Pohl & Sorsa, 1992, p. 38; Mayes, 1993, pp. 13-4).

In addition to accomplishing the agreement, the EU has also sought to extend its membership to the members of the European Free Trade Association (EFTA)⁶ through the European Economic Area Agreement which was signed in 1992. The EFTA countries have applied for full EU membership with the exception of Switzerland⁷. Furthermore, the EU has offered the status of associate partnership to the East Central European countries in the union and is considering to accept them as full members of the EU for closer European integration.

To facilitate economic exchanges and future membership in the EU, the EU negotiated with the former Czechoslovakia, Hungary, and Poland to reach agreements that were finally concluded in 1991. All East Central European countries have signed so-called association agreements with the EU. The association agreements concluded

⁶ EFTA member countries include Austria, Finland, Iceland, Norway, Sweden, and Switzerland.

⁷ The application of Switzerland has been sanctioned by domestic referenda (Galinos, 1994, p. 19).

between the EU and the East Central European countries were called the 'Europe Agreement' (Faini and Portes, 1995, pp. 1-3; Galinos, 1994, pp. 19-20).

The interim Agreements implementing the trade provisions of the Europe Agreements went into effect in March 1992, but were only fully implemented in March 1993 in Romania, December 1993 in Bulgaria, and February 1994 in Hungary and Poland, after these countries' association agreements with the EU had been ratified by their parliaments (Faini & Portes, 1995, pp. 1-3). The association agreements with the Czech and Slovak Republics, which had to conclude new agreements after their split, were implemented in 1994 (Weydenthal, 1994, p. 16).

The so-called 'sensitive sectors', including motor vehicles, were encouraged to liberalise, particularly by the Copenhagen European Council (1993), but strict restrictions on agricultural products and manufactured products, which were required to have at least 60 per cent content, still remained for East Central European countries (Faini & Portes, 1995, pp. 1-3). The agreements also authorised the introduction of anti-dumping penalties⁸, in addition to other restrictions by the General Agreement on Tariffs and Trade (GATT) (Galinos, 1994, pp. 20-1).

If the East Central European countries attain the full EU membership (or even remain associate EU members) and they implement the trade liberalisation measures provided by the association agreements on schedule, these countries will enter free trade in manufacturing and services and free movement of labour and capital among EU member countries. In addition, the European association agreements provided East Central European exporters with some immediate advantages over their non-European competitors (Galinos, 1994, p. 23).

⁸ During 1992, East Central European steel exports faced a number of strong anti-dumping actions (see Ben Slay, External Transformation in the Post-Communist Economies: Overview and Progress, occasional paper, Washington, D.C., Woodrow Wilson International Centre for Scholars, 1994, p. 28.

the EU and East Central European countries have been enacted. As East Central European car manufacturers are able to export their cars duty free to the EU according to the association agreements, in return East Central European countries are liberalising their import restrictions on passenger cars imported from the EU member countries. Import tariffs on new cars from other European countries are scheduled to be reduced to zero by early in the next decade, while all East Central European countries' customs duties on cars from non-EU countries have remained unchanged.

In the motor vehicle sector, the provision of the association agreements between

In this context, East Central European countries' integration into the EU may carry important implications for the location of car production. If car manufacturers outside Europe set up production facilities and procure more than 60 per cent local content in East Central Europe, they can enjoy the same trading status as that of East Central European states (free of customs duty and with other exemptions from new quantitative restrictions by the EU). In particular, for non-European car producers that manufacture relatively price-sensitive products (particularly cars in the small segment), FDI in East Central European countries may improve their competitiveness. Access to one of the East Central European countries implies access to almost the entire European market, covering a population of over 395 million.

This advantage can simply be applied to the case of Daewoo Motor in East Central European countries. By having plants in Poland and Romania, Daewoo Motor can have access to all of the European countries without trade barriers and high transportation costs, resulting in an increase in the price competitiveness of the company's local products, if the company uses more than 60 per cent of local auto parts and components. The company's export destinations of local plants in the region can be mapped out according to transportation costs. Most EFTA member countries and

Germany which is the major car market in the EU, as well as the CEFTA member countries, can be easily accessed from the company's Polish plants due to geographical proximity to those countries. From its Romanian plant, products can be exported to some of the CEFTA member countries or the former Yugoslavia, Albania and Greece.

In this section, by analysing macroeconomic stability and other factors affecting the development of a car industry, including economic growth, the level of productivity, the level of income, market demand and size, it is found that within the region the establishment of final assembly or manufacturing in the Czech Republic, Poland and Romania are feasible. In fact, these countries have already developed a car industry since the 1950s. Then, is this existing car industry in the countries really viable? In other words, does not the developed car industry in the countries need extra help, in terms of technology and managerial skills, or financial support to be viable?

Indigenous production systems and products in those countries were not competitive, compared with Western cars, due to the lower quality caused by obsolete production technology and the shortage of new product development. If the governments' protection and promotion are reduced by the agreement with the CEFTA and EU member countries, the local products will be forced to face much higher competition with foreign car manufacturers. This implies that without increasing competitiveness, the domestic car industry may not survive despite the fact that these countries have an economic environment to develop a car industry. However, local capital markets have not been developed enough to meet the capital requirements for large investment projects for innovating the car industry, and the countries have suffered from a shortage of hard currency.

As the governments decided to promote local car manufacturers rather than importing cars, the governments chose joint ventures with foreign partners through FDI

in order to innovate the existing car industry. However, the motor vehicle industry in the region is one of the problematic industries to attract foreign investors. The industry needs large capital resources for innovating outdated production technology and facilities. In addition, restructuring the motor vehicle industry by foreign companies may result in radical reduction of a substantial number of redundant employees, rather than increase in employment opportunities.

One of the most difficult problems, which the East Central European governments are facing in order to transform from a socialist to a capitalist system, is to secure employment for workers who did not have to be concerned about losing jobs in the past. Hence, the governments have particularly provided investment incentives to attract foreign investments to innovate the motor vehicle industry, while seeking a way for social stability that may be disrupted by abrupt mass job losses in the industry.

In the case of Daewoo Motor's investment in the car industry in Poland, when Daewoo Motor succeeded in its bid to take over the state-owned FSO car manufacturer the government provided the incentives, such as a 6-year tax holiday, a tax exemption on 50 per cent of the investment for 10 years, in order to support the joint venture company, but gained full employment guarantees of the existing workforce for three years and the existing collective wage agreement in addition to the agreement for an increase in the local content of cars and exports in return (*Financial Times*, October 27, 1995). The increase in the local content ratio in car manufacture will foster local auto part and component industry, as well as relevant service industries.

Similarly, the Romanian government provided generous tax incentives, such as a seven-year import-duty exemption and a five-year tax holiday, to the Daewoo Motor's joint venture company that planned to increase the local content of cars up to 60 per cent, which can boost auto part and component industry, and to expand the labour force

in the future in order to meet the government expectation (*Financial Times*, May 5, 1995).

These incentives from both governments can certainly contribute to the reduction of production costs. This implies that the company may reduce the annual minimum viable size of a plant under 30,000 units. It is useful to look at the first year of car production by Daewoo Motor's new joint venture companies in Poland and Romania in order to estimate the company's minimum viable size of a plant. In the case of the company's Polish plant, it planned to produce 20,000 units in the first year in 1996. Although there are other important variables affecting production costs, and it was not clear to what extent the investment incentives provided by the Polish government helped reduce the minimum viable size of a plant to under 20,000 units, the contribution of these incentives should not be excluded. In the case of the Romanian plant, the company planned to manufacture 50,000 units in the first year. Despite the fact that Daewoo Motor received investment incentives from the Romanian government, the minimum survival size of a plant was above 30,000 units. This implies that there are other variables more significant than the incentives per se (which reduced the production costs in the Romanian plant), such as industrial policies, structure of auto parts and components supply systems, and the level of total purchasing volume, affecting an increase in production costs in Romania. Without the government investment incentives. Daewoo Motor in Romania would have had a much higher survival size of a plant than 50,000 units, which may have made it difficult for the company to invest in car manufacturing in that country.

6.4 Implications for Policy

Over six years after the liberalisation, East Central European countries have achieved a resumption in economic growth. However, they are still struggling to make the transition to a successful market economy as there was little direct experience of the process of economic transformation. As discussed elsewhere in this research, the government can play a significant role to provide industries with a competitive climate by adopting particular industrial policies. Based on past experience of East Central European countries, some useful advice on the reforms can be drawn. In addition, general principles and related experience from the high-performing Asian economies can also be applied to the case of the East Central European countries.

Macroeconomic instability, such as a fluctuation of the level of prices, the exchange rate, and particularly high inflation, can exacerbate the economic environment, thereby causing market uncertainty. Lowering inflation to under 50 per cent and stabilising real interest rates can contribute to macroeconomic stability and growth. As observed in this chapter, gaining quick control over inflation helped the countries in the region begin to grow within a couple of years after liberalisation. In the case of the high-performing Asian economies, inflation was an average of approximately 9 per cent when they recorded high economic growth (World Bank, 1993, p. 13). In some way, achieving macroeconomic stability has proven to be an important factor affecting economic activities and growth. This stability can encourage firms' long-term planning and investment, resulting in the further development of the private sector. Policies should foster macroeconomic stability as one of the foundations for rapid economic expansion.

In order to succeed in economic development, it is very important to allocate valuable resources efficiently and increase productivity. In high-performing Asian economies, such as South Korea and Japan, credit has been used to promote and intervene with the industrial development. Particularly, the governments fostered the development of selective industries. In the case of the South Korean government, it promoted scale-sensitive industries, such as the shipbuilding, petrochemical, and automobile industries, but failed to achieve its goals and squandered financial resources in the 1970s.

On the other hand, the government used credit successfully as a tool to monitor firms' performance, using market-oriented criteria such as exports and profitability. As rewards, the government allowed high-performing firms access to credit and foreign exchange more easily. From the Asian economies' experience, such as that of South Korea and Japan, it is, therefore, very difficult to draw a line to what extent the government can intervene in the private sector.

To succeed, selective interventions must be disciplined by competition via either markets or contests. An increase in communication between business and government so-called deliberation councils, in which private sector groups are invited to help, shape, and implement the government policies relevant to their interests, will enhance the degree of successful economic development. In addition, a high-quality civil service that has the capacity to monitor performance and is insulated from political interference is vital to contest-based competition. The governments of East Central European countries should not only be aware of the danger of its intervention, but also realise that there is a positive way to promote private sector based on the lessons from the high-performing Asian economies.

Most high-performing Asian economies have opened up to foreign technology through a variety of mechanisms such as technology transfers in the form of license and capital goods imports and foreign training through FDI, and have succeeded in increasing the competitiveness and productivity of the industry by obtaining advanced technology from developed countries. For East Central European countries, FDI can be used as a way of overcoming deficiencies in local markets and accelerating the transformation of economies because FDI has positive so-called 'spill-overs', such as benefits of backward and forward linkages¹⁰ between MNEs and domestic firms, technology transfer, productivity or efficiency benefits, technical and management skills, quality improvement, and demonstration effects (Blomström and Kokko, 1997, p. 10).

First, local capital markets in the region are not well developed enough to meet the capital requirements for privatisation of large state-owned enterprises and new investment projects. In the case of the establishment of new power plants, for example, advanced machinery and equipment imports are essential to such an investment project. It is, however, difficult to purchase the necessary investment goods when they are not available in local markets due to chronic shortages of hard currency. If MNEs make FDI in any project in the region, they can access foreign sources of capital to facilitate the project without constraints by the under-development of local capital markets. That is to say, FDI can be used as a direct source of external capital.

Second, many local firms in the region are inefficient in productivity and produce lower standard goods, compared to those of developed countries, due to their use of obsolete equipment and techniques. This reduces local firms' competitiveness both in the domestic and in overseas markets, resulting in an increase in imports, and difficulties in

⁹ There are many empirical studies about the various costs and benefits of FDI (refer to Blomström and Kokko, 1997).

¹⁰ Backward linkages mean that the MNE's FDI in local firms that are back, one or more stages, in the production process is towards the sources of raw materials, in other words, the MNE affiliate's relationships with suppliers. Forward linkages stem from contacts with customers.

earning hard currency through exports. Although most of the countries in the region enjoyed high export growth in 1995 at an average estimated rate of 28 per cent (this rate has exceeded the growth of world trade for the third consecutive year), the current trade deficit was US \$ 9 billion (*Trade and Development Report*, 1996, p. 19). FDI is seen as a way to overcome this problem, as firms engaging in FDI (whether through the formation of a joint venture, or acquisition of existing local companies, or setting up new firms) are expected to innovate existing or new facilities with advanced equipment and production technology. Products manufactured by local firms assisted by MNEs can improve their competitiveness in foreign as well as in domestic markets.

Third, when local firms invest in obtaining new technology from companies in developed countries, they take the risk of adopting unknown technology which may not be appropriate to local market conditions or valuable to improve their competitiveness. Markets for advanced technology are typically imperfect (refer to Chapter 2), and the advanced technologies used by MNEs are not always available in the market. Although new technologies and product innovation are available in the market, local firms in developing countries have limited information about the costs and benefits of such technologies (Blomström and Kokko, 1997, p. 8). The entry of MNEs' affiliates as existing users of new technologies and production processes can reduce the uncertainty of new techniques when local firms adopt some of them.

Fourth, local firms in the region had been operated under a centralised economy. Without the assistance of foreign companies with advanced management know-how, it is difficult for them to transfer from the existing system to the capitalist management system within a short period of time. MNEs can introduce management techniques for operating in the market economy to local employees when existing firms are taken over and reorganised by them, or when joint ventures are established with local partners.

Even if MNEs set up new companies, local employees can still have an opportunity to learn new management practices, and then take their skills to other local companies which may employ them in the future. By the MNEs enhancing management know-how, the productivity of workforces can increase, and the workforce can be trained to have a more competitive mind-set in the market economic system.

Finally, local firms in the region lack knowledge about how to establish distribution channels and market their products in the domestic and global marketplaces. MNEs' subsidiaries in the region would provide a way to build domestic distribution networks, and also involve existing international networks. In addition, marketing and sales expertise can be obtained through the training programmes provided by MNEs. Such training would provide the skills necessary to increase export opportunities to the world market.

However, not all FDI can be said to contribute to the economic development of host countries. Depending on the characteristics of the host country's industry and policy environment, the benefits of FDI may be determined differently (Blomström and Kokko, 1997, p. 33). If the governments of East Central European countries intend to attract FDI in order to achieve the objectives of economic development and to maximise the benefits of spill-over effects from FDI, they should be cautious to evaluate FDI projects to see whether these projects are well focused on the tasks, and to avoid short-term, profit-seeking ventures that have little lasting advantages to the countries and waste valuable hard currency, meanwhile improving the overall business environment.

