



Foreign direct investments in the Czech automotive industry

A Case Study of Hyundai Motor Company

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Abstract

This thesis is a strategic analysis of the 2006 greenfield investment in the Czech Republic, by the global automotive manufacturer Hyundai Motor Group. We analyse the factors that made Czech Republic an advantageous location for automotive FDIs, and how this influenced Hyundai when they decided to open a production plant in Europe. Through applying relevant theories, our thesis aims to show that Czech Republic is an attractive location for automotive FDIs due to strong industrial traditions of automotive manufacturing, high labour productivity and a cheap workforce, wide range of automotive parts and components suppliers, a favourable geographical location with access to both Western and Eastern European markets and a stable investment climate. Furthermore, investment in the Czech Republic was beneficial to Hyundai in particular, due to the close proximity to sister company Kia's factory in Slovakia, and access to the European market which at the time were limited by trade barriers between Korea and the EU. In addition, favourable investment incentives from the Czech government were important to Hyundai when deciding to invest in the Czech Republic.

Table of Contents

Introduction	1
Personal Motivation.....	2
PART I: Theoretical concepts	3
1 Multinational Enterprises and Foreign Direct Investments.....	3
1.1 Classification of foreign direct investments and multinational enterprises.....	3
1.1.1 FDIs by relatedness	4
1.1.2 FDIs by ownership.....	4
1.2 Motivation to engage in FDIs	4
1.2.1 The natural resource seekers.....	5
1.2.2 The market seekers.....	5
1.2.3 The efficiency seekers.....	5
1.2.4 The strategic asset seekers	6
1.2.5 Other motives	6
2 Theoretical Concepts on Foreign Direct Investments.....	6
2.1 The Eclectic Paradigm of international Production and the Knowledge-Capital Model	7
2.1.1 Ownership advantage	8
2.1.2 Internalization advantage	10
2.1.3 Location advantage.....	11
2.2 An Imbalance Theory	13
2.3 The Diamond Model	14
2.3.1 Factor conditions	15
2.3.2 Demand conditions.....	16
2.3.3 Firm strategy, structure and rivalry	16
2.3.4 Related and supportive industries.....	17
2.3.5 The role of the government.....	17
2.3.6 Interplay between the attributes in the diamond	17
2.3.7 The Diamond Model & Cluster Theory	18
2.4 The Cluster Theory	18
2.4.1 Productivity	19
2.4.2 Innovation	20
2.4.3 Business Formation.....	20
PART II: Introduction to Case Study.....	21
3 Czech Republic & The Hyundai Motor Company	21

3.1	Introduction	21
3.2	Hyundai Motor Company.....	21
3.3	The Czech Republic	21
3.4	The Hyundai investment in the Czech Republic.....	22
4	Trends in the global automotive industry.....	25
4.1	Introduction	25
4.2	Global automotive industry	25
4.3	Hyundai global strategy	26
PART III: Analysis.....		29
5	Motivation for investment.....	30
6	The Czech Republic and investment climate	31
6.1	The Investment climate in the Czech Republic.....	31
6.1.1	Political environment.....	31
6.1.2	Economic climate	34
6.1.3	Cultural and social environment.....	35
6.2	Foreign Direct Investments in the Czech Republic	38
6.3	Investment incentives.....	42
6.3.1	Impact of EU membership	42
6.3.2	Investment incentives into manufacturing sector in the Czech Republic	42
6.3.3	Investment incentive for Hyundai and its suppliers	43
6.4	Automotive Industry in the Czech Republic.....	45
6.4.1	International trade.....	47
6.4.2	Suppliers.....	48
6.4.3	Technology and R&D.....	49
6.4.4	Labour market.....	50
7	The Moravian-Silesian Region.....	53
7.1	Automotive cluster in the Moravian-Silesian Region	54
7.2	Hyundai's interest in the region.....	57
8	The Diamond Model	60
8.1	Factor conditions	60
8.2	Demand conditions.....	62
8.3	Firm strategy, structure and rivalry	65
8.4	Related and supportive industries.....	66
8.5	The role of the government.....	67
8.6	Implications for Hyundai.....	67
9	OLI and the knowledge-capital model	68

9.1	Ownership advantage	68
9.2	Internalization advantage	70
9.3	Location advantage	72
	Main Findings and Conclusion	76
	Further suggestions and limitations	79
	References	81

List of Figures

Figure 1:	Personal car production at HMMC, number of cars	25
Figure 2:	Hyundai global production, thousand units	29
Figure 3:	Czech Republic in comparison with South Korea by cultural dimension.....	36
Figure 4:	Number of projects and amount invested in million CZK for years 1993-2015	39
Figure 5:	Share of automotive sector on total GVA and manufacturing sector, 2006	45
Figure 6:	Shares of the groups in receipts from sales of own products and services in 2006.....	46
Figure 7:	Share of automotive sector on total import and export in 2006.....	47
Figure 8:	Territorial structure of exports in automotive sector.....	47
Figure 9:	Number of employees in automotive industry in its subsectors, 2005 and 2006.....	52
Figure 10:	Labour productivity and share of labour cost in NACE 34	53
Figure 11:	Europe top-selling vehicles by units, Jan-Jul 2006.....	64

List of Pictures

Picture 1:	Determinants of National Competitive Advantage	15
Picture 2:	Map of the Czech Republic	22
Picture 3:	Hyundai's plant in Nošovice together with Dymos, Mobis and Hysco (Hyundai Steel)	23
Picture 4:	Position of the Nošovice industry zone and its proximity to neighbouring countries	24
Picture 5:	The Structure of Automotive Supply Chain	48
Picture 6:	Automotive suppliers' locations in the Czech Republic, 2014	49

List of Tables

Table 1:	OLI advantages by type of FDI.....	12
Table 2:	OLI characteristics according to country, industry, firm-specific consideration.....	12
Table 3:	Typology of both conventional and unconventional FDI	14
Table 4:	Hyundai global rank and market share by production volume.....	28
Table 5:	Governance Indicators in the Czech Republic, Poland, Slovakia and Hungary in 2006	32
Table 6:	GDP indicators, market prices in 1000	34
Table 7:	Gross Added Value by Sectors (CZ-NACE), million CZK, 2006-2010.....	35
Table 8:	Developments of the rating of the Czech Republic.....	35
Table 9:	Top 10 biggest foreign direct investments in the Czech Republic, 1993-2015.....	40
Table 10:	Sectoral FDI in the Czech Republic, 1993-2015.....	41
Table 11:	Top 10 investors by country of origin by invested amount, Czech Republic, 1993-2015.....	41
Table 12:	Overview of investment incentives to Hyundai's suppliers	44
Table 13:	World Car Production by Country, Top 16 Countries, in 2006.....	46

Table 14: Number of Suppliers in the Czech Republic, 2016	49
Table 15: R&D centres in the Czech Republic, by firm and country of origin, 2008.....	50
Table 16: Labour market indicators, 2006-2014, Czech Republic.....	51
Table 17: Labour costs per hour in euro, whole economy (excluding agriculture and public administration)	51
Table 18: Nominal labour productivity per person employed, index EU28=100	52
Table 19: Supplier base in automotive industry in Moravian-Silesian region before Hyundai's entry	55
Table 20: Top 10 brands for the amount of new cars registered in the Czech Republic.....	63
Table 21: The European car market: new cars registrations	63

Introduction

The automotive industry is one of the largest and most global industries in the world. The emergence of cars has forever changed society, and we are today utterly dependent on the production of quality motor vehicles. The increasing globalization has brought changes to an industry that used to revolve around national enterprises that served their own regions. In the last decades, the use of foreign direct investment has fuelled the internationalization of car manufacturing, with large manufacturing firms establishing plants all over the world. Traditionally, the industry has primarily been located in Western Europe, North America, and Asia. Increasing competitions, stagnating demands and the need to cut production costs has forced the companies to rethink their strategies, opening the gate for emerging markets such as Latin America and the Central and Eastern Europe to become attractive destinations for FDI in the automotive sector.