In terms of the labour market, policies should focus on job generation effectively by boosting the demand for workers. Subsequently, the level of employment will increase followed by market- and productivity-driven increases in wage levels due to the high income elasticity, in order words, a flexible response of wage rates to changes in demand for labour will help to sustain growth, at least this was true for the highperforming Asian economies. Rapid adjustment to the market changes actually contribute to the real wage growth as well as high productivity. In addition, smaller income gaps benefit social stability and enhance the environment for growth.

Export-oriented strategies have been by far the most successful combination of fundamentals and policy interventions. These policies in the high-performing Asian economies exposed much of the industrial sector to international prices than in most other developing economies. For East Central European countries export can be a significant source of rapid productivity growth, in addition to the fact that additional foreign exchange can be earned by increasing exports. Manufactured export growth also provides a powerful mechanism for technological upgrading in imperfect world technology markets, as firms that export have greater access to best-practice technology. Promotion of exports can coexist with protection of the domestic market or local infant firms. However, the time span of protection of domestic firms should not be too long so as to generate negative effects on increasing competitiveness in the industry and international trade relationships.

One of the important policies on which the governments of East Central European countries should focus is to achieve rapid accumulation of human and physical resources. These are traditionally the government's legitimate roles as with providing adequate infrastructure, health and education by increasing investment. Stressing investment in human capital was an important factor affecting the high-performing Asian economies' success.

In summary, the governments of East Central European countries should consider policies to achieve critical functions of economic growth, such as resource accumulation, allocation, and productivity growth. Overall, the success of the high-

performing Asian economies teaches us that a willingness to experiment and to adapt policies to changing circumstances is a key element in economic success. The governments in East Central Europe should not overlook pragmatic flexibility in the pursuit of their objectives.

6.5 Conclusion

After the communist system collapsed in 1989, the East Central European governments have made an effort to transform a centrally planned system to a market-oriented economy. The radical reformers seem to have performed very well, compared with the more gradual reformers, in terms of controlling high inflation and creating the resumption of economic growth. In order to see if the countries in the region have potential to achieve high growth, structural reforms was investigated as an important factor because industrial change is a prerequisite for a further increase in growth and productivity as well as competitiveness. In general, all the countries have started to grow and undergone structural shift from over-built industry (particularly military-related industries) to services. In particular, Poland showed significant shifts in the industries, compared with other countries in the region, marking the highest real GDP growth.

In order to examine whether the country in the region is viable to establish a car industry, various indicators, such as level of wages and productivity and demand for cars and market size by population, have been discussed. Overall it is observed that there is market potential for cars in the region, although the economic growth has fluctuated and the level of income in some countries in the region is too low to maintain purchasing power or increase demand for cars within a short period of time. Among East Central

European countries, the Polish market seems to be in a dynamic stage of product cycle with competitive wage levels, compared with those of South Korea, and the domestic market demand for cars crossed the minimum viable size of a plant, while the markets of the Czech Republic and Romania are rather static, showing lower growth rates despite the fact that the level of productivity has increased and the minimum feasible size of a plant was met by the market demand.

Until the markets of other East Central European countries can provide car manufacturers with economies of scale, accessibility to the CEFTA and the EU, and in particular the region's integration into the EU, may play a significant role in making the regional markets attractive. Even for the countries which can offer the minimum viable size of a plant, the regional integration into the CEFTA and the EU is an attractive merit to car producers.

This integration has significant implications, in particular to non-European car producers which do not operate production factories in Europe. These car makers may be more interested in being located in East Central Europe than in Western Europe (that is, the EU), due to the accessibility to the whole European market. This is because if car producers set up production facilities in the EU member countries, they cannot access the whole European market without being hampered by trade barriers until East Central European countries join the EU. That is to say, the countries in the region still protect their market through imposing duties on cars manufactured in the EU. Particularly, being located in Poland will give car producers more competitive advantages than other countries in the region because the market is in a dynamic stage of product cycle and market demand is enough to offer economies of scale, in addition to the cheaper wages and access to the CEFTA and the EU.

Daewoo Motor, which has production facilities in Poland and Romania, could have more competitive advantages not only in the European markets because of local governments' protection, but also in exporting passenger cars to the EU and the CEFTA countries from plants in Poland and Romania rather than in South Korea. In addition, the company is in a better position than other non-European car makers that do not obtain production facilities in Europe.

Chapter Seven

The Determinants of Daewoo Motor Company's Direct Investment in East Central Europe: Empirical Analysis

7.1 Introduction

The previous chapter (Chapter 6) in Part C discussed the viability of the car industry in East Central European countries by looking at the process of transition and economic development as well as long-term perspectives in the region.

This chapter aims to test the hypotheses formulated in Chapter 2, and to attempt a more profound examination of motivation of Daewoo Motor's direct investment in Poland and Romania. In order to achieve this, a detailed study of the Daewoo Motor Company was carried out mainly between January and May, 1996. This study consists of information gathered and in-depth interviews at the Group's headquarters, Daewoo Corporation, and Daewoo Motor in South Korea (between January and April, 1996), Daewoo Cars Ltd. in the United Kingdom¹ (January, 1996), Daewoo Corporation in Hungary² (May, 1996), Daewoo Corporation and Daewoo - FSO in Poland (May, 1996), Daewoo Corporation and Rodae Automobile S.A. in Romania (May, 1996), and

¹ As Daewoo Cars Ltd. in the United Kingdom has played a major role in Daewoo Motor's European operation, interviews with executives of Daewoo Cars Ltd. in the United Kingdom were carried out to obtain information of Daewoo Motor's European plans.

² In order to understand the role of the Daewoo Group's headquarters in the countries other than Poland and Romania in the region for Daewoo Motor's production operations in Poland and Romania, interviews at the branch of Daewoo Corporation in Hungary were conducted, but those in the Czech Republic and Bulgaria were not available. As of May, 1996, there is no presence of Daewoo Group in the Slovak Republic.

other industrial experts. Supplementary interviews in South Korea were conducted between January and March, 1998.

During that time, within the selected interviewee categories outlined in Chapter 2, 56 in-depth interviews were carried out, including those with senior management members (board members) and managers of the Group (within the Group, senior management members and managers in the Office of the Chairman, International Finance, Motor Vehicle Division, local branches in East Central Europe were interviewed). In Daewoo Motor, all relevant senior management members and Kia Motors (who are in charge of the export business and East Central Europe), and government officials in 3 countries (South Korea, Poland, and Romania), and industrial experts were also interviewed (see *Table 7.1*). The list of interviewees and interview guides used in this research are attached to Appendix A and B, respectively.

Table 7.1 The Surveyed Interviewees

Category	South Korea	U. K.	Hungary	Poland	Romania	Total
Daewoo (Corpora tion & Motor)	10 (9)	2	1 (1)	5 (2)	2 (1)	20 (13)
Hyundai Motor	3	/	1	/	1	3
Kia Motors	3 (6)	1	/	/	/	3 (6)
Governm ent Officials	3	/	/	2 b	2 c	7
Experts / Academic s	4 a	/	/	/	/	4
Total	39	2	2	7	6	56

Notes: Figures refer to the number of the senior management interviewed. Figures in the brackets refer to the number of managers interviewed. **a:** Two of the industrial experts interviewed are German and British. **b:** Polish government officials deployed to the embassy in South Korea. **c:** Romanian government officials deployed to the embassy in South Korea.

Source: Field survey.

This chapter is divided into two parts to present the findings of the field study. In the first part, section 7.2 is designed to provide a better understanding of the case study, Daewoo Motor. The section seeks to explain the development of Daewoo Motor and the significance of the company's separation from GM. In order to comprehend internal and external factors that affect the company's FDI, its performance in exports and domestic sales is examined. The background to, and reasoning behind, the establishment of the Daewoo Group's global program is also discussed.

In the second part, section 7.3 describes the field work conducted in South Korea, Hungary, the United Kingdom, Poland, and Romania. The content of interviews and findings from primary documents obtained from this survey are critically analysed and commented on.

7.2 The First Part: An Understanding of Daewoo Motor

7.2.1 History and Development

The Daewoo Group is, after Hyundai Motor, the second largest motor vehicle manufacturer in South Korea in terms of total production, followed by Kia Motors. The Group produces passenger cars, commercial vehicles, and speciality vehicles for both the domestic and foreign markets. Within the Group, there are two operating subsidiaries in motor vehicle manufacturing- Daewoo Motor Company, and Daewoo Shipbuilding and Heavy Industry (DSHI)³, an entity specialising in the production of mini-cars⁴ and the only manufacturer of mini-cars in South Korea, as of 1997⁵.

³ DSHI was established with technical assistance from Suzuki Motor of Japan, particularly for manufacture of mini-cars in South Korea.

⁴ Mini-car is a car industry term used to explain cars with the size of less than 1000 cc.

⁵ Hyundai Motor also introduced a mini-car at the end of 1997.

The Daewoo group became involved in the automobile industry (relatively late, compared with other competitors⁶) when it formed a 50 - 50 joint venture with GM by acquiring GM's existing partner, Saehan, at the government's request in 1976. This joint venture company was renamed Daewoo Motor Company, Ltd. in 1983. The Group further developed its relationship with GM to establish five joint ventures for manufacturing components.

In 1984, Daewoo and GM reached a joint manufacturing agreement that included exports of subcompact cars (based on the German Opel Kadett) to the United States through the GM dealership networks. Daewoo Motor's product, the Le Mans, was exported to the United States in 1987. However, this agreement with GM prohibited Daewoo Motor from exporting the cars under its own name to other overseas markets, such as European and developing countries. The company mainly operated as one of GM's subsidiaries for the domestic market and also as a cheaper production base for the North American market.

Daewoo and GM had serious disagreements in some areas, including investment, product development, marketing, export restrictions, and technology transfer. For example, Daewoo's aim of establishing a joint venture with GM was to improve production technology and to be a global auto part manufacturer, as well as to increase its car exports through GM's world-wide networks. However, the restrictions on car exports by GM were barriers to the achievement of Daewoo's export plans.

For GM, Daewoo Motor's production performance did not satisfy the company; it alleged that there had been a decrease in the quality of Daewoo's cars and this perturbed GM (Daewoo Motor's losses were US\$ 200 million in 1992) (EIU, 1996, p. 98).

⁶ Hyundai Motor Company was set up in 1967 and Kia Motors Company was established in 1973. Both companies produce passenger cars, commercial vehicles, and speciality vehicles.

Finally, Daewoo terminated the joint venture with GM in 1992 by acquiring GM's 50 per cent stake. Although Daewoo has pursued an independent operation since then, a relationship with GM has been maintained through continuous technical collaboration in auto parts and components.

The separation from GM signaled a number of significant changes in Daewoo Motor:

- By obtaining full management control, Daewoo Motor could pursue its own production and export plans for both domestic and foreign markets.
- Daewoo Motor had depended heavily on the production technology and vehicle
 designs of GM. After the break-up, the company, if it wished to export, needed to
 develop its own models and to improve production technology to compete with
 other domestic and foreign car manufacturers, not only in the domestic market, but
 also in the world markets.
- The company needed to set up an overseas distribution network for selling cars.
- In order to increase sales, a world-wide marketing plan for its products was essential.

Daewoo Motor focused more on the markets of developing countries where car demand was growing rapidly, and the Western European market, one of the three largest major car markets (North America, Western Europe and Japan), after the break-up with GM than on the North American market. Under the separation conditions set by GM, the company was allowed to set up independent distribution networks in developing countries in 1993, Western European countries in December 1994, and in North America in 1995. There was no competitive advantage in exporting products to the Japanese market (in fact, in 1994, South Korean car producers exported only 41 units to Japan).

7.2.2 Domestic Position

In the domestic market, Daewoo cars have generally been regarded as unremarkable compared with other major competitors, Hyundai Motor and Kia Motors (Hyundai Motor has led the domestic car market, accounting for an average of 50 per cent of total domestic sales between 1990 and 1996, and Kia Motors has been in the second position in the domestic market, except in 1994) (see *Table 7.2*). Since 1990, Daewoo Motor's market share has changed very little.

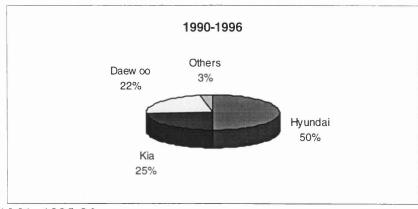
Table 7.2 Domestic Market Share of Car Manufacturers, 1990-96 (%)

Year	Hyundai	Kia	Daewoo	Others a
1990	53.1	22.4	20.9	3.6
1991	50.5	24.3	22.0	3.2
1992	49.4	25.7	22.2	2.7
1993	46.3	27.1	24.2	2.4
1994	49.6	22.3	24.9	3.2
1995	51.9	25.0	20.4	2.7
1996	49.6	25.9	22.8	1.7

Notes: Figures include sports-utility vehicles. a: Others include Ssangyong and Asia that produce sports-utility vehicles.

Source: KAMA, 1995 - 96.

Figure 7.1 Average Domestic Market Share of Car Manufacturers in South Korea, 1990 - 96



Source: KAMA, 1995-96.

With regard to Daewoo Motor's financial position, there have been major concerns about losses. Although its losses have continued to decrease due to the increase in domestic sales and in exports since the separation from GM, the company remained in the red until 1994 (see *Table 7.3*).

Between 1992 and 1994, Daewoo Motor's accumulated deficits reached almost W180 billion (South Korean currency). Since the separation from GM in 1992, the company tried to improve its product quality and management, but it was difficult to achieve a drastic improvement in product quality. Even though the company improved quality gradually, it was not an easy task to change customers' perception of Daewoo Motor's poor quality products, which had been established over the past years. However, Daewoo Motor reported a sharp decrease in losses, by approximately 89 per cent in 1994 and 227 per cent in 1995 (the company made a positive net profit of W11.6 billion in 1995). Hyundai Motor recorded positive net earnings during that period. Kia Motors also made profits until 1993, but since 1994 it recorded deficits and was finally declared bankrupt in 1997. Given the lesson learnt from Kia Motor, a rapid and continued growth in car sales (in order to increase Daewoo Motor's profits per car) is essential to offset huge cumulative debts.

Table 7.3 Earning (Profit) Trends of the Major Car Manufacturers, 1992-95 (W100 m)

	Hyundai	Kia	Daewoo
1992	416	150	-956
1993	582	187	-847
1994	1,368	-696	-91
1995	1,567	100	116
Accumulated	4,349	-259	-1,778
Profits			

Source: KAMA, 1995 - 96.

In the future, more obstacles may occur to decrease Daewoo Motor's domestic sales, i.e. the increasing competition caused by a new entrant, Samsung and other potential participants, although competition depends on price and quality, and it is too early to assume that the competitors will be better than Daewoo Motor. However, Daewoo Motor does not have the highly advanced production and product development technology which its competitors can obtain either through their own research and development, technology licenses, or joint ventures with major car manufacturers in developed countries. In terms of prices, Daewoo Motor's cars in the different classes are relatively competitive, compared with those of Hyundai Motor and Kia Motors. For example, prices of cars with a capacity of 1500 cc which are manufactured by these three car producers costs an average of W 7,312,000 (Daewoo Motor), W 8,466,000 (Hyundai Motor), and W 7,946,000 (Kia Motors) respectively in 1998 (Field survey).