In the heart of Central Europe, acting as a bridge between the former capitalist Western Europe and socialist Eastern Europe, lies the Czech Republic. The country has benefited from increasing attention from foreign investors, and has seen its powerhouse car manufacturer Škoda Auto acquired by the Volkswagen group, and a Toyota-Peugeot Citroen joint venture has established plants within its borders. Most recently, in 2006, Hyundai invested 1185.36 million Euros in a production plant in the Moravian-Silesian region in the eastern part of the country.

It is this investment we will use as our case study when analysing why the Czech Republic has been an attractive location for foreign investments. In our thesis, we will analyse which factors make the Czech Republic advantageous for FDI in the automotive sector, and use this knowledge to analyse why Hyundai chose this exact location.

Our research question is as follows:

“What made Hyundai decide to locate their European plant in the Czech Republic?”

We are focusing on a specific case, which is the biggest single FDI in Czech history, as this allows us to analyse how the environment for FDI in the Czech Republic has real-world implications. Our thesis is a strategic analysis that aims to answer this question by the use of several theories that are relevant for explaining foreign direct investment. To analyse why Hyundai chose to invest in the Czech Republic we will use the Eclectic Paradigm, introduced by John Harry Dunning. The knowledge-capital model, introduced by James Markusen, will

support this framework. In addition, we will analyse whether the Czech automotive industry has competitive advantages by the use of Porter's Diamond Model, and we will use Cluster Theory to shed light on the potential advantage of establishing a plant in the Moravian-Silesian Region. Our thesis consists of three parts: Part one presents the theoretical frameworks we are using; part two introduces the case study, and important information related to the case study; and in part three we analyse the case study by applying the theoretical concepts presented in part one. At the end, we summarize our findings and provide a conclusion to our research topic.

Personal Motivation

The International Business study profile is wide and challenging, combining a variety of subjects, which enable us to acquire diverse and complimentary knowledge. For our master thesis, we wanted to find a topic that would replicate the profile's versatility. The case study and the research question we have chosen for the research is particularly relevant to the international strategy course, while also allowing us to apply knowledge we acquired in courses like macroeconomics and international trade, international organisation and management and supply chain management.

Foreign direct investment is one of the most important and challenging topics in international business, and the growing prevalence of foreign investment serves as an engine for international growth and development. The automotive industry is one of the most globalized and rapidly changing industries, which is why it is of high interest for us. The Czech Republic as an FDI recipient is an interesting case because transition economies are quite specific and distinguishable from developed and developing economies, which get a lot of attention from researchers. The Case of Hyundai Motor Company investment in the Czech Republic was chosen as a recent and up-to-date relevant case, and it is the single biggest FDI in the Czech history, which makes it particularly interesting.

PART I: Theoretical concepts

1 Multinational Enterprises and Foreign Direct Investments

Since the Second World War, world trade has increased and intensified, and the amount of private foreign investment has increased substantially. Many companies set up its subsidiaries or acquired controlling share abroad. Companies that operate in at least two different countries are called multinational enterprises (MNE) (Grimwade, 2000). According to Dunning (1992), a multinational enterprise is “an enterprise that engages in foreign direct investments and owns or controls value-adding activities in more than one country.” Grimwade (2000) summarizes the main characteristics of MNEs as a company that owns assets for production in minimum two different countries, and the parent company has managerial control over the daughter companies.

Investments abroad in order to build a new foreign subsidiary or to acquire a share in another company are referred to as foreign direct investments. Foreign direct investment is a way that a firm can territorially expand outside its home country without a change in ownership.

According to OECD (2008), foreign direct investment “*reflects the objective of establishing a lasting interest by a resident enterprise in one economy (direct investor) in an enterprise (direct investment enterprise) that is resident in an economy other than that of the direct investor. The lasting interest implies the existence of a long-term relationship between the direct investor and the direct investment enterprise and a significant degree of influence on the management of the enterprise. The direct or indirect ownership of 10% or more of the voting power of an enterprise resident in one economy by an investor resident in another economy is evidence of such a relationship.*”

It is important to note that foreign direct investments are different from portfolio investments. Portfolio investments are investments in interest-bearing securities by individuals and financial institutions (Grimwade, 2000). Unlike a portfolio investment in addition to financial capital, FDIs also transfer management and organization competence, technology, values and culture, entrepreneurship and access to foreign markets (Dunning & Lundan, 2008).

1.1 Classification of foreign direct investments and multinational enterprises

Foreign direct investments can be classified by different criteria. In this part, we will distinguish FDI by relatedness and by a form of ownership.

1.1.1 FDI by relatedness

Foreign direct investments and multinational enterprises can be divided into three main categories respectively. The first type is **horizontal FDI** or **horizontally integrated MNE**, where a manufacturing plant for the same product or group of products is located in more than one country. The second type is **vertical FDI** or **vertically integrated MNE**, where the company locates different stages of production for the same product or group of products in different countries. This type of FDI can be further classified as backwards and forwards vertical FDI. In a backward vertical FDI, a newly set up affiliate produces at an early stage in the production. In a forward vertical FDI, the new subsidiary produces at the later stage in the production or engages in distribution or marketing activities. The third type is the **conglomerate FDI** or the **conglomerate MNE** where the company acquires a controlling share or mergers with a company that is located abroad and produces an unrelated product or group of products. The goal of the MNE is in this case to attain product diversification (Grimwade, 2000).

1.1.2 FDI by ownership

Foreign direct investments can be further divided by the form of entry. The minimum ownership stake in the affiliate to be considered as an FDI is 10%, according to OECD (2008). We can distinguish between wholly owned subsidiaries and partially owned subsidiaries. The higher percentage of ownership an investor has in the affiliate; the more control he has over the foreign operation (Hill, Hwang, & Kim, 1990). If the investor establishes an entirely new subsidiary abroad and has 100% controlling interest, it is referred to as a **greenfield venture**. Another possibility is to acquire an ownership stake in an already existing company abroad through a **merger**¹ or an **acquisition**² resulting in wholly or partially owned subsidiary. A special case is a **joint-venture**, where two competing firms cooperate to establish an FDI (Grimwade, 2000).

1.2 Motivation to engage in FDI

The main motivation for an enterprise is to be more profitable and competitive in its markets. Therefore, the basic motivation for an FDI is to establish a presence in a foreign country that gives the company some sort of competitive advantage. There are several ways a firm can achieve a competitive advantage by means of FDI, and The Behrman's typology defines

¹ A merger is a voluntary combining of two or more companies into one new entity. (BusinessDictionary, 2016)

² An acquisition is when a company takes control of another firm, having 51% voting shares. (BusinessDictionary, 2016)

different types of foreign investors as natural resource seekers, market seekers, efficiency seekers and strategic asset seekers (Dunning & Lundan, 2008, pp. 67-77). Why firms engage in FDI can be divided into these four main groups. However, many MNEs show multiple objectives as their motivation and, therefore, their FDI can result in a combination of characteristics of different categories.

1.2.1 The natural resource seekers

The natural resource seekers invest abroad in order to acquire specific resources that are not currently available, or of a higher quality and lower cost than in their home country. The natural resource seekers can search for the different types of resources, and it is often exported back out of the country. Investors that are mostly producers or manufacturers, seek physical resources like metals, agriculture products, mineral fuels etc. Investments of this kind are usually very capital intensive and become tied with location. Investors often also seek cheap and skilled labour, especially investors from countries with high labour costs.

1.2.2 The market seekers

The market seekers invest in the host countries in order to serve the local market or the markets or neighbouring countries. MNEs decide for local production when it is a better option than serving these markets by exports. Mostly the reason is an emergence of trade barriers by the host country or larger market size with a growth potential. Dunning & Lundan (2008) presents other major motivation for market seekers. The first reason is when a firm needs to follow its suppliers and customers, which have expanded abroad in order to retain its business. The second reason is to strengthen the market position by adapting their product to local trends and culture in taste and needs. The third reason is lowering the costs when the local production is a cheaper option to serve the market than a foreign supply. This applies especially to firms that originate in countries distant to the main markets or have high transportation costs. The fourth reason is when the MNEs consider its presence in the markets served by its competitors as necessary.

1.2.3 The efficiency seekers

The efficiency seekers invest if the host country can offer increased efficiency in production. They usually expand abroad in order to gain from the common governance of spatially distributed activities. The advantage originates from the economies of scale and scope and diversification of risk. In general, they benefit from the territorial differences regarding factor endowments, culture, demand, institutional and economic policies and engage in locations

from where they can cover regionally integrated markets. This kind of seekers are usually large and experienced MNEs producing standardised production.

1.2.4 The strategic asset seekers

The strategic asset seekers look for foreign companies that possess certain assets that are needed to sustain a competitive production in order to become more competitive through their acquisition. They engage in FDI in order to uphold their strategic goals and position in a global competitive market, or to become competitive in new and yet unknown markets. Their intention is to profit from a diversity of activities and capabilities or from their different locations. This type of motivation often comes from companies from emerging markets, that needs to expand abroad in order to attain strategic assets not currently developed in their home market.

1.2.5 Other motives

Dunning & Lundan (2008) present other motives for the activities of MNEs. They classify them into three categories that include escape investments, support investments, and passive investments.

Escape investments originate from countries where legislation, economic and trade policy is affected by an ideology asserted by the home government, which is not accepted in the global business environment.

Support investments are investments intended to support activities of the MNEs. Mostly it is trade and finance services, which assist the enterprise with exports and imports.

Passive investments are FDIs that are performed for trading or capital appreciation. Since some amount of the managerial input is involved, they are considered as FDIs and not as portfolio investments.

2 Theoretical Concepts on Foreign Direct Investments

As referred by Dunning and Lundan (2008), there is no single theory that can explain all forms of foreign-owned production. Different forms of trade need to be explained differently and involved enterprises have diverse intentions and motivations for trade. On the other hand, they claim that it is possible to formulate a general paradigm with which it is possible to identify relevant variables to explain different forms of foreign-owned production.

Our main framework is The Eclectic Paradigm, presented by J.H. Dunning, as this is the most comprehensive and widely used framework to explain FDI behaviour. This framework will be

supported by the Knowledge-Capital model by James R. Markusen. In addition, we will use Porter's Diamond Theory of National Advantage and Cluster Theory to provide additional insight into the advantages of establishing a plant in the Czech Republic, and cluster theory to explain advantages of the specific Moravia-Silesia region.

2.1 The Eclectic Paradigm of international Production and the Knowledge-Capital Model

The Eclectic Paradigm of international production, or the "OLI" framework, was first published by J. H. Dunning in 1979 (Dunning J. H., 1980). The theory integrated several major theories and findings that existed at the time in the field of international production, especially industrial organisation theory, the theory of the firm, the theory of property rights, the economics of transaction costs and theories of location and trade. Formulating the framework intended to explain international production.

This theory is still the most persuasive, as most of the factors that can be relevant for FDI are compiled into a single paradigm that can be applied to analyse most forms of foreign direct investment.

The key propositions of Dunning's Eclectic Paradigm explain the extent and pattern of production financed by FDI. The hypothesis underlying the paradigm states that the firm will be involved in FDI if the following conditions are fulfilled (Dunning J. H., 1988):

1. The company should have ownership advantages in form of tangible or intangible assets over its rivals in the foreign country, and these advantages are firm-specific and exclusive (**O – ownership advantage**);
2. Having the first condition satisfied, it must be beneficial for the company to possess and utilize those advantages internally rather than sell or lease them to other firms (**I – Internalization advantage**);
3. If conditions 1 and 2 are satisfied, there must be location advantages in the form of factor inputs outside the home country, which are beneficial if utilized together with ownership and internalisation advantages (**L – location advantage**).

Dunning's OLI framework was later used by Markusen to develop the Knowledge-Capital model, which evolved from merging models from Helpman and Markusen, and integrating the treatment of horizontal and vertical multinational enterprises.

Helpman's model (1984) describes how the firm can split the production process into two major activities: headquarters and production. As these activities are differentiated by factor intensities they can be separated geographically between different countries. FDI that follows this pattern can be characterized as the vertical type, and its production stages are separated geographically depending on factor endowments and factor prices across countries. When aiming to reduce total costs, the company, for instance, places activities that require high-skilled human capital, such as research and development, in areas where these resources are plentiful, and activities that require mostly unskilled labour, typically production plants, in areas where labour is inexpensive. If the production is based on the consumption of a particular resource, the location of the plant can be determined by the proximity to that resource. Thus, according to Helpman (1984), a multinational company has headquarters and production facilities in different countries, and this is an example of vertical multinational enterprises. In the model, trade costs were not considered and MNEs appear only when countries' relative factor endowments are sufficiently different, implying that FDI does not take place between identical countries (Reinert, 2008).

Markusen (1984) developed a model in which headquarters and production activities are separated, but the focus of the model is not on the factor intensities. According to Reinert (2008), Markusen argues that R&D as a part of headquarter activity can yield its productivity to foreign production facilities at the same value as it has been yielding it to the local one. Adding one more production facility does not reduce the productivity of the R&D assets. R&D output, like blueprints, formulas or procedures, can be transferred and used in different locations fully and jointly. The object of Markusen's paper is the multinational companies going to different locations for horizontal or market-seeking FDI to take advantage of knowledge capital the MNE possesses (Reinert, 2008). Under this approach appearance of MNEs between two identical countries can be explained.

The knowledge-capital model is a powerful framework to differentiate the type of FDI (vertical versus horizontal) when analysing general FDI flows. This approach enables researchers to clearly distinguish what the objective and motivation of the investments undertaken by MNEs are: exploiting larger markets (horizontal FDI) or reducing production costs (vertical FDI).

2.1.1 Ownership advantage

When firms enter countries ready to compete in the markets with companies in the host countries, they must have competitive advantages that arise from a privileged ownership or

access to income-generating assets, or from a unique ability of management and coordination of these assets in a way that is more profitable compared to international competitors. Ownership advantages are firm specific, or internal, and presented by tangible and intangible assets (Dunning J. H., 1988). Dunning distinguishes three types of advantages: Firstly, advantage over competitors producing in the same location. This can include size, monopoly power, access to superior resources, or exclusive intangible assets. Secondly, the advantage of new branch plants over rivals, brought by the endowments of the parent company and its ability to coordinate separate complimentary activities in a more efficient way. Thirdly, the advantage gained by multinationalism of a company – ability to extract benefits from operating in different countries and economic environments.