The Samsung Group, the largest conglomerate in South Korea, entered the car market with government permission in 1994. Since then, Samsung Shipbuilding and Heavy Industries has been manufacturing trucks in collaboration with Nissan, the Japanese car producer, while the production facilities for passenger cars were completed in 1996. The company plans to launch its passenger cars and recreational vehicles⁷ in 1998.

There are possibilities that other companies could enter car production. South Korea's Hyosung Group, covering sectors from construction to petrochemicals, has also a unit building motorcycles with Suzuki. The company is known to have considered opportunities to move into full scale production of 4 wheeled vehicles. Other potential entrants include the Daewlim Group, which makes motorcycles under a technical cooperation agreement with Honda of Japan. The Kumho Group, a producer of tyres and

⁷ Recreational vehicles refer to sport-utility (4 wheel drive (4WD)) vehicles.

petrochemicals, and a recent entrant into airline passenger services, could be another candidate. The company is already the distributor of Fiat cars in South Korea.

However, the financial crisis of 1997 may reduce the possibility of Chaebol groups' new entry into car production because the crisis will force the down-sizing and increased specialisation of Chaebol groups, rather than the expansion of their organisations to inter-subsidise business units within the group. This, however, does not necessarily imply that the character of the Chaebol will be changed.

Another threat to Daewoo Motor's plan to increase domestic sales is the liberalisation of the domestic market by the government since 1988. There have been sizeable reductions in customs duties every year. Import duties on cars, which were 60 per cent in 1986, were lowered to 30 per cent in 1989. In 1995, the duties were further lowered to 8 per cent and an additional reduction should take place in the near future in response to the World Trade Organisation (WTO) and the Organisation for Economic Co-operation and Development (OECD) rules.

The sale of imported cars have continued to grow due to the reduction of import duties, although the current market share of imported cars is very small, accounting for less than 1 per cent of the market (3,903 units were sold in 1994). However, if the government continues to reduce import duties and non-tariff barriers, such as the special excise tax for foreign cars, as well as lift restrictions on marketing and foreign control of car dealerships, foreign car manufacturers may enlarge their domestic market shares.

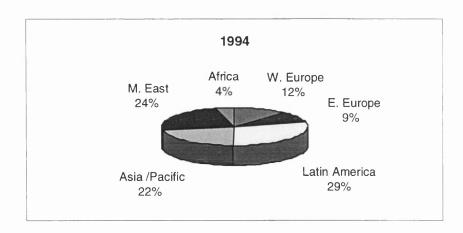
If Daewoo Motor wishes to concentrate on the domestic market for its growth, there are a number of obstacles to overcome. However, it seems that Daewoo Motor has found another way to secure its growth. In the past, Daewoo Motor had depended heavily on domestic sales, with an average of over 75 per cent of total production between 1990 and 1994. However, its dependence on domestic sales has decreased

sharply to 47.3 per cent in 1995 and to 46.1 per cent in 1996. The company now seems more focused on establishing a strong position in foreign markets rather than fostering its sales in the domestic market.

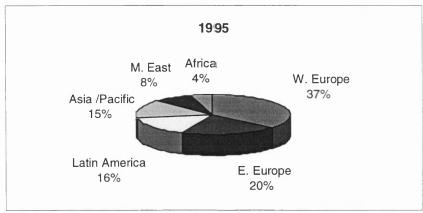
7.2.3 Exports

As discussed in Chapter 4, the volume of Daewoo Motor's exports per se has increased rapidly since 1992 and its export markets have been diversified. In particular, the company's exports to the Western European market increased sharply, from 12 per cent of its total exports in 1994 to 37 per cent in 1995. The share of its exports to the Eastern European market⁸ also increased from 9 per cent in 1994 to 20.2 per cent in 1995 (see *Figure 7.2*) That is to say, the European market accounted for more than half of total exports in 1995 (57.2 per cent), and became one of Daewoo Motor's most important export markets.

Figure 7.2 Exports by Region of Daewoo Motor, 1994-95



⁸ Eastern European countries include East Central European countries, the former Yugoslavia, and the former Soviet Union.



Note: Including knock down (KD) kits.

Sources: Daewoo Motor, Daewoo Securities, and KAMA, 1995-96.

As observed in Table 7.4, Daewoo Motor's exports have been concentrated in the small cars (1000 - 1500 cc), where the company has competitive advantages over its other car segments in the domestic market (sales of Daewoo Motor's small cars in the domestic market have taken an average over 66 per cent of total sales over the past decade) (KAMA, 1995, p. 46; Daewoo Motor). Exports of this segment of cars accounted for 74.5 per cent of its total exports in 1994 and 64.8 per cent in 1995. It increased dramatically by 267 per cent in 1993, compared with the previous year, and another leap was taken between 1994 and 1995 (during that period, exports of cars in the small segment increased by 217 per cent).

Table 7.4 Exports by Car Segment of Daewoo Motor, 1994-95

Year	Car Segments			
	mini-car segment (below 1000 cc))	small car segment (1000 - 1500 cc)	medium car segment (1500 - 2000 cc)	large car segment (over 2000 cc)
1990	-	4,370	29,577	-
1991	-	3,741	41,959	-
1992	3,203	29,491	24,404	-
1993	6,498	78,653	22,935	•
1994	6,629	78,849	20,3119	1
1995	16,024	171,127	73,717	3,153

Note: Excluding KD kits

Sources: Daewoo Motor and KAMA, 1995-95.

In terms of the destinations of its exported cars, the majority of Daewoo Motor's cars in the small segment have been exported to the European market (Western and Eastern Europe), and this volume has increased rapidly. Due to this export growth the company has overtaken Kia to rank as South Korea's second largest car exporter since 1994.

7.2.4 Globalisation Program

In Chapter 5, it was observed that the Daewoo Group commenced its globalisation program, Vision 2000, in 1993. Motor vehicle manufacturing is one of the three main business areas in which the Group has concentrated on setting up overseas operations through the program. Based on the Group's program, Daewoo Motor has formulated its goals:

- to become one of the world's top ten auto manufacturers by 2000
- to produce 2 million units annually, 1 million units in South Korea and 1 million units overseas by establishing foreign auto production facilities.
- to reach auto sales worth US\$ 20 billion by the year 2000.
- to reduce the technology gap by obtaining advanced technology and R and D investments

In order to achieve these goals, Daewoo Motor began to implement its program in 1993, and has since established 49 subsidiaries in motor vehicle manufacturing around the world (refer to *Table 5.3*).

The company is also trying to obtain advanced product development technology and to increase its capacity to develop new vehicles through expanding technical centres

in South Korea and in developed countries. The existing technical centre, Bupyong Technical Centre in South Korea, was expanded to serve as its R & D hub. It plans to increase the number of researchers from 2,000 in 1996 to 8,000 in 2000 (*News from Daewoo*, 1996).

The company has acquired a leading United Kingdom automotive design and engineering company, International Automotive Design (IAD) based at Worthing, and has been operating from there since January, 1994. This centre concentrates on developing new body chassis. Daewoo Motor has also set up a German Technical Centre in March 1995 to develop power-trains such as engines and transmissions. It is also preparing to set up a technical centre in the United States in 1997 (News from Daewoo, 1996).

The three major technical centres outside South Korea (Germany, the United Kingdom, and the United States), and the R & D centre in South Korea will co-operate together to establish a global network of design and engineering centres of excellence to accelerate the development of new product development.

New models developed by these centres were already introduced in South Korea in 1997. New products will be manufactured in South Korea, and then after three to four years of production for the domestic market, the company will decide which of these models should be produced in overseas plants.

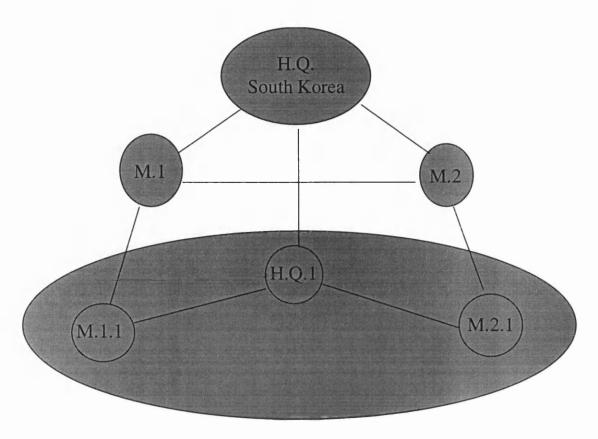
In conjunction with the Daewoo Group's globalisation program, Vision 2000, Daewoo Motor aims to employ a large number of personnel from these countries in its senior management. In order to transfer management skills, the Group particularly plans to assign senior managers, who have experience in many different business units within the Group, to Daewoo Motor's subsidiaries in developing and transitional countries (in fact, the current vice president of its Romanian joint venture, the Rodae company, has

previously worked in the international finance, construction, and motor vehicle divisions in the Group).

In summary, Daewoo Motor's globalisation program is largely divided into two parts. R & D centres including product development are focused in developed countries, particularly countries which have major car producers such as the UK, USA, and Germany, while production facilities concentrate in developing countries. However, it is found that there are close relationships among Daewoo Motor's subsidiaries as well as between Daewoo Motor's subsidiaries and group's other affiliates since the group adopted and implemented its globalisation program.

This global cooperation among the group affiliates has similar network systems to those of the group's domestic affiliates. It is recognisable that the organisational structure of the Daewoo Group in South Korea has been replicated globally. This feature is also applied to Daewoo Motor's subsidiaries and the group's subsidiaries of other business divisions in East Central European countries (see Figure 7.3). The headquarters of the Daewoo Group (Daewoo Corporation) in South Korea coordinate the Group's member companies. Under the planning and coordinating by the headquarters in South Korea, the branches of the headquarters have supported the Group's affiliates in East Central European countries. Although each affiliate of the Group in the region is not financially related, they have been closely operating because all mother companies of those affiliates in South Korea are all inter-shareholding. Therefore, all members of the Group should support each other to generate ultimate profits. Within this structure in East Central Europe, Daewoo Motor's subsidiaries can be supported by the group's other affiliates in terms of finance, information, and marketing and sales as are they in South Korea.

Figure 7.3 A Sample of Daewoo Group's Organisational Structure in a Host Country



Notes: H.Q.: the headquarters in South Korea. M.1: a member company of the Daewoo Group in South Korea. M.2: a member company of the Daewoo Group in South Korea. H.Q. 1: a branch of the headquarters in a host country. M.1.1: an M.1's affiliate in a host country. M.2.1: an M.2's affiliate in a host country. Source: the author.

7.3 The Second Part: Discussions and Findings of the Case Study

This field study was conducted by using an in-depth interview method rather than a pre-structured questionnaire in order to obtain a deeper understanding of the case study as outlined in Chapter 2. The factors and reasons analysed in the following sections, which were provided by all the surveyed interviewees, are all listed in the tables presented in this section. All the surveyed interviewees gave multiple replies, thus

figures shown in the tables are focused on the different factors or reasons which were considered by each interviewee (particularly the surveyed board members, because FDI decisions are made by them), rather than how important each factor or each reason was to the interviewees.

7.3.1 Overview of Daewoo Motor's Direct Investment (DI) in Poland and Romania

Before proceeding with the analysis of the field study on Daewoo Motor, it is useful to recapitulate general information on the case study.

Table 7.5 Daewoo Motor's Subsidiaries in Poland and Romania

Name of Company	DAEWOO - FSO MOTOR CORPORATION	RODAE AUTOMOBILE S.A.
Location	Poland	Romania
Form of Investment	Joint Venture	Joint Venture
Daewoo Motor's Planned Investment	US \$ 1.1 billion	US \$ 360 million
Daewoo Motor's Stake	70 %	51 %
Size of Employment	21,000 employees	4,490 employees
Start-Up Year	1996	1996
Production Capacity by 2000	220,000 units	200,000 units
Type of Production Model	T - 100	T - 100
Capacity of Model (cc)	1500 сс	1500 сс

Source: Daewoo

7.3.2 Factors Related to DI Decision-Making of Daewoo Motor

Daewoo's interviewees said that the Daewoo Group's corporate culture, which from the birth of the Group in the 1970s has been based on a relatively stronger export-oriented strategy than other groups, was one of the factors in Daewoo Motor's DI

consideration (see *Table 7.6*). Particularly, it is noticeable that the interviewed senior management members regarded this factor to be more significant than the surveyed managers did. However, the corporate culture is a feeble explanation for Daewoo Motor's consideration of DI. It is not possible to identify how the corporate culture affects the operation of business organisations. Needless to say, it is not certain whether the operational significance of a corporate culture can be defined and measured in terms of the company's DI decision-making. Daewoo's interviews argue that the company's global strategy of FDI was developed based on the so-called 'Daewoo Spirit', and this also applied to the company's DI decision-making in Poland and Romania. It is, however, hard to believe that Daewoo Motor's decision on DI depended on the corporate culture rather than a proper evaluation of FDI projects (50 per cent of all the interviewed board members and 38 per cent of all the interviewed managers pointed out the importance of the Group's corporate culture).

The potential for increased competition in the domestic market was revealed as a factor in Daewoo Motor's DI decision-making. Daewoo's interviewees identified it as an important factor as they were aware of the fact that Ssangyoung⁹ and Samsung are preparing to enter the passenger car market and that there are other potential competitors (as observed in Chapter 4). However, there is always potential for stiff competition in capitalist markets, although the major South Korean car manufacturers have enjoyed a domestic market protected by import restrictions, and have grown under the government control of new entries to car manufacturing. If Daewoo Motor's investment was affected by potential competition in the market, the company actually acknowledged the fact that it could not compete in the open market.