Dunning (1988) lists following characteristics as Ownership-specific advantages:

Property rights and intangible assets, including product innovation, management, organization and marketing systems, innovation capacity, human capital, acquired knowledge etc.

Advantages of common governance: Including branch plants advantages over newly established firms, economies of scope and specialization, economies of joint supply, monopoly power, advanced resource capacity and usage, and exclusive or favoured access to input product markets.

Multinationality advantages: better knowledge of international markets, ability to diversify or reduce risks (currency areas, political scenarios), the advantage of geographical differences in factor endowments.

Markusen argues that among ownership advantages, the majority is knowledge capital related. Knowledge capital includes R&D; human capital, such as scientific and technical workers; proprietary knowledge like patents, blueprints or procedures; marketing assets, such as brand name, goodwill, and trademark; advanced technologies of production; product complexity; innovations; and differentiation. Markusen stresses that knowledge capital rather than physical capital, is a key characteristic for FDI and supports the point with three features of knowledge-based assets:

1) The output of these assets can be more easily transferred and used for production at the foreign affiliates (**fragmentation**) compared to physical capital. The examples are engineers

and managers who can work across different locations. This property is relevant for both horizontal and vertical FDI (Markusen J. , 2002).

2) The production of knowledge-based assets requires more skilled labour (**skilled-labour-intensity**), compared to production. This feature creates a reason for geographical fragmentation as it happens within vertical MNEs. The underlying principle is to locate skilled-labour-intensive activities, such as R&D, management or marketing, at the favourable locations where the necessary workforce is plentiful and relatively cheap. The production facilities are in turn located where non-skilled labour can be obtained cheaply.

3) The knowledge-based assets can transfer their productivity fully to multiple locations (**jointness**). The author argues that once obtained or developed, even though costly, knowledge-capital assets can be transferred at relatively low costs to foreign affiliates, while the value or productivity of these assets is preserved. Markusen notes that this property of knowledge capital is not available in the market, and is especially important for horizontal FDI, though quite relevant for the vertical FDI as well.

2.1.2 Internalization advantage

Internalization advantage is the advantage firms get in the case when they own and operate the assets abroad instead of leasing or renting them out. Dunning (1988) lists internalization-incentive advantages as following: Control over suppliers, inputs, technology and market outlets; control over the quality of intermediate and final products; ability of cross-subsidization, transfer pricing, predatory pricing, leads and lags; ability to avoid or exploit government interventions (quotas, tariffs, tax differences, etc.); ability to capture economies of interdependent activities; avoidance of contractual costs (partners search and negotiations); and avoidance of property rights enforcing costs.

As Dunning states, internalization advantage explains why MNEs exploit ownership advantages internally within a firm rather than by means of contracting with third parties but does not differentiate between FDI and export.

Internalization advantage is highly relevant for the knowledge-capital model. As the knowledge-based asset can be easily transferred between facilities, it can be as well easily dissipated (Markusen J. , 2002). In order to preserve the knowledge asset value, firms have to transfer it internally to keep it from falling into the hands of competitors.

2.1.3 Location advantage

Location advantage arises when firms can operate abroad more effectively than within their national boundaries. It is beneficial for the enterprise to combine O and I advantages with factor endowments in a country. Dunning (1988) lists following variables as Location-Specific: Input prices, quality and productivity (labour, energy, materials, components, semi-finished goods); spatial distribution of natural and created resources endowments and markets; international transport and communications costs; investment incentives and disincentives; artificial barriers (import control, quotas) to trade in goods; infrastructure provisions (commercial, legal, educational, transport and communication); psychic distance (language, culture, business, customs); economic systems and policies of the government, institutional framework for resource allocation.

According to Markusen (2002), location advantages differ for horizontal and vertical FDI and depend on the purpose of the investment.

Serving the local market of the host country is a horizontal type of FDI and location advantages for this type of investments are 1) a large host-country market size, which can compensate for the costs of establishing a plant there, otherwise the market can be served with export, and 2) existence of high trade costs as import tariffs, quotas and transportation costs that make serving the market by means of export expensive.

For the investments that tend to use a host country as an export platform for serving other markets, or as a production facility for final assembly and delivering the products back to MNE's home country (vertical type of FDI), location advantages are low trade costs, which make it profitable to buy and sell intermediate and final goods to and from the host country. Factor price difference arises as an important advantage in this situation; therefore, location advantage will be low input costs or abundance of low-waged unskilled labour for the final assembly plant. For R&D facility, on the contrary, an abundance of high-skilled labour will be a location advantage.

The OLI framework is highly representative and can be applied to analyse most types of FDI as illustrated in Table 1.

Table 1: OLI advantages by type of FDI

Type of FDI	Ownership advantage	Location advantage	Internalization advantage	Illustration of types of activities
Resource based	Capital, technology, access to market, complementary assets	Possession of natural resources and related infrastructure	Ensure stability of supplies at right price, control of markets, to obtain technology	Oil, copper, bananas, cocoa, pineapples, hotels
Market based	Capital, technology, information, management and organizational skills, surplus R&D, economies of scale, trademarks, goodwill	Material and labour costs, markets, government policy	Reduction of transaction and information costs, buyers' ignorance or uncertainty, property rights protection, quality control	Computers, pharmaceuticals, motor vehicles, cigarettes, insurance, advertising
Rationalized specialization	Capital, technology, information, management and organizational skills, surplus R&D, economies of scale, economies of scope, access to markets, geographical diversification	Economies of product specialization and concentration, low labour costs, incentives to local production by host governments	Reduction of transaction and information costs, buyers' ignorance or uncertainty, property rights protection, quality control, gain from common governance, economies of vertical integration	Motor vehicles, electrical appliances, business services, consumer electronics, textile and clothing, cameras, pharmaceuticals
Trade and distribution (import and export merchandising)	Market access, products to distribute	Source of inputs and local markets, need to be near customers, after-sales service	Need to protect quality of input, need to ensure sales outlets and to avoid underperformance or misrepresentation by agent	Variety of goods, particularly those requiring contact with final consumers and sub-contractors

Source: (Dunning J. H., *Explaining International Production*, 1988, p. 42)

Dunning (1988) also mentions that OLI characteristics may vary according to the consideration scale: country, industry or firm level as presented in Table 2.

Table 2: OLI characteristics according to country, industry, firm-specific consideration

	Country	Industry	Firm
Ownership	Factor endowments (resources and skilled labour) and market size and character. Government policy towards innovation, protection of proprietary rights, competition and industrial structure, government controls on inward direct investment	Degree of product /process technological intensity; nature of innovations; extent of product differentiation; production economies (economies of scale); importance of favoured access to inputs and/or markets	Size, extent of production, process or market diversification; extent to which enterprise is innovative or marketing-oriented, values security, stability; extent to which there are economies of joint production

Internalization	Government intervention and extent to which policies encourage MNEs to internalize transactions (transfer pricing); government policies towards mergers; differences in market structures between countries (transaction costs, contracts enforcement, buyers' uncertainty, etc.); adequacy of technological, educational, communications etc. infrastructure in host countries and ability to absorb contractual resource transfers	Extent to which vertical and horizontal integration is possible/desirable; extent to which internalizing advantages can be captured in contractual agreements (early and later stages of product cycle); use made of ownership advantages; extent to which local firms have complementary advantages to those of foreign firms; extent to which opportunities for output specialization and international division of labour exist	Organizational and control procedures of enterprise; attitudes to growth and diversification (boundaries of a firm's activities); attitudes toward subcontracting ventures (licensing, franchising, technical assistance agreements etc.); extent to which control procedures can be built into contractual agreements
Location	Physical and psychic distance between countries; government intervention (tariffs, quotas, taxes, assistance to foreign investors or to own MNEs)	Origin and distribution of immobile resources; transport costs of intermediate and final goods products; industry specific tariff and non-tariff barriers; nature of competition between firms in industry; can functions of activities of industry be split? Significance of 'sensitive' locational variables, e.g., tax incentives, energy and labour costs	Management strategy towards foreign involvement; age and experience of foreign involvement; (position of enterprise in product cycle); psychic distance variables (culture, language, legal and commercial framework); attitudes towards centralization of certain functions, e.g., R&D; regional office and market allocation; geographical structure of asset portfolio and attitude to risk diversification.

Source: (Dunning J. H., *Explaining International Production*, 1988, p. 42)

2.2 An Imbalance Theory

The OLI framework was further developed by H. Chang Moon and Thomas W. Roehl (1993) by forming an Imbalance Theory. This theory presents an alternative view on ownership advantages when they consider deficiency of ownership advantages (ownership disadvantages) as a driver for foreign direct investments. If a firm cannot compensate an ownership disadvantage in its home country, it will compensate this deficiency in the foreign country. An imbalance between surplus and deficient factors of the firm's resources motivates a firm to invest abroad. This model can be used to explain strategic foreign direct investments and investments from less developed countries, together labelled as unconventional FDI. The explanation of these investments by the classic theories, conventional FDI, (using ownership advantage as a reason for FDI) fails since many firms which are conducting FDIs don't possess any significant ownership advantage. The Table 3 presents conventional and unconventional types of FDIs (Moon & Roehl, 2001).

Table 3: Typology of both conventional and unconventional FDI

	Conventional FDI (ownership advantages)	Unconventional FDI (ownership disadvantages)
Market-seeking	Conventional advantages (e.g., technology, capital)	Small home market
Factor-seeking	Conventional advantages (e.g., technology, capital)	Lack of key technology or resources
Oligopolistic reaction	Leader Conventional advantages (e.g., technology, capital)	Follower Competitive threat
Risk diversification	Financial Reason Surplus capital	Political Reason Political instability
COO	Good home image	Bad home image

Source: (Moon & Roehl, *Unconventional foreign direct investment and the imbalance theory*, 2001, p. 200)

2.3 The Diamond Model

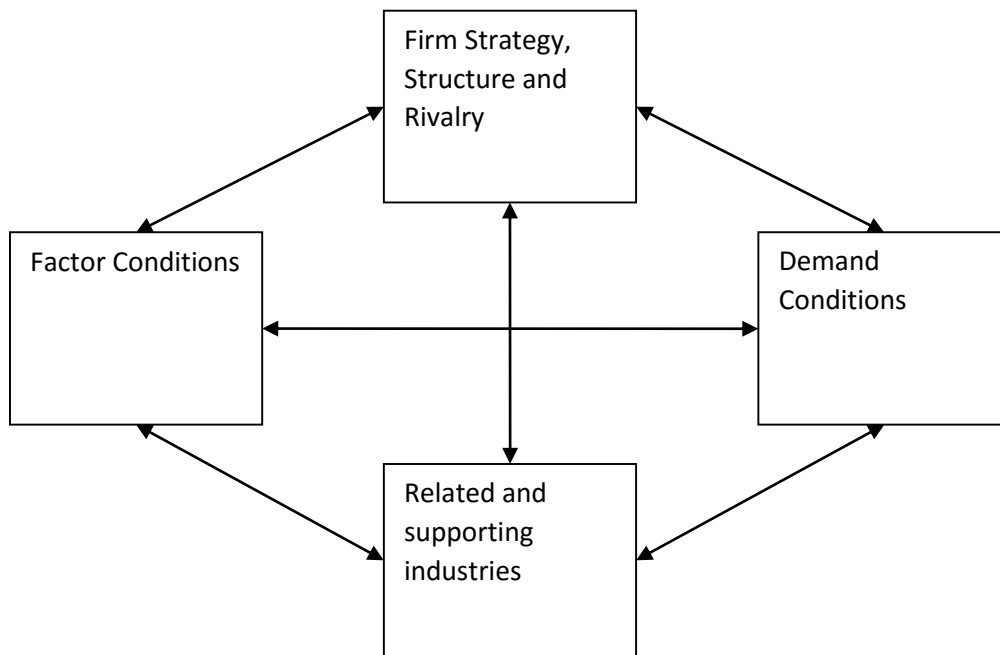
According to Porter (1990), “national prosperity is created, not inherited”. This point is very important for explaining why some countries originating from the same background develop and evolve economically at different rates. Porter states that the nation can be competitive as long as its industry has the capacity for innovation, and competitive advantages must be sustained. To sustain a competitive advantage can be difficult due to fierce rivalry in the present globalized world.

National components such as culture, national values, economic structure and institutions contribute to the competitiveness of the country and lead to the success of certain industries where the environment is dynamic and challenging.

Porter developed a model called The Diamond of National Advantage, which is formed with four attributes of the nation:

1. Factor conditions;
2. Demand conditions;
3. Related and supporting industries;
4. Firm strategy, structure and rivalry.

Picture 1: Determinants of National Competitive Advantage



Source: (Porter, *The Competitive Advantage of Nations*, 1990)

These determinants shape the conditions where the local companies appear in, grow and learn to compete. Additionally, the government can influence these conditions by stimulating the factors that makes them competitive.

2.3.1 Factor conditions

Factors of production are possessions of the country: natural resources, land, infrastructure, capital, human capital or scientific base. According to Porter (1990), the basis for an advanced economy is formed by sophisticated industries, where factors of production are created rather than acquired from existing ones, as such factors are difficult to copy. Knowledge-intensive industries benefit from skilled labour and scientific base, while basic factors, such as labour pool or raw material base do not create and sustain competitive advantage. The most valuable factors are those who are specialized to industry needs, because such factors are often scarce and difficult to imitate. Thus, among the most important factors of production, Porter mentions those that "involve sustained and heavy investment and are specialized" (Porter, 1990, p. 79).

Nations become successful in those industries where a country has favourable factor conditions, and manages to utilize them to create an advantage. Porter uses an example of the Netherlands, the world leader in flowers export, which has done a lot of research and development on all the stages of flower delivery from cultivation until packing and shipping.

Furthermore, Porter suggests that basic factor disadvantages in the long-run in some cases can contribute to the creation of competitive advantages, as disadvantages motivates companies to upgrade and develop other areas. An example of this is Japan, a country with very little natural resources that has specialized its production in other areas.

2.3.2 Demand conditions

Demand conditions are characterized by "composition and character of the home market." The significance of demand characteristics can overweigh the importance of the market size. Demand conditions leading to the development of competitive advantages are formed by the influence of internal customers and their demand. If consumers in a country are sophisticated and high-demanding, this stimulates firms to innovate and improve their products in order to meet the demands. This pressure to meet high standards and innovate makes the companies competitive on the foreign markets as well. Local buyers can also indicate the features of global market trends and serve as early indicators of market changes for domestic companies, especially in globalized industries.