As observed in Table 7.6, the limits of the domestic market are considered as one of the factors in Daewoo Motor's DI decision-making. As observed in Chapter 4

⁹ Ssangyoung already introduced cars in the large segment (over 2000 cc) at the end of 1997.

taken a majority share of the domestic market, accounting for 75.5 per cent of total domestic sales in 1996 (about 913,043 units). Despite Kia's insolvency, its domestic sales accounted for 25.9 per cent in 1996 and it is difficult for Daewoo Motor to increase its domestic sales rapidly in a short period of time. In order to increase Daewoo Motor's sales, the company needs to penetrate foreign markets and it chose DI in car manufacturing in Poland and Romania rather than exporting.

and the previous section in Chapter 7, Hyundai Motor and Kia Motors have already

Daewoo Motor's plan for car production is to manufacture over 2 million cars. In order to maintain competitiveness, Daewoo Motor needs to introduce new products, which is costly (approximately US \$ 1 billion over 5 years), because the company cannot compete with other car manufacturers which keep developing new products unless it invests in product development. Daewoo Motor's board members (the executive vice president of Daewoo Motor, the executive managing director of the motor vehicle export division at Daewoo Corporation, and the executive managing director of international finance at Daewoo Corporation) argue that the targeted profits per car will be about US\$ 500, therefore the company needed to manufacture and sell more than 2 million units, which is four times the company's total production in 1996, to cover new product development costs. The reason that the company did not intend to have profits more than US\$ 500 per unit was to be price-competitive, as cars in the small segment are particularly price-sensitive. Therefore, the company plans to sell a larger volume of cars to cover total production costs (including product development) instead of increasing a profit margin per unit. However, as observed in the previous section, Daewoo Motor still has huge cumulative debts. The company's expansion will further increase its debts. In South Korea, low capacity use imposes a sizeable penalty at the individual plant level, boosting unit costs by 6 per cent at 85 per cent capacity use and by 17 per cent at 65 per cent use (Auty, 1996, p. 426). If the company uses the full capacity of the existing plants it will increase economies of scale, making more profits per car without expanding facilities through DI, as well as reducing the risk of bankruptcy (the capacity of Daewoo Motor's plants was 520,000 units in 1994, but this was not fully used and the total production was 340,707 units in that year). The South Korean market is small, but there is still room to grow, as observed in Chapter 4. If Daewoo Motor is competitive in quality and price, its sales in the domestic market can increase, thus it is difficult to consider the limits of the domestic market as a factor in the company's DI decision.

An interesting feature is that, in addition to the potential for increasing competition in the domestic market, Daewoo Motor's current weak position in the domestic market due to a lack of competitiveness and high product development costs seems to affect the company's DI decision-making more than the small domestic market per se, although all the interviewees of the Daewoo Group did not indicate it as a factor in the DI decision - making process.

Potential trade barriers were also considered to be a factor in the DI decision-making of Daewoo Motor. The interesting characteristic of this factor is that there has been no significant trade obstacles aimed toward South Korean cars. In the current international trade environment, world trade has been liberalised by reduced tariffs, while there is a growing tendency to establish free trade zones, such as the EU, the CEFTA, and the North American Free Trade Agreement (NAFTA). The company seems to be concerned that its car exports will be affected by rising regionalism rather than by direct trade barriers against South Korean products. In other words, in the case of Daewoo Motor, the fear of increasing regionalism may have precipitated its DI decision.

Table 7.6 What Are The Factors Affecting Daewoo Motor's DI Decision - Making?

	Daewoo Corporation and Daewoo Motor			
Factor	Board Members (20)	Managers (13)	Total (33)	
Corporate Culture	10	5	15 (45 %)	
Increasing Competition	3	1	4 (12 %)	
Limit of Domestic Market	10	6	16 (48 %)	
Potential Trade Barriers	10	6	16 (48 %)	
Transportation Cost Reduction	6	4	10 (30 %)	

Notice: All percentages in the table are rounded.

Source: Field survey.

The surveyed Daewoo employees indicated a reduction in transportation costs as a significant factor, accounting for 43 per cent of all the interviewees at Daewoo. Personnel at Daewoo Corporation (the executive director and the executive managing director) provided the future plan for Daewoo Motor's sales division in East Central Europe (depending only upon transportation costs) (see *Table 7.7*).

Table 7.7 Planned Sales Areas of Daewoo Motor's Polish and Romanian Plants

Plant	Planned Sales Area		
From Polish Plant	Poland, Sweden, Norway, Finland, Denmark, Germany,		
	Estonia, Latvia, Lithuania, the Czech Republic, the Slovak		
	Republic, Hungary		
From Romanian	Romania, the former Yugoslavia, Bulgaria, Albania, Greece		
Plant			

Source: Field survey.

According to Daewoo Motor, if the company exports a unit with the capacity of 1500 cc from South Korea to the region, the average transportation costs are approximately US \$ 1230. If cars are exported from its Romanian factory to the neighbouring countries, the average costs can be reduced by up to US \$ 800 per unit. The board members also noted that products could be delivered to the regional market in reasonable time if Daewoo Motor has manufacturing plants in the region.

Like the classic case of American car manufacturers' FDI in the 1920s and 1930s, Daewoo Motor has attempted to reduce transportation costs by setting up production facilities in nearby export markets to serve local and the neighbouring markets. Senior management members argue that, unlike the 1920s and 1930s, this is not because of an underdeveloped transportation system, but because of the need to maintain price competitiveness by using different methods of transport. Rail transport within the European continent is much cheaper than shipping from South Korea.

However, because of today's well-developed transport system, costs are a small proportion of total unit costs. These transport costs hardly influence FDI decisions based on production location. For example, other South Korean car manufacturers, some Japanese companies or Proton (Malaysian car producer) export cars to Europe as well as the reverse. Transportation costs can obviously be reduced once the manufacturing facilities are in local areas, but it is difficult to see this as a main factor in Daewoo Motor's DI.

In order to identify the views of other South Korean car manufacturers, interviews were conducted with South Korean competitors of Daewoo Motor, relevant industrial experts and government officials of the automobile division in the Ministry of Trade, Industry and Energy in South Korea.

As shown in *Table 7.8*, non - Daewoo interviewees indicated that the high labour costs due to the increase in the level of wages in South Korea was a factor in Daewoo Motor's DI decision-making, accounting for 39 per cent of all the interviewees. Auto parts and components are labour-intensive. In addition to operating costs, total production costs can be reduced if a plant is located in places where the labour force is cheaper. Unlike the results of the Daewoo interviews, Hyundai Motor and Kia Motors did not consider potential trade barriers or high transportation costs as an important factor.

In contrast to the response of Daewoo's interviewees, non-Daewoo interviewees saw the difficulties in raising investment funds for new production facilities in South Korea as a factor, due to the lack of capacity of the domestic financial institutions. However, financial markets in Poland and Romania are not well established yet, even compared with South Korea. Therefore, if this is a factor, Daewoo Motor would have invested in developed countries and not in Poland and Romania.

Interestingly, except government officials, the surveyed non-Daewoo's interviewees pointed out that the complicated legal procedure for the expansion of car manufacturing in South Korea was a factor in Daewoo Motor's DI decision-making. However, all major South Korean car manufacturers, including Daewoo Motor, announced plans for the expansion of car production in South Korea by 2000 and are constructing new production facilities. If the legal procedure was so difficult as to affect car manufacturers' FDI decision-making, they would not have built new production plants in South Korea.

A common feature of the responses of both Daewoo and non-Daewoo interviewees was the identification of stiff competition in the domestic market as a factor in Daewoo Motor's DI decision-making. However, increasing competition in the

domestic market does not necessarily mean Daewoo Motor will lose a large market share and thus needs to find foreign markets to sell its cars through FDI in car manufacturing. Stiff competition in the domestic market per se cannot be a factor because the company must face competition in market systems everywhere, unless the government (for example, in Poland and Romania) controls the level of competition. If this is one of the factors affecting Daewoo Motor's DI decision-making, the company will not survive in any market unless it finds production locations where local car markets are protected or monopolised.

Table 7.8 Non-Daewoo Interviewees: What Are the Factors in Daewoo Motor's DI Decision-Making?

Factor	Competitors (Hyundai Motor and Kia Motors) (12)	Industrial Experts / Academics (4)	Government Officials (7)	Total (23)
High Labour	2	3	4	9 (39 %)
Costs				
Difficulties in				
Raising	2	2	2	6 (26 %)
Investment				
Fund from				
Domestic				
Financial				
Institutes				
Red Tape in	6	3	0	9 (37 %)
Car				
manufacturing				
High	6	2	1	11 (48 %)
Competition				

Source: Field survey.

7.3.3 Advantages of DI in Car Manufacturing

For car producers, there are four ways to sell cars to foreign countries. The first way is to export from home or through other foreign subsidiaries. The second is to license car manufacturing technology, including the supply of auto parts and components to local car manufacturers (in the form of semi knock down (SKD) or completely knock down (CKD) kits) without capital involvement. The third method is to establish assembly plants with or without local partners through direct investment in foreign markets by using auto parts and components imported from home or their other foreign subsidiaries. The final means is to have manufacturing plants with or without local partners in foreign markets through direct investment.

This section investigates why Daewoo Motor prefers DI in car manufacturing to the other methods mentioned above, and what the advantages of Daewoo Motor's DI in car manufacturing are. The disadvantages of Daewoo Motor's DI in Poland and Romania are discussed separately in the following section 7.3.5.

As observed in Table 7.9, it was an advantage for Daewoo Motor that car manufacturing in the local markets could remove export barriers directly (import tariffs on cars) or indirectly (other taxes imposed on foreign-made cars). Cars manufactured in East Central Europe using local auto parts and components are recognised as products of the host countries when the cars are exported to EU member countries (refer to Chapter 6). However, the auto parts and components used to manufacture Daewoo Motor's cars in Poland and Romania are lower quality. It will take some time to increase the local content ratio up to 60 per cent with quality auto parts and components.

In conjunction with this, Daewoo's interviewees identified that reduction in production costs was an important advantage of DI in car manufacturing. In particular,

Daewoo's interviewees (the executive director of motor vehicles export in Eastern Europe and Commonwealth of Independent States (CIS) division at Daewoo Corporation, and the executive managing director of motor vehicle export division at Daewoo Corporation) argued that assembling cars in local markets by using imported SKD or CKD kits costs more than exporting finished cars due to other additional costs, such as packing and containers, unless importing countries impose high import duties on cars (more than 30 per cent). In Poland, 30 per cent import duties are imposed and the Romanian government bans car imports.

However, localising auto parts and components does not necessarily reduce production costs. Depending on industry policies, the number of suppliers and the supply network, quality of parts and components, and productivity, total production costs may not be reduced. For Daewoo Motor, importing SKD or CKD kits from South Korea may keep product prices more competitive than in the case of manufacturing auto parts and components in overseas plants due to higher productivity, as well as the high quality levels maintained in the plants in South Korea, compared with those in the existing host countries. If the markets of the host countries, however, are heavily protected (over 30 per cent), Daewoo Motor's local production becomes more profitable than exporting. This implies that it is very important for Daewoo Motor to close a deal with the governments of the host countries for protection until each is obliged to open their markets.

Daewoo's interviewees pointed out that having car production facilities in local markets could provide an opportunity for better marketing through prompt adjustment to changing local market conditions. In addition, maintaining management control through DI in car manufacturing was an advantage in selecting production models of cars when production platforms different to those of South Korea are used, and in the

practicing of management consistent with Daewoo Motor's global goals and plans. However, European customers prefer buying small cars, and the Polish and the Romanians have a similar preference when buying cars. Daewoo's interviewees said that small car classes will be produced in Poland and Romania. This means that the company does not have to use car production platforms which are different or separate from those in South Korea, unlike American car manufacturers which have production platforms in Europe which are different from those in the United States because of different customer preferences, different government policies, and smaller roads (refer to Chapter 3). In terms of marketing, it is not necessary to have a factory in a country to have excellent local marketing because the location of production is irrelevant to marketing, which is a different specialised field.

Access to cheaper international finance without the restraints of the capabilities and regulations of South Korean financial institutions was suggested as an advantage of DI in car manufacturing. This advantage can hardly be applied to the case of Daewoo Motor's DI in Poland and Romania. If the company's subsidiaries in Poland and Romania wish to access international finance, they have substantial difficulties because the credit of Poland and Romania rank much lower than that of South Korea. In addition, the government has encouraged firms' FDI by easing the regulations. It cannot be a true advantage that the company tries to raise funds from the weaker local financial institutions in these countries by using its joint venture companies.

Table 7.9 What Are the Advantages of Daewoo Motor's DI in Car Manufacturing in Poland and Romania?

	Daewoo Corporation and Daewoo Motor			
Advantage	Board Members (20)	Managers (13)	Total (33)	
Elimination of Direct / Indirect Export Obstacles	11	6	17 (52 %)	
Reduction in Production Costs	9	7	16 (48 %)	
Better Marketing / Management	9	6	15 (45 %)	
Access to International Financial Institutes	5	3	8 (24 %)	

Source: Field survey.

In general, non-Daewoo's interviewees identified similar advantages of DI in car manufacturing in Poland and Romania to those identified by Daewoo's interviewees. In the elimination of export obstacles, the surveyed interviewees of Hyundai Motor and Kia Motors considered it an advantage. Interestingly, among 5 of the 12 interviewees surveyed at Hyundai Motor and Kia Motors, who recognised it as an important advantage of DI in car manufacturing in Poland and Romania, 4 were Kia Motors. All three board members of Kia Motors interviewed (the senior managing director of overseas sales division, the chief representative of Kia Motors in London, and the director of overseas finance department), considered it one of the advantages of car manufacturing in Poland and Romania. However, they acknowledged that, due to the shortage of capital and difficulties of raising funds for new plants, Kia Motors' plans for FDI in car manufacturing were very limited. In contrast, the interviewees of Hyundai Motor surveyed did not regard this advantage as being significant. All the interviewed industrial experts as well as government officials identified this as an advantage.

As for the advantage of better marketing and management, the experts and government officials surveyed attached more importance to this advantage than car producers. Two of the 12 interviewees of Hyundai Motor and Kia Motors who considered it as an advantage were both Kia Motors' personnel.

Another advantage, which Daewoo's interviewees did not identify, was the synergy effect of co-operation between car manufacturers, and part and component suppliers in product technology development.

Table 7.10 Non-Daewoo Interviewees: What Are the Advantages of DI in Car Manufacturing in Poland and Romania?

Advantage	Competitors (Hyundai Motor and Kia Motors)	Industrial Experts / Academics (4)	Government Officials	Total (23)
	(12)	(4)		(23)
Elimination of				
Direct /	5	4	3	12 (52 %)
Indirect Export				
Obstacles				
Better	2	4	4	10 (43 %)
Marketing /				
Management				
Better				
Cooperation	6	3	2	11 (48 %)
with Local				
Suppliers (Auto				
Parts /				
Components)				

Source: Field survey.

7.3.4 Locational Factors

This section examines the reasons for Daewoo Motor's selection of Poland and Romania, rather than any of the other countries in Europe, for its direct investment in car manufacturing. As the first step, Table 7.11 provides factors considered by Daewoo Motor in choosing car production locations in terms of regional factors.

Table 7.11 clearly shows Daewoo Motor's intention to invest in places where there is no or weaker presence of major global car manufacturers. In terms of this condition, the company has selected developing countries and the former communist countries as its target locations for setting up production bases outside the three major car markets: Western Europe, Japan, and North America. Daewoo board members provided two reasons for this decision: (1) those target production sites are located in the places where other major competitors do not yet exist, thus Daewoo Motor can enjoy a distinctive first-mover advantage over its competitors, such as increased brand recognition and the establishment of well-organised marketing and sales networks; (2) having production facilities in developing and transitional countries are less costly than setting up new production facilities in South Korea or developed countries.

However, it is not necessary to set up production plants in Poland and Romania in order to increase brand recognition and to establish marketing and sales networks. If the company's products are competitive in price and quality, its brand image will improve automatically. Setting up networks is in a different category from building new production facilities. Even without local production facilities, these marketing and sales networks can be well established. It is not possible to consider this as the first mover advantage as Daewoo interviewees argued.