2.3.3 Firm strategy, structure and rivalry

Every country differs in how firms are structured and how management is performed. As certain management styles and firm structures are better suited for certain types of industries than other, the nation can develop competitive advantages in industries that work well with the firm strategy that traditionally exist in the country. According to Porter (1990), examples are German management styles who are adherent to solid hierarchies and organization, which is suited for engineering and technical industries, or the Italian style of small family businesses that is orientate on niche markets, let the companies to be extremely flexible, customized and responsive to changing customer needs, which can be important in the fashion industry. The level of education and talent, work culture and commitment that different nations possess, influences the competitive advantage. Another powerful stimulus for development of competitive advantage is competition between the companies in the domestic industry. Local rivalry can be beneficial for the national industry, as it stimulates companies to innovate and improve, making them more competitive on the international stage. Geographic concentration enhances the power of domestic competition in its turn. Rivalry within a country eliminates the advantageous effect of the national factors of production, as all the companies in a particular country can access local land, resources, human capital, etc. Thus, companies are pushed to

move beyond those advantages and develop competitive and sustainable advantages such as efficient technologies, know-how, skilled labour, researches, innovations, etc.

2.3.4 Related and supportive industries

According to Porter (1990), related and supportive industries can create competitive advantages for the companies competing worldwide. Advantages arise if upstream suppliers are cost-efficient, delivering on time and are responsive to the downstream industry demand or, even more importantly, related and supportive industries are internationally competitive. Geographical proximity can play an important role, as it can enable companies to embed more innovative and advanced production practices. The communication and information flow, exchange of ideas and expertise can be empowered by geographical proximity as well, giving the companies an opportunity to influence suppliers' technical exertions and "accelerate the pace of innovations". If related and supportive industries are well-developed and strengthens the position of the main industry, this contributes to the creation of national advantage.

2.3.5 The role of the government

In this model, Porter (1990) also pays attention to the role of the government in the development of competitive advantage. Companies that are heavily subsidized and protected by the government are often uncompetitive and their development is stagnating. Domestic competition, on the contrary, pushes companies to improve quality and lower costs, develop new products and improve processes. As they cannot rely on the advantages that they have gained from simply being in a particular nation, companies have to go beyond these advantages and thus develop sustainable ones. The government can also strengthen the competitive advantages by strengthening the conditions that supports the competitive advantage. Porter formulates basic principles that government should adopt if it wants to be supportive for the national competitiveness, especially important is to stimulate innovations, encourage domestic competition and embrace changes.

2.3.6 Interplay between the attributes in the diamond

Porter points out that the attributes of the competitive advantages that are represented by the points on the diamond, are self-reinforcing, implying that the diamond replicates the system. For example, domestic rivalry can improve the demand conditions by making the consumers used to a variety of different products and higher innovation, which in turn makes them demand even more products and innovation. Similarly, the related and supportive industries can strengthen the factor conditions by improving the knowledge in the workforce or the scientific

base. All the different attributes interplay, and can have a positive influence of the development of the other attributes. In this way, a competitive advantage can become self-sustaining and persist over a long period of time.

2.3.7 The Diamond Model & Cluster Theory

This interplay in the diamond can function as a system for the formation of clusters in competitive industries. Porter argues that a country usually has more than one competitive industry if there are national competitive advantages. Competitive industries in this environment are not diffused but rather linked through common customers, technology or channels, or in other words, vertically or horizontally interacting. The interplay between the points on the diamond leads can lead to a region becoming more productive than other regions, which can lead to industrial clusters. Once a group of industries forms a cluster, they become mutually supportive.

2.4 The Cluster Theory

In *The Competitive Advantage of Nations* (1990) Michael Porter presented a theory which addresses clusters as a potential source of competitive advantage. He noted that the role of location has changed since the competition is more dynamic than it used to be before. Firms cannot rely fully on advantages arising from location endowments, i.e. input prices of cheap labour, anymore since the global sourcing allows their competitors to reduce their disadvantages. Instead, the companies have to focus on more innovative and productive use of their resources. Porter observed that some innovative and competitive companies are geographically concentrated and that a substantial part of the competitive advantage originates from outside of the company, or even the industry, in the location of its business units (Porter, 2008).

A cluster is ‘a geographically proximate group of interconnected companies and associated institutions in a particular field, linked by commonalities and complementarities’ (Porter, 2008, p. 215). Its boundaries are defined by the linkages and complementarities across industries and institutions that are most important to competition (Porter, 1998). It is usually contained within political boundaries, but can also span across national borders. Clusters usually include many actors like suppliers, service companies, components, machinery, financial institutions, complement producers, government, agencies, training and educational institutions, R&D centres and trade associations supporting the cluster. To identify the whole cluster, Porter suggests analysing its different layers:

- 1) Large firm or concentration of alike firms
- 2) Upstream and downstream firms and institutions in the vertical chain
- 3) Horizontal chain – supply-side linkages - companies that use similar specialized inputs or technologies
- 4) Institutions providing specialized skills, technology, information, capital, infrastructure
- 5) Government, other regulatory bodies that have a significant influence on the participants in the cluster

Clusters by their complexity captures linkages, complementarities, technology spillovers, marketing, information, customer needs across firms and even industries. These connections are important for competition, productivity, and potential innovations. Most of the cluster members are not direct competitors because the cluster consists of different segments, but there is also rivalry between companies in the same segment, which can benefit the cluster by stimulation innovation. Clusters give a possibility for cooperation and improvement since most of the cluster participants share common needs and opportunities and face alike constraints in productivity. A cluster can emerge for many different reasons, but the roots can often be traced to historical circumstances, sophisticated demand patterns, rich access to resources or sometimes chance events.

According to Porter, clusters affect competition in three areas. Firstly, it increases the productivity of its participants. Secondly, it increases their capacity for innovation and productivity growth. Thirdly, it stimulates new business formation, which further enhance innovation and cluster expansion. To enjoy the full benefits of the clusters, the firms need to actively participate in the community.

2.4.1 Productivity

Clusters can provide its participants with productivity enhancing advantages. They usually involve benefits of public goods that are location-specific. They depend on physical proximity, contact and close and ongoing relationships.

In a cluster, firms can get an access to a pool of **specialized and experienced employees**. This can significantly lower search and transactions costs connected with recruiting. Furthermore, a cluster can usually offer **superior or lower-cost access to inputs** if the network of local suppliers is available. Local sourcing can be efficient since it lowers the need for inventory,

has lower transaction costs, minimizes importing costs and delays, and hinder opportunistic behaviour of suppliers, who could otherwise overprice their products or not meet the commitments. Furthermore, productivity can be enhanced by better **access to information** as market, technical or other specialized information can be more efficiently accessed in a cluster. Other cluster benefits include advantage of **complementarities**. Overall quality or efficiency, and technological linkages can be achieved through coordinating activities and mutual pressure for improvement. For example, joint marketing can be more efficient and have a positive impact on a reputation of a given location. Additionally, cluster participants can benefit from the **access to institutions and public goods**. They can for example recruit employees who were trained in local programs and save the costs of internal training, receive expert advice for lower costs or profit from fair trades and other activities which are jointly beneficial for cluster members. Additionally, buying from a cluster can be more beneficial to customers, as they get access multiple vendors in a single trip.

2.4.2 Innovation

Cluster provides a good environment for innovation. Firms can faster and more clearly perceive market opportunities; especially new buyer needs and technological or operating possibilities. The presence of local suppliers, partners and specialized personnel can provide capacity and assist the innovation process. Due to better availability and lower costs of inputs, a firm can engage in more experimental innovation processes. Additionally, strong competition within the cluster can increase innovation, by forcing companies to innovate to stand out. However, a cluster can also potentially set back the innovation process if the participants share a uniform approach or resort to group thinking.