Table 7.11 Daewoo: Importance of Locational Factors in Car Manufacturing - Regional Level

	Daewoo Corporation and Daewoo Motor			
Factor	Board Members (20)	Managers (13)	Total (33)	
Absence of Major Car producers	17	10	27 (82 %)	
Developing / Transitional Countries	15	4	19 (58 %)	

Source: Field survey.

Within each focused region, Daewoo Motor endeavours to find a particular production location. Thus within Europe, East Central Europe falls into this category of Daewoo Motor. For the Daewoo's interviewees surveyed, economic growth and political stability were fundamental locational factors. However, except Poland and the former Czechoslovakia, economic growth and political stability are not prominent features of East Central Europe. If this is true, the region could not have been selected as the company's production locations. Among East Central European countries, Daewoo interviewees considered potential market size of a country as the most important locational factor. However, without taking income levels into account the market size of a country does not mean much because car demand can be much higher in a country with a high income level and small population than in one with a low income level and large population. For example, car demand in the Netherlands is higher than in Poland. If there is not a high enough car demand, how can the company maintain production plants in Poland and Romania? Accessibility to neighbouring countries was also considered one of the essential factors for Daewoo Motor to set up production facilities in East Central Europe. All the factors listed in Table 7.12 were recognised as significant locational factors to Daewoo Motor by all the Daewoo's interviewees surveyed.

Daewoo's interviewees said that the existing car industry (car manufacturing facilities) was considered an important factor in the selection production locations in the region. Because of this factor, in addition to reason (2) provided above, Daewoo Motor could save the initial time and expenses required to set up new production plants as well as auto parts and components supply systems, although production plants in targeted countries needed to be modernised. The executive vice president of Daewoo Motor, and the executive managing director of international finance at Daewoo Corporation, pointed out that this factor was regarded more significant after the experience gained from Daewoo Motor's investment in Uzbekistan (they argue that they had difficulties in operating new production facilities in Uzbekistan, where the car industry had not yet been developed).

However, if this is an important factor, why did other car manufacturers not do the same thing? For example, GM decided to set up production facilities in a green field site in Poland rather than take over existing facilities. Suzuki, a Japanese car manufacturer, set up production facilities in Hungary where the passenger car industry had never been developed. Rover also set up a plant in Bulgaria where no motor vehicle industry had been developed.

Table 7.12 Daewoo: Importance of Locational Factors in Car Manufacturing - National Level in East Central Europe

	Daewoo Corporation and Daewoo Motor			
Factor	Board Members (20)	Managers (13)	Total (33)	
Economic Growth	11	10	21 (64 %)	
Political Stability	13	7	20 (61 %)	
Potential Market Size	16	10	26 (79 %)	
Access to the Neighbouring Countries	18	7	25 (76 %)	
Presence of Car Manufacturing Industry	15	5	20 (61 %)	
Development of Auto part / component Industry	8	9	17 (52 %)	

Source: Field survey.

Non-Daewoo's interviewees were asked what factors are important in choosing production locations in order to judge the factors influencing the location of Daewoo's car production facilities in East Central Europe.

Among the non-Daewoo interviewees surveyed, particularly the industrial experts and government officials regarded government support as an important factor because the government's of East Central European countries provide Daewoo Motor with market protection through high import tariffs. For example, the Romanian government prohibits car imports and the Polish government imposes the highest import duties among East Central European countries, as already discussed in the above sections (refer to Chapter 7).

Only Hyundai Motor (2 of 3 board member interviewees), which owns a Turkish production plant in the European area, regarded accessibility to neighbouring countries as an important factor. Economic growth and political stability were also considered

important by non-Daewoo's interviewees, despite the fact that countries in the region have shown fluctuating economic growth and unstable political activities, compared with Western European countries. The non-Daewoo interviewees (except government officials) considered future actual purchasing power as an important factor in choosing production locations in East Central Europe. However, current actual purchasing power in East Central Europe is not strong enough to provide economies of scales.

Non-Daewoo interviewees identified as significant that Daewoo Motor could mobilise capital from international financial institutions by using the guarantee of local governments. Again, however, establishing joint ventures in East Central European countries do not provide any advantage in raising funds from international financial institutions over setting up joint ventures in developing countries, because it is in fact easier for Daewoo Motor to raise funds if it builds joint ventures with partners in developed countries due to a lower risk in investing in developed countries, compared with those in East Central Europe.

Non-Daewoo interviewees said that the existing auto parts and components industry is an important factor in choosing production locations. However, this industry is underdeveloped in East Central Europe and the quality of parts and components is low. In addition, nowadays, auto parts and components are globally procured by car manufacturers. Although the industries in the former Czechoslovakia, Poland and Romania are relatively well-established due to the development of the existing motor vehicle industry within the region, this factor itself cannot be significant in the selection of location in car manufacturing in East Central Europe.

Lower levels of competition are mentioned by non-Daewoo interviewees. Currently, the markets of the East Central European countries are protected. However, these countries have established the CEFTA, and furthermore all countries in the region

have applied for full memberships of the EU. This means that the countries in the region will open their markets in the near future. If this is an important factor in the selection of production locations, East Central European countries are proper locations for Daewoo Motor only until they join the EU.

Table 7.13 Non-Daewoo Interviewees: Importance of Locational Factors in Car Manufacturing

Advantage	Competitors (Hyundai Motor and Kia Motors) (12)	Industrial Experts / Academics (4)	Government Officials (7)	Total (23)
Government Support	4	3	6	13 (57 %)
Access to the Neighbouring Countries	2	4	4	10 (43 %)
Economic Growth	7	4	5	16 (70 %)
Political Stability	8	4	6	18 (78 %)
Potential Market Size	7	2	5	14 (61 %)
Level of Actual Purchasing Power	12	4	0	16 (70 %)
Development of Financial Institution	3	2	4	9 (39 %)
Development of Auto part / component Industry	7	4	2	13 (57 %)
Level of Competition	3	4	3	10 (43 %)

Source: Field survey.

Given all the factors identified by Daewoo's interviewees in Table 7.12, they did not provide an explanation for the location of car manufacturing in the region. They,

however, indirectly implied that the decision to set up production in these countries was made to sell in the host countries where competition was low, that is, car production locations were selected to penetrate local markets with governments' protection. In addition, Daewoo Motor wished to export cars to the neighbouring countries so the surveyed Daewoo's interviewees regarded access to neighbouring countries as an important advantage.

More than 78 per cent of the cars manufactured in the world are consumed in three major car markets. The major share of car consumption is unlikely to shift to developing countries within a short period of time. There are advantages to having production plants and selling cars in developed countries, such as (1) high product quality, productivity, and advance production technology can be obtained; (2) a high income level can generate high purchasing power; (3) high quality auto parts and components can easily be sourced; and (4) part / component suppliers' networks are well established.

As shown in Table 7. 14, the level of productivity in Western Europe was much higher than that of Poland and Romania. Ford Europe and the Japanese producers performed very well, in particular 50 units per employee were produced in Toyota. Daewoo Motor in South Korea produced 23.3 cars per employee, while the level of productivity in the first year of FSO was even below one due to redundant employees against total production. In other words, one employee could not produce a car per year. The Romanian plant performed well compared with the productivity of FSO, but the productivity was still lower than that of Daewoo Motor in South Korea and Western European car manufacturers. Although the productivity was based on the number of employees against total production, excluding other factors affecting the level of

productivity, it is clear that Western Europe provides higher productivity than Poland and Romania.

Table 7.14 Productivity of European Vehicle Manufacturers, 1994

Car Manufacturer	Total production (units)	No. of employees	Vehicles per employee (units)
Fiat Auto	2,100,000	119,618	17.6
Ford of Europe	1,666,500	82,000	20.3
GM Europe	11,676,000	86,230	19.4
PSA	1,989,000	139,800	14.2
Renault	1,849,523	102,358	18.1
VW group	3,042,000	243,638	12.5
Toyota	3,508,000	70,328	49.9
Mazda	1,029,000	30,164	34.1
	For Comparison	(Daewoo Motor)	
Daewoo Motor	340,707	14,653	23.3
(Korea) a			
FSO (Poland)	20, 000 b	21,000	0.95
Rodae (Romania)	50,000 b	4,490	11.1

Note: a: Total production of Daewoo Motor includes cars, commercial vehicles and special-utility vehicles. b: The volume of units was the plant's start-up production in 1996.

Source: Vehicle manufacturers; EIU, 1995.

It is, however, a disadvantage of markets in those countries that they are very competitive (the markets of developed countries are relatively open, compared with those of developing and transitional countries), labour costs are high, and consumers expect high quality products, compared with those of developing and transitional countries. The key factor of the existing major markets is that they grow slowly.

Table 7.15 shows that the level of wages in the car industry was much higher than that of East Central Europe (refer to Chapter 6). Within Western Europe, Germany presented the highest costs of a unit by labour costs, while those of Spain and Italy were competitive. If the costs of a unit by labour costs in the FSO plant were calculated based

on the start-up production in 1996, they were equivalent to US \$ 3832.5 (about ECU 4,599, the current exchange of ECU against US dollars is approximately 1 ECU to US \$1.2), which were higher than those of Germany.

However, if the Polish plant produces 22,000 units, which is 10 per cent of total capacity of 220,000 units planned by 2000 (refer to section 7.5), the costs can be decreased to US\$ 346, and if the plant uses 50 per cent of total capacity (220,000 units), the costs would be down-sized to US\$ 69. In Romania, the costs of a unit in the start-up year in Rodae were US\$ 13. If the Romanian plant uses 50 per cent of total capacity planned by 2000, the costs would be US\$ 7. The costs of a unit by the labour costs of Daewoo Motor in South Korea in 1994 were about US\$ 645 (the Korean currency calculated based on the 1994 rate against US\$). This implies that cheaper labour costs in East Central Europe (Poland and Romania) could contribute to the reduction of total production costs despite the fact that the level of productivity is low, although at least 10 per cent of total capacity of the plants in Poland and Romania has to be used (at 5 per cent use, the costs of the Polish plant increases to US\$ 697, which is not competitive).

Table 7.15 Typical Annual Salary Levels in European Vehicle Assembly Plants, 1994 (ECU)

Country	Salary	Costs of a unit by labour costs
Western Germany	28,000	3,163
Former East Germany	17,000	1,361
France	17,000	1,194
UK (Rover)	16,500	1,151
Spain (SEAT)	15,700	770
Southern Italy	10,000	570

Note: Costs of a unit by the labour costs = salary * total employees / total production. Source: Vehicle manufacturers; EIU, 1995.

those major car markets in developed countries (although its exports to Western Europe have increased rapidly). However, this requires long-term investment and possible losses or bankruptcy arising from the small economies of scale. Without the protection and promotion of the government's of host countries, this is very possible. In this regard, the company has been protected and promoted by governments in developing and transitional countries because the car industry is regarded as a key national strategic industry in those countries.

Daewoo Motor focuses more on future markets in developing countries than on

The most significant aspects of this study is explained by the following sets of tables. They seek to explain why Daewoo Motor selected Poland and Romania. All the Daewoo interviewees surveyed identified six reasons. Among these reasons, 3 were regarded as most important, particularly by Daewoo board members.

Firstly, within the East Central European countries, the potential growth of the Polish market was considered one of the main reasons for direct investment in car manufacturing; furthermore, the Polish market is the largest one in the region (as observed in Chapter 6).

Secondly, the geographical location of Poland motivated Daewoo Motor's investment in car production in the country. Poland is located in the centre of the European continent which is convenient for physical access to both Western and Eastern Europe without high transportation costs (as shown in Table 7.16, reduction in transportation costs was one of the reasons for Daewoo Motor's investment in Poland). However, as discussed above, this reason given by Daewoo's interviewees is trivial in making a DI decision.

Finally, Poland may obtain full EU membership in the future. This will provide Daewoo Motor with an opportunity to export its cars to the EU member countries

without trade barriers. However, this cannot always be advantageous to the company. If Poland enters the EU, it will be obliged to liberalise imports and Daewoo Motor will face much stiffer competition in the Polish market because other European producers will enter the market. If Daewoo Motor has, however, recovered its costs and made a profit during protection, the company could survive and compete in the free domestic market or shut down and go elsewhere, having made its profits.

In terms of exports to member countries of the EU, interestingly, car imports from South Korea are not restricted by trade regulations because South Korea still has a Generalised System of Preferences (GSP) status allowing for tariff exemption in the EU. However, all the Daewoo's interviewees surveyed considered potential restrictions on Daewoo Motor's car exports to the EU as the most import motivation for the company's DI in Poland which would secure export bases in the EU. Daewoo's interviewees predict that the EU is considering abolishing the GSP status (the United States had already abolished this status in 1988).

Table 7.16 Why Did Daewoo Motor Invest in Car Manufacturing in Poland?

	Daewoo Corporation and Daewoo Motor			
Reason a	Board Members (20)	Managers (13)	Total (33)	
Relatively Stable Political Situation	15	6	21 (64 %)	
Presence of Car Industry	16	7	23 (70 %)	
Potential Domestic Market Growth	19	11	30 (91 %)	
Geographically Easy Access to the European Countries	20	10	30 (91 %)	
Potential Obtaining of Full EU membership	20	13	33 (100 %)	
Reduction in Transportation Costs b	15	5	20 (61 %)	

Notes: a: Interviewees gave these reasons, compared with other countries in the region. b: Interviewees gave this reason, compared with South Korea.

Source: Field survey.

The reasons for Daewoo Motor's investment in Romania provided by all Daewoo's interviewees were basically similar to those provided for investment in Poland: (1) potential domestic market growth; (2) presence of an existing car industry; (3) potential obtainment of full EU membership; and (4) reduction in transportation costs. However, as discussed in the case of Poland, the reasons given by the interviewees were too weak to be the real motives. The interviewees said that within the region, the market size of Romania is the second largest in terms of population and it is a growing economy, although the market needs some time to grow.

Some of the reasons given for Daewoo Motor's investment in Romania were different compared with Poland. All Daewoo's board members surveyed regarded government support, in terms of investment incentives and favourable regulations (import control), as most important. Daewoo board members (the executive vice president of Daewoo Motor, the vice president of RODAE AUTOMOBILE S.A., and the executive managing director of motor vehicle export division at Daewoo Corporation) explained that it would be difficult for Daewoo to make an investment in Romania without the incentives awarded by the Romanian government, as Daewoo Motor could not maintain its Romanian subsidiary without government protection.

Physical access to the CIS countries was also considered a significant motive for investment in Romania. However, Daewoo Motor had already set up production facilities in Uzbekistan (this investment was made earlier than that in Romania) and planned to establish facilities in the Ukraine, from where the company can access the CIS countries more easily. Geographical accessibility, as one of the company's motivations for production in Romania, does not seem a reasonable explanation.