2.4.3 Business Formation

Because of higher productivity and innovation, clusters provide a suitable environment for the emergence of new businesses. They provide lower barriers to both entry and exit and a potential local market. The necessary assets, inputs, personnel, skills are available. In addition, the presence of other firms, which manage well, lowers the risk of starting a business in this location. Clusters also attract existing firms for relocation. By attracting new businesses, the cluster can evolve and become a self-strengthening system that can retain competitive advantages over time.

PART II: Introduction to Case Study

3 Czech Republic & The Hyundai Motor Company

3.1 Introduction

In our study of the attractiveness of foreign direct investment in the Czech automotive industry, we will use Hyundai's 2006 investment as our case study, to illustrate how the investment climate affects a real-life decision. In this section, we will introduce the important information that might have played a role for Hyundai when deciding to locate in the Czech Republic. It contains a quick introduction to the Hyundai Motor Company and the Czech Republic, and we will present the most important facts about the Hyundai investment in the Moravian-Silesian Region of Czech Republic.

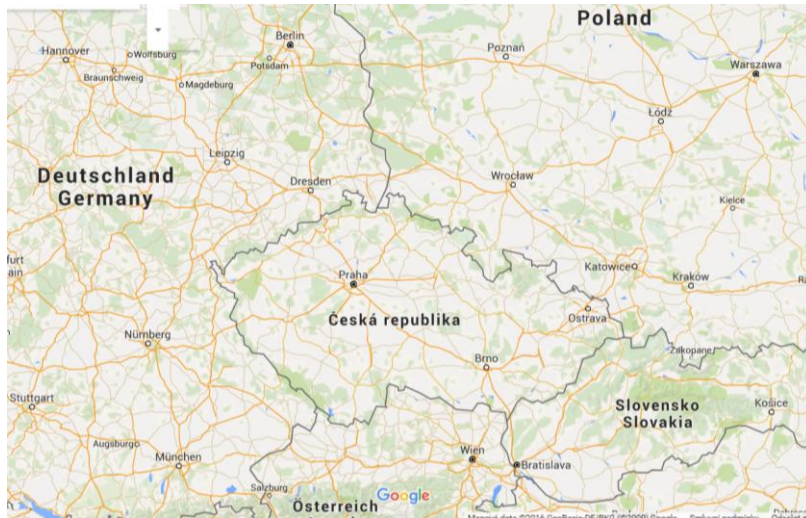
3.2 Hyundai Motor Company

The Hyundai Motor Company (further referred to as Hyundai) was founded in 1967 in South Korea for assembling and selling the American Ford Cortina in Korea. Hyundai designed its first Korean car, named Pony, in 1975, and became a national brand of South Korea. Soon Hyundai engaged in international expansion, first with exports, and then by establishing its operations in foreign markets. Hyundai has a comprehensive network of R&D centres, design centers and seven overseas manufacturing plants, in the U.S., India, China, Turkey, the Czech Republic, Russia and Brazil, together with three Korea-based plants. It is the fourth leading car producer in the world with global market share of 5,7%, production capacity of 495 600 cars and sales revenue of 81,49 billion USD (Hyundai Motor Company, 2015). Hyundai is owned by Hyundai Motor Group, which also owns a number of other companies, including KIA Motors Corporation, automotive parts producers Hyundai MOBIS, Hyundai DYMOS and others.

3.3 The Czech Republic

The Czech Republic, covering an area of 78,866 km², is located in the Central Europe and borders with Germany, Austria, Poland and Slovakia, see Picture 2. The capital city is Prague, and the country is divided into 14 administrative regions. The population is about 10.5 million, where 1.25 million people live in the capital. The official language is Czech and the currency is Czech koruna (CZK).

Picture 2: Map of the Czech Republic



Source: Google Maps, 2016

It is a developed country, with a high standard of living and a high-income economy. Before the Second World War, Czechoslovakia was one of the most industrialized countries in the world with a standard of living comparable to countries in Western Europe. The War and the following Communist regime had a negative impact on country's development. In 1989, after the Velvet revolution, Czechoslovakia returned to a liberal democracy and opened to global markets. In the following years, it went through the transformation process from state-planned to market economy. In 1993, Czechoslovakia peacefully split into two independent countries – the Czech Republic and Slovak Republic. Czech Republic has since developed its international relations and become a member of several international organizations, most importantly NATO, OECD, EU and the Schengen Area.

3.4 The Hyundai investment in the Czech Republic

Hyundai's investment was the biggest greenfield investment in Czech history. Hyundai decided to build a manufacturing plant for passenger cars in the Czech Republic for supplying the European market in May 2006. Hyundai's total investment was worth 1185.36 million EUR (34 428.9 million CZK) and had to be authorized by the European Commission. The manufacturing plant holds a complex assembly line and primary capacity of 200,000 cars per year, which were subsequently expanded to 300,000 cars per year. The factory complex further includes a mill, welding and paint shop and transmissions production. In addition to the main plant, other suppliers followed Hyundai and established factories in the same region. Most notably there were further investments by suppliers owned by Hyundai Motor Group; Mobis Czech, which is producing modules such as chassis module, cockpit, and front mask wagon;

Hysco Czech, which is producing steel components and products that reduce the weight of a vehicle; and Dymos Czech producing automobile seats. (European Commission, 2007) Hyundai's plant and its suppliers shows Picture 3.

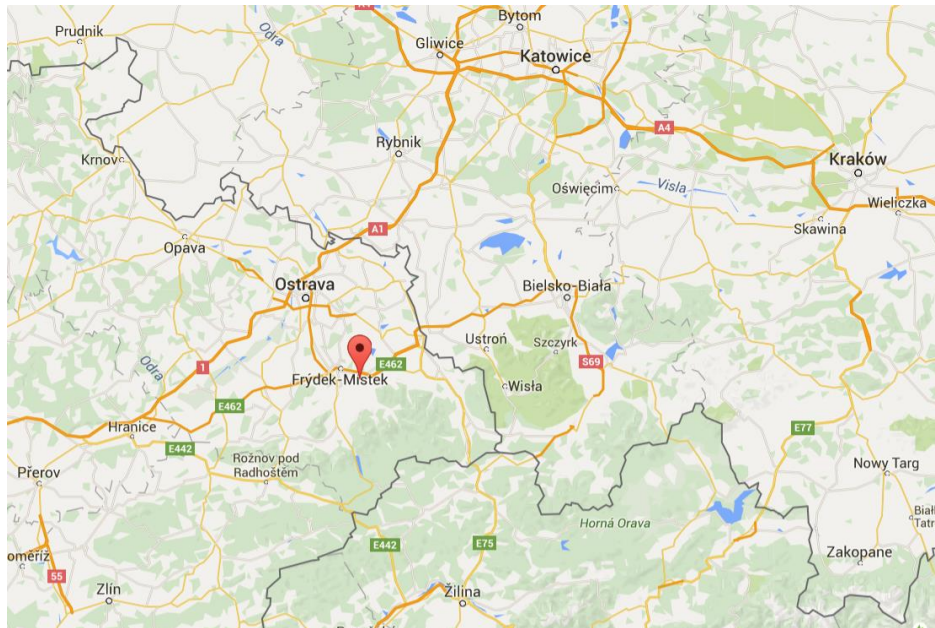
Picture 3: Hyundai's plant in Nošovice together with Dymos, Mobis and Hysco (Hyundai Steel)



Source: (Hyundai Motor Manufacturing Czech, 2016), adjusted by author

The manufacturing plant is located in the Nošovice industrial zone, which is a small town in the Moravian-Silesian Region, close to the cities of Frýdek-Místek and Ostrava, and a few kilometres from the Slovak and Polish borders (see Picture 4). The plant is also located at close proximity (around 80km) to the KIA factory in Žilina, which is another OEM in the portfolio of Hyundai Motor Group (Paskovska, 2006).