Table 7.17 Why Did Daewoo Motor Invest in Car Manufacturing in Romania?

	Daewoo Corporation and Daewoo Motor			
Reason a	Board Members (20)	Managers (13)	Total (33)	
Potential Domestic Market Growth	15	4	19 (58 %)	
Government Support (incentives)	20	12	32 (97 %)	
Presence of Car Industry	16	6	22 (67 %)	
Fastest Economic Growth in the Region	10	3	13 (39 %)	
Access to the CIS countries	20	11	31 (94 %)	
Potential Obtaining of Full EU membership	19	10	29 (88 %)	
Reduction in Transportation Costs b	11	9	20 (61 %)	

Notes: a: Interviewees gave these reasons, compared with other countries in the region.

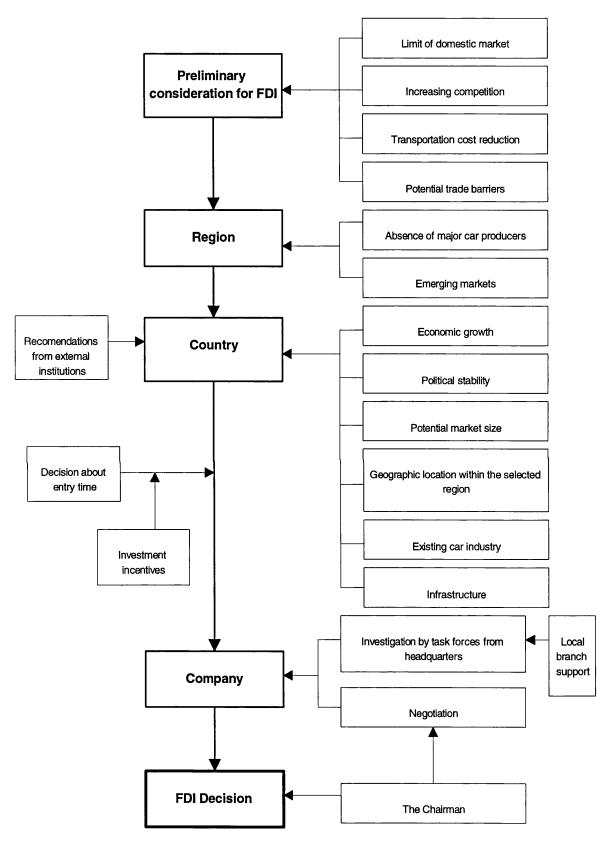
b: Interviewees gave this reason, compared with South Korea.

Source: Field survey.

Having provided findings which relate to Daewoo Motor's investment in car manufacturing in Poland and Romania, Figure 7.4 now provides a concept of how Daewoo Motor made decisions on investments in Poland and Romania. All of 33 Daewoo's interviewees surveyed revealed that the chairman of the Group made a final decision on foreign car manufacturing, including in the cases of Poland and Romania, although some negative analyses were provided by Daewoo employees or external research institutions. According to the interview, there was a remarkable lack of serious appraisals of investment in car manufacturing in Poland and Romania. It seems that government investment incentives were rather more key motives than the reasons given by the interviewees. Actually, the former president of FSO (now Daewoo-FSO, Daewoo Motor's Polish subsidiary) in Poland said that Daewoo Motor (in fact, the chairman of

the group) accepted most of his conditions he required, particularly those relating to the existing employees in the plants Daewoo Motor took over, and the development of auto parts and components. Those conditions had been major obstacles in attracting other major car manufacturers such as GM (GM and the former FSO had negotiated for years about establishing a joint venture), and even Hyundai, a South Korean car producer. Although he said that the government did not provide investment incentives other than those published (refer to Chapter 6), there may have been a government bribe to induce the company's decision to produce cars in Poland, as well as in Romania. However, if the government changes its mind, the company could face severe losses.

Figure 7.4 Daewoo Motor's FDI Decision-Making Process.



Source: Field survey.

7.3.5 Factors Related to Investment Risks

The above sections sought an explanation of the motives for Daewoo Motor's investment in Poland and Romania. It is, however, said that there are many risks or disadvantages in investing in car manufacturing in these two countries. If the risks are high, how did Daewoo Motor evaluate those risks, and reach final decisions? Is Daewoo Motor different from other car manufacturers?

Although the reasons for Daewoo Motor's investment have been identified by Daewoo's interviewees, non-Daewoo interviewees were asked about the risks of investing in those countries in order to cross-check the validity of those reasons provided by Daewoo's interviewees. Then, Daewoo's interviewees were questioned about whether they considered all the investment risks listed in Table 7.18 as the same, and asked to explain how they coped with these risks.

Table 7.18 Non-Daewoo Interviewees: Risks of Investment in Car Manufacturing in Poland and Romania

Risk	Competitors (Hyundai Motor and Kia Motors) (12)	Industrial Experts / Academics (4)	Government Officials (7)	Total (23)
(1) Unstable				
Marketing /	10	4	4	18 (78 %)
Distribution				
Channel				
(2) Shortage of				
Auto Parts /	11	4	6	21 (91 %)
Components				
Suppliers				
(3) Poor quality of	12	4	7	23 (100 %)
Auto Parts /				
Components				
(4) Lack of	10	4	5	19 (83 %)
Purchasing Power				
(5) Inconsistent	9	3	3	15 (65 %)
Government				
Support				
(6) Shortage of	11	4	5	20 (87 %)
Hard Currency				

Source: Field survey.

considered (1) as one of the risks because it is relatively costly to set up efficient marketing and distribution networks in the former communist countries, where the concept of marketing had been absent for a long time. However, most of Daewoo's interviewees (18 of 20 board members and 10 of 13 managers) did not regard (1) as a risk, although some of the Daewoo interviewees surveyed (2 of 20 board members and 3 of 13 managers) considered it a difficulty that has to be overcome. Local employees would learn about the concept of marketing through working with deployed Daewoo employees and through training programs. Daewoo Motor plans to secure long-term investment in organising distribution networks (although the interviewees did not reveal the amount of investment), and Daewoo Group's general trading and sales division also plans to help subsidiaries in car sales and distribution. Interviewees of Daewoo Corporation's subsidiaries in Poland and Romania (4 board members) explained that they have been working closely with Daewoo Motor's subsidiaries in these countries to improve sales and marketing, as well as distribution networks (the subsidiaries of Daewoo Corporation in Poland, Hungary and Romania were using their employees as a car sales force in Daewoo Motor subsidiaries, for example the director of a Hungarian Daewoo Corporation subsidiary said that he negotiated with taxi companies to sell cars). (2) and (3) were considered as the most important negative factors in investing

As observed in Table 7.18, the majority of non-Daewoo's interviewees

in Poland and Romania by all the non-Daewoo interviewees surveyed. The shortage of parts and component suppliers could increase production costs, resulting in a decline in price competitiveness. Maintaining competitive prices is a more important and sensitive issue in car sales in developing and transitional countries, compared with in developed countries, only if the market is open to imports. In addition, the supply of low quality

parts and components could cause significant damage to car manufacturers' plans for export to developed countries where strong competition exists.

Non-Daewoo interviewees considered (2) and (3) risks in setting up car manufacturing plants in Poland and Romania because it is imperative to foster close cooperation between car manufacturers and suppliers in the development of high quality auto parts and components. It takes a great deal of time, effort and financial resources, and they doubted whether Daewoo Motor could raise enough funds for this. With regard to (2) and (3) risks, Daewoo's interviewees (20 of 20 board members and 11 of 13 managers) explained that they had prepared plans to overcome these difficulties. Two managers acknowledged that (2) and (3) are risky, but not enough so to prevent Daewoo Motor's investment in Poland and Romania.

In order to develop local auto parts and components to supply car manufacturing facilities, the interviewees said that Daewoo Motor encouraged its auto parts suppliers in South Korea to invest in these countries. Daewoo's interviewees (the executive vice president of Daewoo Motor, the executive director of motor vehicle export in Eastern Europe and CIS division at Daewoo Corporation, and the executive managing director of international finance at Daewoo Corporation) argue that production costs can be reduced if the production of larger auto components, such as glass, seats, and bumpers, is relocated at the first stage. When Daewoo Motor invested in Uzbekistan, its auto parts suppliers in South Korea also set up plants there. Based on the experience of Uzbekistan, the company has also supported its suppliers in South Korea in establishing facilities near its manufacturing plants in Romania. Daewoo Motor's thirteen auto components suppliers plan to form joint ventures in Romania, and the company is providing technical and financial support for them. Daewoo Motor plans to continue to

assist its auto parts and components suppliers from South Korea to set up parts plants in Poland.

To improve productivity and the quality of products in the Polish and Romanian plants to the level of plants in South Korea, both Daewoo Motor and its subsidiaries have prepared training programs in South Korea for technicians, engineers, and workers in the production lines from these countries. As of 1996, over 1,100 workers (management and engineers: 200; technicians: 900) in Romanian plants were sent to South Korea for training. Up to 1999, Daewoo Motor plans to send a total of 2,300 local employees (management / engineers: 300; technicians: 2000) for training. The executive director of planning and co-ordination at Daewoo-FSO Motor Co. explained that Daewoo-FSO in Poland plans to send Polish employees (about 200) to Daewoo Motor in South Korea, not only to learn how to manufacture cars, but also too imbibe its corporate culture and management style, as well as South Korean culture (he believed that these cultural programs would help reduce management conflicts between local employees and South Korean management). By allowing employees in Poland and Romania to participate in training, Daewoo Motor believes it can improve productivity and quality. Due to the fact that the field work research was conducted in the same year when the company's joint ventures started, it was not possible to evaluate the further impacts of DI by Daewoo Motor in Poland and Romania excluding some parts of backward and forward linkages.

Non-Daewoo's interviewees considered (4) as a negative feature of investing in Poland and Romania. Although these two countries have larger populations and the economies continue to grow, purchasing power is still low. Daewoo's interviewees (17 of 20 board members and 5 of 13 managers) acknowledged that it is difficult to predict the economic situation in these countries. They argue, however, that in the long-term,

manufacturing in Poland and Romania (refer to Table 7.14 and 7.15) are more significant than (4) to the company. They explained that they would not expect profits over a short term period. In addition, the fleet sales of cars to the government and public institutions of these countries, and the increase in export to the neighbouring countries, could contribute to overcoming the shortage of domestic market demand.

these countries' economies will take off, and other reasons for investing in car

However, some of the Daewoo's interviewees surveyed, particularly managers (3 of 20 board members and 8 of 13 managers) considered (4) a high investment risk for the similar reasons as those provided by non-Daewoo interviewees. If current car demand and purchasing power in Poland and Romania are considered, Daewoo Motor's subsidiaries may expect some losses, rather than profits. As of 1994, car demand (in terms of new car sales) in Poland and Romania was 241, 000 units and 45,000 units respectively. Daewoo Motor plan to have a capacity of 220,000 units in the Polish plant, which is almost equivalent to the total domestic demand (Fiat, which has a joint venture in Poland, has a majority share [more than 50 per cent] of the domestic market; GM has also entered the domestic market), and a capacity of 200,000 units in the Romanian plant, which is more than four times current domestic demand (Dacia, the largest domestic passenger car company, has a major share of the domestic market, although Daewoo Motor's joint venture company, Rodae's, market share has increased). Without a substantial increase in purchasing power and fast economic growth in Poland and Romania, it may be difficult for Daewoo Motor to increase sales of cars to cover the costs related to car production for some time.

Daewoo's interviewees (20 of 20 board members and 13 of 13 managers) did not see (5) as an investment risk. The governments of Poland and Romania are the partners of Daewoo Motor's joint ventures in the Polish and Romanian factories. They

argue that Daewoo Motor has maintained a good relationship with those governments, and as partners these governments have been favourable to Daewoo Motor's subsidiaries in the countries in terms of incentives and taxes. This statement clearly showed that Daewoo Motor trusted 'cronyism'.¹⁰

It is often found that the industrial policies of developing and transitional countries are not consistent in supporting the development of the domestic car industry and markets for cars, for example by frequently increasing taxes on cars, auto parts or petrol, which discourage car consumption. In the case of Daewoo Motor, the inconsistent support from the governments of Poland and Romania does not seem to be an obstacle. Rather, the company depends heavily on government subsidies and protection. This may reduce Daewoo Motor's competitiveness because the company is operating in distorted markets. The markets of Poland and Romania are in the process of opening up, particularly to cars from the EU member countries.

As seen in Table 7.18, Daewoo Motor's competitors and industrial experts considered a shortage of hard currency (6) as an important negative factor since it affects the repatriation of profits. These countries have suffered from a shortage of foreign currencies, causing difficulties in paying for imported products or technologies.

Daewoo's interviewees (20 of 20 board members and 10 of 13 managers) said that they did not regarded (6) as a risk, mentioning that they have some positive experiences of dealing with this problem. Some managers interviewed (3 of 13 managers) said that they considered (6) as a difficulty, but not a barrier.

The board members interviewed (the executive vice president of Daewoo Motor, the executive managing director of international finance at Daewoo Corporation, and the vice president of Rodae Automobile S. A.) provided some examples: the Group's

¹⁰ Daewoo Motor developed its business based on a close relationship with the host governments, which awarded favourable investment incentives, regardless of the company's qualifications. In this case, cronyism is the proper term to explain this phenomenon.

construction company received crude oil instead of capital payments for its construction work in Libya, and the general trading division in the Daewoo Corporation then traded the oil and paid the Daewoo construction company; in Sudan, Daewoo Corporation traded cotton in the same way; in Uzbekistan, cotton, silk, and gold have been traded by the Group to obtain payment from the Daewoo Motor's joint venture company to Daewoo Motor.

Naturally, all Daewoo's interviewees explained that Daewoo Motor has also been supported by the Group (particularly, the Group's headquarters, Daewoo Corporation which specialises in general trading and international finance) through payments for auto components and equipment, and fees for technical assistance to its joint venture companies in Poland and Romania. In Romania, the Group imported the necessary ores from the Ukraine for the Romanian steel companies to produce steel, and then assisted in selling steel to foreign shipbuilding and car companies to generate enough foreign currencies in the country to pay Daewoo Motor. The Group plans to support Poland similarly if the need should arise.

As observed in Chapter 5, the Group has a peculiar organisational structure. Due to its present structure, Daewoo Motor has come some way to overcome this (6) obstacle. As it is a group with diverse specialisation facilities, it can barter trade. However, due to the 1997 financial crisis, Chaebol groups are being forced to down-size and specialise their organisation. Barter trade may only be a solution for a short period of time.

All interviewees gave several reasons rather than a single reason, but none of them were able to suggest clear explanations. The interviewees said that Daewoo Motor intended to globalise its operations through direct investment because the company regarded FDI in car manufacturing as a more advantageous strategy than the expansion of its assembly plants through technology licensing agreements.

According to Daewoo interviewees, East Central European countries were selected as production sites for the company within the context of Daewoo Motor's globalisation plan. In addition to access to those local markets, Poland and Romania were chosen for Daewoo Motor's production locations to gain access to the European and CIS markets. The interviewees said that the advantages of investing in Poland and Romania, such as the existing passenger car industry, market size, and the countries' geographical location in Europe, also contributed to the company's DI there.

However, there was a lack of serious appraisal because the interviewees failed to provide any hard evidence, such as figures, with which to evaluate Daewoo Motor's investment in Poland and Romania, while there might be hard data on the company's investment project, including total costs and profits, and benefits from government incentives, but the interviewees perhaps did not wish to provide it and instead gave their opinions on the company's DI decision.

At the country level, Poland was in the dynamic youthful stage of product cycle with high economic growth, while the Romania market was more static than that of Poland. The current demand in Poland and Romania in 1994 crossed the annual minimum viable size of a plant at the level of a firm. However, at the firm level, there were many obstacles to invest in car manufacturing in these countries because the plants

of join venture companies in these countries had low levels of productivity and needed huge capital investments in innovation projects for an old plant, in addition to fluctuating market demand due to the negative effects from the regional transition (particularly in Romania). The labour market was not flexible according to the changing market conditions (the governments in these countries intervened in the labour market by their industrial policies and incentives, resulting in losing competitiveness and productivity) because the labour market was not yet reformed to a market- and productive-oriented system. Without rationalisation as the governments requested, as well as an increase in productivity, a cheaper labour force in these countries cannot contribute to the reduction of total production costs.

Accessing the West European markets through Poland and Romania could be a motivation if the EU imposed high tariffs on South Korean cars, or trade restrictions such as a quota import system. However, at present Daewoo Motor, like other South Korean car manufacturers, do not face trade barriers in exporting their cars to EU member countries. Poland and Romania have not joined the EU yet, although they could obtain full membership in the future (if the company really sought access to the EU through a country in East Central Europe, the Czech Republic or Hungary might have been better locations for Daewoo Motor based on the economic and political situation, and because both countries have a better chance of joining the EU than does Romania).

In the determination of Daewoo Motor's investment in Poland and Romania, the incentives and protection offered by the host governments (Poland and Romania) were rather critical. It seems that those incentives were not big enough to attract a major international car player, but perhaps the deal was big enough for Daewoo Motor to make a net profit on the total investment before these countries' entry into the EU (if Poland and Romania enter the EU, the company cannot be protected by the

governments and will be forced to compete with major car manufacturers in open domestic markets). For Daewoo Motor, Poland's and Romania's entry to the EU was not a motive, but a threat. The government incentives and import controls were an important determinant in the company's decision to establish its subsidiaries in Poland and Romania.

Chapter Eight

Conclusion

8.1 Implications of the Research Findings

Different factors have affected FDI in car manufacturing at different times over the past century. In the first, second and third generation of major car manufacturers, those in developed countries (Western Europe, the United States, and Japan) implemented FDI in car manufacturing. The major reasons for this FDI were (1) reducing transportation costs; (2) penetrating local markets; and (3) avoiding trade barriers, such as high tariffs.

As emerging car producers, the South Korean car manufacturers have been leading the FDI in car manufacturing in the fourth generation. In particular, among South Korean car manufacturers, Daewoo Motor has implemented the greatest amount of FDI in car manufacturing in transitional countries, and the company's major FDI went to East Central European countries (Poland and Romania).

In this research, three hypotheses were formed to find out the motivations for Daewoo Motor's FDI in Poland and Romania through testing relevant theories. Hypothesis (1) was 'Daewoo Motor possesses firm-specific advantages strengthened by cheaper labour and being a subsidiary of the Daewoo Group so that the company could conduct FDI in East Central Europe'. Lall (1983) argues that the firm must possess firm-specific advantages which lead it to conduct FDI in foreign countries, and

developing country MNEs can obtain those advantages by satisfying some conditions: (1) localising technologies; (2) manufacturing a specific product to a specific sector of the market with localised technologies; (3) being efficient in terms of prices, quality, and market demand conditions; (4) having experiences of serving a diversity of domestic users; and (5) being supported by favourable government policies.

Daewoo Motor has grown and expanded within the Daewoo Group. The company adopted GM products and production technology and produced the German Opel Kadett until its separation from GM in 1992. Based on the experience of producing cars, the company has been investing in R & D to develop its own car models. The company has been introducing indigenous models to the domestic and foreign markets since 1992. This indicates that the company was able to localise technologies.

Daewoo Motor is particularly specialised in cars within the small segment category, and its products have been price competitive compared with other South Korean and major foreign car producers. After 1994 the company's market share has increased for it to become the second largest car manufacturer in South Korea due to the increase in domestic and foreign market demand for its cars, implying that prices and quality of the company's product have been competitive. The company's export markets have been diversified (refer to Chapter 4 and 7). This gave the company experience to serve large markets with different preferences.

The South Korean government has protected and promoted the car industry since the 1970s. The growth of Daewoo Motor, like the other two major passenger car producers (Hyundai Motor and Kia Motors) benefited from the industrial policies, although these industrial policies was implemented too early to develop a successful scale-sensitive industry like the car industry. Entry to the passenger car industry in South

Korea was restricted by the government, and the domestic market was highly protected by import controls as well as non-tariff barriers.

Given all the factors identified throughout this research, Daewoo Motor obtained firm-specific advantages and these advantages enabled the company to implement FDI. As a developing country MNE, the company enjoyed a cheaper labour force in South Korea, although the level of wages has increased in the 1990s. Due to the 1997 financial crisis, resulting in the freezing or decreasing of wages and the increase in unemployment, the company could recover its price competitiveness. This implies that the South Korean labour market is still flexible to market conditions, although there has been government intervention via a rationalisation programme for the firms, particularly for the Chaebol groups.

In addition to a cheaper labour force, Daewoo Motor's firm-specific advantages were strengthened by being an affiliate of a large conglomerate group. In Chapter 5, it was observed that the company was supported by the parent firm, Daewoo Corporation, and the group's other business units. The company may have survived because of intersubsidisation within the group despite its huge losses in the past.

One of the interesting features observed in this research is that Daewoo Motor's joint venture companies in Poland and Romania have also benefited from the Daewoo Group's organisational structure. For example, establishing marketing and distribution networks, and the sales of cars, were supported by the Group and the Group's other subsidiaries in those countries. This structure particularly gives them an advantage in the barter trade for repatriating payments in hard currencies, but this may only be for a short time. Currently the branches of Daewoo Corporation, the headquarters, have been established in all East Central European countries to assist the planning and coordination of its subsidiaries' operations. (see *Figure 8.1*).

Figure 8.1 Daewoo Subsidiaries in East Central Europe



Source: Field survey.

However, it may be too early to say that the organisational structure of the Chaebol (in other words, the organisational structure of the Daewoo Group) is desirable. Firstly, the markets of Poland, Romania and other East Central European countries are not open enough to test the Daewoo Group's organisational structure. In general, the governments of the countries in the region still intervene in the private sector, as well as in economic development, although privatisation programmes in the region are progressing. Secondly, foreign affiliates of Daewoo Motor and the Daewoo Group have operated for less than five years so it is not possible to obtain reliable data on the efficiency of the Group's structure. Finally, the financial crisis in 1997 will force the liberalisation of the South Korean market, and this will in turn force the down-sizing and increased specialisation of Chaebol groups, including Daewoo. This may make the inter-subsidisation of units within the group more difficult.

Overall, Hypothesis (1) was proved that by being able to fulfil the conditions identified by Lall, Daewoo Motor possessed firm-specific advantages which led it towards FDI despite the fact that it was from a developing country, and those advantages were enhanced by cheaper labour and being an affiliate of the Daewoo Group. Lall's theory for developing country MNEs helped to understand the characteristics of developing country MNEs, and how Daewoo Motor became an MNE from a developing country. However, he did not give a clear idea as to why Daewoo Motor implemented FDI in the first place and for the timing of it. He explained the factors affecting capacity of developing country firms which enables the firm to implement FDI. There are developing country firms which obtained firm-specific advantages, but not all of them are engaged in FDI. In this research, it was found that Daewoo Motor invested in FDI at the time when the company's firm-specific advantages had been weakened by the changes in the government policies rather than

when the company obtained such advantages. In order to be an MNE, it is essential to obtain these advantages as a fundamental capability, but it is not necessary to become an MNE after gaining them. Timing seems to be an important factor to become an MNE, particularly for developing countries' firms.

Hypothesis (2) was set out to test the theory of the firm in order to find reasons for the selection of Daewoo Motor's FDI in East Central Europe. Hypothesis (2) was that 'Daewoo Motor chose FDI as a diversification strategy for entering the East Central European market because more net benefits are gained via FDI than by other market entry modes (export and technology licensing agreements)'.

There were negative factors affecting Daewoo Motor's firm-specific advantages when the company selected FDI as its diversification strategy. In particular, these were the changes in industrial policies and the domestic market situation. Some domestic companies have shown their desire to enter the passenger car industry despite the fact that the domestic market has been sluggish. This implies that the government's control over the private sector has been declining gradually. In addition, the government started to open up the domestic market by lowering import duties, and finally will have to liberalise in response to the World Trade Organisation (WTO) and OECD rules.

Before the domestic market is fully opened, the company faces immediate problems which have to be solved to ensure its survival in the market: (1) the company needs to increase competitiveness in prices and product quality because the world market, including the South Korean market, intends to be liberalised and the competition is getting more intense; (2) at the same time, the company needs to increase its export market, where competition is less intense, to secure economies of scale in a short period of time due to the limits of the domestic market; and (3) the separation from GM in 1992 precipitated a need to resolve (1) because, if the company remained one of GM's

subsidiaries, GM would have provided the product technologies needed to improve competitiveness.

Under the circumstances, Daewoo Motor had few other choices but to draft its so-called 'global strategy': firstly, the company invested in technical centres in South Korea, Germany and the United Kingdom in order to develop its own product technology; and secondly, the company invested in car manufacturing in developing and transitional countries where its market share has increased sharply and the competition is much less.

These countries are highly protected by import controls, although there is a trend of liberalising the markets. Exporting from South Korea was not price competitive, if import duties were high. In terms of import controls, the Polish government imposes 30 per cent import duties on cars (the highest tariff in the region). Moreover, the Romanian government bans car imports in order to boost domestic car manufacturers (there are only two passenger car producers, Rodae, a Daewoo Motor's subsidiary, and Dacia). This was one of the reasons why Daewoo Motor chose FDI in car manufacturing rather than exports to the countries to penetrate the markets.

The company could choose technology licensing agreements with local partners, but local firms in East Central Europe have a lack of experience in marketing and sales within a capitalist system, even compared with that of developing countries which have at least an opportunity to be exposed to the capitalist market system. In addition, FDI enables the company to obtain management control in its subsidiaries in the countries in the region in order to establish the regional or global integration of the value network among the headquarters of the company in South Korea and the company's subsidiaries in East Central Europe, as well as among the group's other business units in South

Korea and the group's affiliates abroad, including those of Daewoo Motor due to its peculiar organisational structure.

Daewoo Motor's FDI in car manufacturing in Poland and Romania may cause the future transformation of the South Korean car industry and that of the East Central European countries. In addition, the company's investment in car manufacturing may change the pattern of car trade between South Korea and Europe.

There are some arguments about the role of FDI in terms of home countries' trade patterns. FDI conducted by American car manufacturers in Western Europe in the 1920s and 1930s actually replaced automobile exports from the United States to Western Europe. In the case of Japan, Japanese car manufacturers' FDI in Western Europe has partly been supplementary to automobile exports from Japan.

In the case of Daewoo Motor, the company made direct investments in setting up production facilities in those countries to replace its automobile exports from South Korea to the countries of the region, as did the American car manufacturers. FDI implemented by Daewoo Motor will gradually decrease its car exports from South Korea. However, this FDI will also stimulate the export of auto parts and components from South Korea for use in the production of cars in East Central Europe until auto parts and components are localised in the host countries.

Once Daewoo Motor began its FDI in Poland and Romania, the company had several advantages in Europe, one of its most important export markets (refer to Chapter 4 and 8). Firstly, if the company is only located in South Korea it has to compete with major global car producers in the domestic and the European market without any advantages, but by obtaining the Polish and Romanian plants the company does not have to be concerned with intense competition, at least in these markets, due to the import controls. In addition, if the EU imposes trade restrictions on South Korean

cars in future, exporting to the EU from these plants will be more price competitive than exporting from South Korean factories due to the EU's agreements with East Central European countries as part of the EU enlargement, although the company's products manufactured in those plants will have to meet the quality standards of customers in Western Europe. Cars exported from Poland and Romania to the EU are not subject to import duties. Secondly, the costs of exporting from South Korea to Europe is not much different from Poland and Romania to Europe, but once the company is located in these countries transport costs per se can be reduced, contributing to price competitiveness in the European markets, although only a small proportion of the costs are saved.

The theory of the firm (refer to Chapter 2) helped in the understanding of Daewoo Motor's economic behaviour, particularly relating to the selection of foreign market entry modes as well as the net benefits of the company's FDI in Poland and Romania. The different firms have different strategies in the organisational expansion. For example, Kia preferred to establish technology licensing agreements with foreign partners to FDI. However, the theory provides a lack of an explanation about a locational shift of a scale-sensitive industry like the car industry to a specific place. Overcoming high tariffs in Poland and Romania was one of the net advantages that Daewoo Motor could obtain, but using the import controls argument per se is a weak way to justify the selection of those countries as the company's production locations. Based on the income-driven product cycle mode, Hypothesis (3) formulated to test the reasons for Daewoo Motor investing in car manufacturing in Poland and Romania. Hypothesis (3) was that 'Daewoo Motor began FDI in Poland and Romania because: (1) those markets were in the dynamic youthful stage; (2) the market demand met the minimum viable size of a plant; and (3) the favourable government policies.

In Chapter 6, various indicators were examined in order to investigate the market potential of the region. Among East Central European countries, Poland showed the highest potential for the development of the car industry. The country has been a radical reformer and attained macroeconomic stability. The country's economic growth has recorded the highest levels of the region (of over 5 per cent), and is predicted to show strong economic and productivity growth. This indicates that the Polish market is in a dynamic and youthful stage of the product cycle. In terms of market demand for cars, according to the production costs model formulated in Chapter 3, the market demand for cars crossed the annual minimum viable size of a plant at the level of the firm. Romania has been in the process of liberalisation, but its reforms have been slow, although the country adopted a liberalisation programme in 1990 (earlier that the former Czechoslovakia) and achieved resumption of economic growth. Despite the fact that the level of productivity and income has increased, the Romanian market is less dynamic. In fact, the former Czechoslovakia is in a more dynamic and youthful stage of the product cycle model. In terms of market demand, the annual minimum threshold size of a plant was met by the local market demand, but market demand has been fluctuating.

By being located in Poland, Daewoo Motor can increase competitiveness, in addition to a cheaper labour force, but in Romania it was not clear-cut whether the company could improve competitiveness by locating production facilities there. The Czech Republic could be a better production location than Romania. The locational theory provides an explanation that Daewoo Motor's FDI in Poland could attain or improve competitive advantages. However, the theory did not explain why the company instigated FDI in Romania despite the fact that other countries in the region had better market conditions. For example, the company could obtain more competitive advantages by investing in the Czech Republic.

Through this research it is found that the investment incentives and industrial policies of Poland and Romania may have played a critical role in Daewoo Motor's FDI in car manufacturing in these countries. In terms of investment incentives affecting the production costs, the governments of Poland and Romania were generous because they were keen to attract FDI in order to transform their motor vehicle industries without mass job losses. The Polish government awarded Daewoo Motor (1) a 6-year tax holiday, and (2) a tax exemption on 50 per cent of investment for ten years. The Romanian government gave the company (1) a five-year tax holiday, and (2) a sevenyear import duty exemption. In return, Daewoo Motor took over the existing car companies on the governments' conditions (no job reductions and the development of local auto parts and components). In terms of industrial policies, the governments provided the necessary protection with import controls and selective intervention in the car industry (which the South Korean government cannot provide any longer) until the CEFTA and the EU are fully implemented in the region. The company may calculate that, as a result, the profit rate will be so high that they can amortise their capital fast enough to make a net profit on the total investment before each enters the EU. The enlargement of the EU is not an advantage to Daewoo Motor because of the trade liberalisation resulting in the arrival of competitive imports.

However, the interviewees' perceptions differed from the facts. All interviewees gave similar explanations of the company's motivation to those which motivated developed country manufacturers, without serious consideration of the fact that Daewoo Motor is the first car manufacturer from a developing country to make major investments in these countries. According to the interviewees, Daewoo Motor chose Poland and Romania in order to gain access to the local markets, and to secure future export bases to the whole of Europe and the CIS countries despite the absence of

obvious trade restrictions on its products. That is quite different from the reality, where the potential for obtaining full membership of the EU in order to avoid trade barriers imposed by the Union mainly attracted Daewoo Motor's investment in Poland and Romania rather than in Western European countries.

In this research, the many investment risks in car manufacturing in Poland and Romania were also mentioned by interviewees. Daewoo's interviewees argued that they did not consider these factors as risks, but the company faces critical problems in maintaining its operations in Poland and Romania although it received investment incentives.

Firstly, in addition to prerequisites, like the improvement in product quality, sufficient investments in R & D are essential. In fact, total R & D investment within South Korea as a whole is about the same amount that the GM company itself invests (Far Eastern Economic Review, July 24, 1997). Although the company can step up investment in R & D, there is no assurance of developing a car model which will be successful in the market, and it is very difficult for the company to fund ever increasing product development costs. This is even more difficult in the current financial crisis where the Korean won has been drastically depreciated.

Secondly, the timing of the release of new models for local production in East Central Europe can be a dilemma for Daewoo Motor. The company decided to produce small car models (mainly the Cielo T -100) in the region. The affiliates in the region are not yet operating at full scale as they are still being established. Recently, the company developed a new model in the same class and started to produce it for the South Korean market as well as for exports. If there is a demand for the new model in the same class in the region, the company would export its cars there. There would then be a good

possibility that the old models produced in Poland and Romania would compete with the new produced in South Korea in the same markets in the region.

Finally, there may be over-capacity in Daewoo Motor's car production in Poland and Romania. The capacity of Daewoo Motor's plants in Poland and Romania is more than those countries' market demand (refer to Chapter 6). Exports to neighbouring countries are not easy because major car manufacturers, such as Fiat, GM and VW, are producing cars in the region and their import tariffs on cars are relatively high (refer to Chapter 7).

In summary, this research found that the government policies and incentives can sway the firms' locational decision for car manufacturing, regardless of the importance of other factors which are needed to be fulfilled in order to develop the car industry. This is mainly because the car industry is one of the strategic industries which developing and transitional countries wish to develop.

Daewoo Group (Daewoo Motor) as well as other Chaebol groups in South Korea have grown rapidly under government protection and promotion. In order to achieve Daewoo Motor's growth in Poland and Romania, the company seems to have the same approach: heavy dependence on the protection and promotion from the governments concerned. Through Daewoo Motor's FDI in Poland and Romania, the close relationship between the government and private sector, one of the typical Chaebol characteristics, was observed.

Overall, this research can contribute to a better understanding of developing country MNEs' economic activities, particularly those of developing car producers, and to the further development of theoretical work in the field of the firm, industrial location and international car production. This research also can provide valuable insights about how industrial policies affect the growth and character of firms in developing and

trransitional countries and what industrial policies are required to achieve successful economic development in the East Central European countries.

83.2 Issues for Further Research

In this research, the opinions of Daewoo managers and other employees, and the global strategy of Daewoo Motor were studied as the first step to understanding the company's global operations. Based on the results of this research, many interesting research topics can be generated for future studies.

At a macro level, it is useful to study the impact of the transfer of car manufacturing to foreign countries on the economies and industries of the home countries, whether FDI can substitute exports, and particularly whether FDI can be a future engine for the growth of countries which have pursued an export-oriented strategy. For host countries, it would be useful to study whether developing country MNEs generate more positive effects on the host countries' economies than developed country MNEs. Particularly, it is interesting to look at whether the organisational structure of the Chaebol (a group of unrelated business units) implies a positive or negative impact on the economic development of the host countries through the Chaebol's FDI.

At a micro level, it is important to understand what factors influence the management of overseas operations, and why those factors have an effect on management, particularly in foreign operations; to understand what significant differences exist between the management of domestic and foreign operations; to understand why MNEs' management control are decentralised and how management control of MNEs is effectively decentralised from the headquarters in the home

countries; and to understand which organisational structures of MNEs are desirable to manage their overseas affiliates.

Another aspect that needs to be investigated is which changes in the international economic environment (such as the establishment of regional trade agreements, or world trade liberalisation by international organisations (OECD, or WTO)) can affect firms' economic activities across national boundaries, and which government policies affect MNEs' behaviour, and also affect FDI.

With more data and information from empirical studies of developing country MNEs, the prevalent theories for developed country MNEs can be enhanced. In addition, general explanations of developing country MNEs and their economic activities in foreign countries can also be better developed.

In the car industry, there has been a shortage of research on developing country car manufacturers. It is necessary to conduct more empirical research on emerging car producers. In order to understand the rapidly changing global car industry, it is helpful to study those car producers, for example Skoda in the Czech Republic and Proton in Malaysia, which are planning to join the global automobile industry.

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Appendix A

List of Interviewees

Daewoo's Interviewees

Board Members

Interviewee	1	Director 1 Passenger car Division
		Daewoo Motor CO., LTD.
Interviewee	2	Executive Vice President Daewoo Motor CO., LTD.
		,
Interviewee	3	President
		(the former director of Hyundai Motor in Canada) Daewoo Wooree Motor Sales CO., LTD.
Interviewee	4	Executive Director
Interviewee	4	Motor Vehicles Export
		Eastern Europe & CIS Division
		Daewoo Corporation
Interviewee	5	Executive Managing Director
		Motor Vehicle Export Division
		Daewoo Corporation
Interviewee	6	Executive Managing Director
		International Finance
		Daewoo Corporation
Interviewee	7	President
		Office of The Chairman
		Daewoo Group
Interviewee	8	Executive Director
		Planning & Co-ordination
		Daewoo-FSO Motor CO.
Interviewee	9	Chairman
		(the former president of FSO)

Centrum Daewoo LTD.

Interviewee	10	Vice President RODAE AUTOMOBILE S.A.
Interviewee	11	President Daewoo Automobile European Operations
Interviewee	12	Director Budapest Representative Office Daewoo Corporation
Interviewee	13	Executive Managing Director Daewoo Cars Ltd. U.K.
Interviewee	14	Deputy Managing Director Daewoo Cars Ltd. U.K.
Interviewee	15	Vice President Engineering / Product Development Daewoo Motor
Interviewee	16	Executive Managing Director Office of the Chairman Daewoo Group
Interviewee	17	Managing Director Daewoo Corporation Warsaw Office, Poland
Interviewee	18	Deputy Director Daewoo Corporation Warsaw Office, Poland
Interviewee	19	Representative & General Director Romanian Branch Office Daewoo Corporation
Interviewee	20	Director Daewoo-FSO Motor CO.
Managers		
Interviewee	21	Manager International Finance Department Daewoo Corporation
Interviewee	22	Assistant Manager Daewoo Management Development Center Daewoo Corporation

Interviewee	23	Assistant Manager International Finance Department Daewoo Corporation
Interviewee	24	Manager Overseas Investment Department Daewoo Corporation
Interviewee	25	Manager Planning Team Daewoo Management Development Center Daewoo Corporation
Interviewee	26	Manager Daewoo Warsaw Office Poland
Interviewee	26	Assistant Manager Daewoo Warsaw Office Poland
Interviewee	27	Deputy General Manager No. 1 Passenger Car Assembly Department Daewoo Motor
Interviewee	28	Assistant Manager Eastern Europe Team Motor Vehicles, Eastern Europe & CIS Division Daewoo Motor
Interviewee	29	Manager Automobile Project Management Team Daewoo Corporation
Interviewee	30	Manager Global Operation Support Department Daewoo Corporation
Interviewee	31	Assistant Manager No. 1 Passenger Car Assembly Department Daewoo Motor
Interviewee	32	Deputy General Manager Budapest Representative Office Daewoo Corporation
Interviewee	33	General Manager Daewoo Bucharest Office RODAE AUTOMOBILE S.A.

Non -Daewoo's Interviewees

South Korean Car Manufacturers

Hyun	dai	Mo	tor
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Interviewee 34 **Managing Director** Hyundai Motor **Europe** Interviewee 35 **Director Hyundai Corporation** Interviewee 36 **Director Central & Eastern Europe Team International Marketing Group 1** Hyundai Motor Kia Motors Interviewee 37 **Chief Representative Kia Motors Corporation London Office** Interviewee 38 **Senior Managing Director Overseas Sales Division Kia Motors Corporation** Interviewee 39 Director **Overseas Finance Department Kia Motors Corporation** Interviewee 40 **General Manager Overseas KD Business Department Kia Motors Corporation** Interviewee 41 Manager **Overseas KD Business Department Kia Motors Corporation** Interviewee 42 **Assistant Manager Overseas KD Business Department Kia Motors Corporation** Interviewee 43 Manager **Kia Motors Corporation London Office** Interviewee 44 Manager **Overseas Profit Innovation Kia Motors Corporation**

Assistant Manager Interviewee 45 **Planning & Coordinating Department Kia Motors Corporation Industrial Experts** Interviewee 46 Chairman **European Logistics Association** Interviewee 47 **Business Development Associate Motor Vehicle Industry** Henley Management College **Executive Director** Interviewee 48 **Korea Auto Industries Corporation Association Automobile Center** Interviewee 49 **Partner Autopolis Government Officials** Interviewee 50 Commercial Attaché **Embassy of Poland** Republic of Korea Interviewee 51 **Commercial Attaché Embassy of Romania** Republic of Korea Interviewee 52 **Second Secretary Commercial Office Embassy of Romania** Interviewee 53 **Director General** Ministry of Trade, Industry and Energy Republic of Korea Interviewee 54 **Deputy Director Europe Division** Office of International Trade Ministry of Trade, Industry and Energy Republic of Korea Interviewee 55 **Director Automobile & Shipbuilding Industry Division Basic Industry Bureau**

Ministry of Trade, Industry and Energy

Republic of Korea

Interviewee 56 Director

International Affairs Department
Korea Chamber of Commerce & Industry

Appendix B. Interview Guide A. General Information Date: Location: Name of Company / Department: **Interviewee's Title:** B. Specific Information 1) Factors related to the DI decision-making of Daewoo Motor Q.1What is the Daewoo Company's culture? Is it different from other companies ? -----What is the domestic position of Daewoo Motor ?-----Q.2) What is the company's plan for car manufacturing ?-----Q.3) What are the strategies for car manufacturing ?-----Q.4)Q.5) Does Daewoo Motor particularly have a global strategy ?-----Q.6What is Daewoo Motor's perception of FDI as a market entry mode?--Q.7)What is the government attitude toward car manufacturers and FDI ?---O.8What is the current situation of the Korean auto market ?----Q.9How does Daewoo Motor perceive rising income level in Korea?-----Q.10) Do you feel that market competition is steep?-----2) Advantages of DI in Car manufacturing Q 11) What are the ways of producing cars abroad?-----Q.12) What are the merits and demerits of the different methods of car manufacturing in foreign countries ?-----Q 13) Why did Daewoo Motor establish joint ventures ?-----

O 14)	Are there particular reasons for choosing D1?
,	
Q 15)	What are the advantages of DI in car manufacturing ?
Q 16)	What are the disadvantages of DI in car manufacturing ?
Q 17)	Are there particular advantages of DI in European countries (Western and Eastern Europe) ?
3) Locational	factors
Q. 18)	What was Daewoo Motor's intention to invest in East Central Europe?
Q. 19)	Why did Daewoo Motor establish joint ventures with East Central European partners ?
Q. 20)	Were there specific reasons to produce cars in East Central Europe ?
Q. 21)	Did Daewoo Motor consider building joint ventures with Western European partners ?
Q.22)	Was Daewoo Motor's investment in East Central Europe a part of the company's global strategy ?
Q.23)	What about competitiveness? Can Daewoo Motor maintain competitiveness of its products through production in East Central Europe?
Q.24)	Due to the low quality of cars produced in East Central Europe, is there any possibility for the established image of Daewoo Motor's cars in the EU to be damaged?
Q. 25)	What are the advantages of producing cars in East Central Europe ?
Q. 26)	Did Daewoo Motor have specific reasons to invest in Poland and Romania than in other East Central European countries?
Q.27)	For Korean car producers, were there exclusive benefits from the Polish and Romanian governments?
Q.28)	What was the main drive for Daewoo Motor to decide production locations in Poland and Romania ?
Q. 29)	Was gaining a foothold in the EU market a reason for Daewoo Motor's investment in East Central Europe?

	2. 30)	Was Daewoo Motor's main interest in East Central European economies to by-pass the taxes or import duties in the event that East Central European countries would obtain full membership of the EU?
Ç	2.31)	What do you think is the competitive edge of the Korean cars or Daewoo Motor's cars in the East Central European and EU markets ?
	,	Do you think that Korean partners had more possibility of a success with East Central European partners than with Western car producers?
		ated to investment risks
(2. 33)	Are there investment risks in East Central European countries ?
C	2. 34)	What are the risks of investing in East Central European countries ?
() . 35)	Do the Korean car producers have higher risks than major producers from developed countries ?
(2. 36)	What are the disadvantages of investing in East Central Europe, particularly in Poland and Romania?
(). 37)	Were the investment conditions different from those of other European countries ?
(Q.38)	Did Daewoo Motor have a different position to evaluate investment risks ?
() 391	How did Daewoo Motor overcome investment risks ?