Picture 4: Position of the Nošovice industry zone and its proximity to neighbouring countries

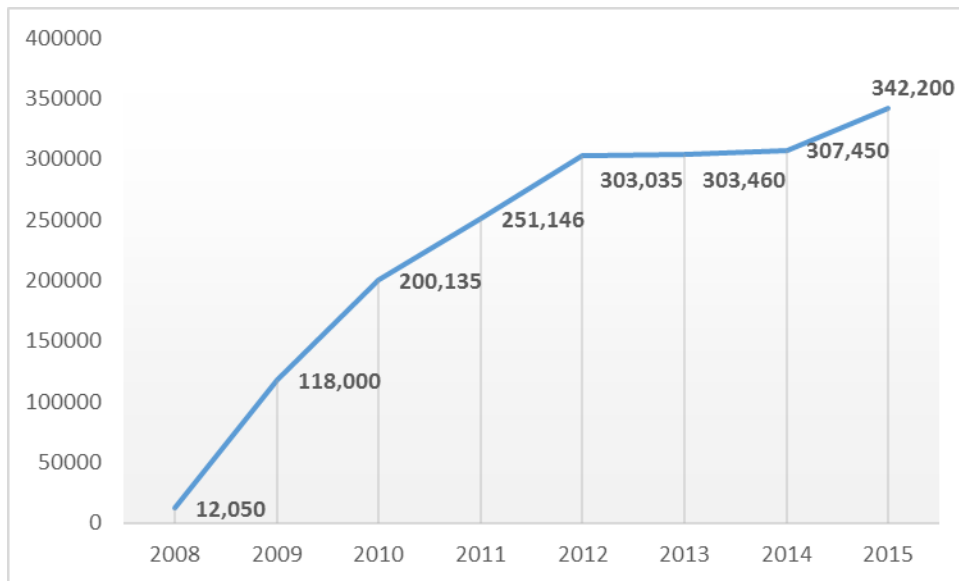


Source: Google Maps, 2016

As part of the plan to move into Europe, Hyundai first opened the Hyundai Motor Europe Technical Centre GmbH (HMETC) in Rüsselsheim in 2003. The centre is a joint facility for Hyundai and Kia, and serves as the European headquarter and main R&D facility for Hyundai Motor Group in Europe. (Hyundai Motor Group European Technical Center, 2016)

The Hyundai factory in the Czech Republic reached its maximum capacity of 300,000 cars per year after launching the three-shift operation in 2012 and will further extend it to 350,000 in 2016 (Automotive News Europe, 2016), see Figure 1. It produces Hyundai i30, Hyundai i30 wagon, Hyundai i30 3-dr, Hyundai ix20 and Hyundai Tucson, which were designed at the Technical centre in Rüsselsheim primarily for the European market. It employs 3440 people, where 97% are Czech, and it has created an additional 7,000 local jobs (Hyundai Motor Manufacturing Czech, 2016). Hyundai uses more than 60% of local suppliers, 3 principal suppliers are located in the factory zone, and 15 other principal suppliers are located in the Czech Republic. Annually, it purchases supplies worth of approximately 1.3 billion EUR from European companies, and having an annual turnover of approximately 3.2 billion EUR. It is well evaluated in the Czech business environment and Hyundai received following awards; Excellence Award in Czech National Award for Quality (2011), Company of the Year (2012) and Employer of the Year (2012). (Hyundai Motor Manufacturing Czech, 2016)

Figure 1: Personal car production at HMMC, number of cars



Source: (Automotive Industry Association, 2016)

4 Trends in the global automotive industry

4.1 Introduction

To understand which factors are relevant for Hyundai when choosing the location for the production plant, it is important to understand the general trends in the automotive as a whole. This section will give an overview of the most important trends in the global automotive industry, and its implications for the automotive industry in Central and Eastern Europe. We will then build on this section when we go into more detail about the Czech automotive industry later.

4.2 Global automotive industry

The automotive industry is one of the most globalized industries in the world (Dicken, 2011). Historically, production and trade were geographically concentrated in three main regions, North America, Western Europe and Asia. However, the economic geography of the industry is changing (Sturgeon & Florida, 2000), and during the previous decade producers increased their presence in new regions in Asia, Latin America and Eastern Europe, where demand growth was expected (Dicken, 2011). The global automotive industry is dynamic and changing rapidly, which has led to fierce competition (Halesiak, Mrowczynski, & Orame, 2007). Halesiak et. al. points to external and internal factors that intensifies the challenges the industry is facing. In the external factors the most prominent are weakening demand in traditional markets, especially Western Europe and the U.S.; rising costs on automotive-related

commodities, such as steel, aluminium, copper and plastic; and growing oil prices that shifts consumer demand towards more fuel-efficient alternatives. In addition, Halesiak et. al. mentions three important internal issues within the industry: cyclicity, overcapacity and growing competition from low-cost countries. They also point out that these issues affect the suppliers as well as the car producers themselves.

In response to these issues, the industry is changing both the production methods and the location of manufacturing plants. The change in industry initially gave an entry of Japanese producers, who became strong competitors to traditional car producers in North America and Europe. Their main competitive advantage was in supply chain management where they employed the use of just-in-time delivery, which was the opposite approach to the broadly used EOQ model (economic order quantity), and Total Quality Management. By this strategy, Japanese manufacturers maintained a lean production system, with a minimum hold of inventories in the whole supply chain. This system was later widely spread and implemented all around the world. It significantly influenced a spatial distribution of supply chains, which needed to be concentrated in order to maintain lean delivery and flexibility. (Kim & McCann, 2008).

The fierce competition and increase in automotive-related commodity prices forced the manufacturers to change their strategy and locate plants in low-cost areas. Dicken (2011) argues that complexity of the production network in Europe is the highest in the world, reflecting strategies of the industry, which was nationally oriented in the past, and had to adapt and change in context of rising global rivalry. The automotive market in Central and Eastern Europe has benefited from the strategy of moving plants to low-cost areas. Its proximity to both Western and Eastern European markets and lower production costs has made it a strategically important region, not only for European manufacturers, but also from Asian companies, such as Hyundai, looking to develop their presence in the European market (Halesiak, Mrowczynski, & Orame, 2007).

4.3 Hyundai global strategy

According to (Wright, 2009) Hyundai's strategy developed through four periods: an establishment for local manufacturing from 1962 to 1971, development of local models from 1972 to 1982, mass production in 1983 to mid-1990s, and global production overseas from the late 1990s.

Supported by the Korean government as a local producer, Hyundai reached a high capacity of production and economies of scale in a short time. Hyundai started exporting already in 1984 (Chung, 1998), while it was expanding domestic sales at the same time (Wright, 2009). The other specific feature of Hyundai's global strategy was establishing subsidiaries in different parts of the world, disregarding physical distance or cultural proximity. The entry mode varied from collaboration and joint ventures to mergers, acquisitions and new plant establishments (Wright, 2009), (Chung, 1998).

Wright (2009) describes the globalization of Hyundai with three distinctive themes: 1) Hyundai growth was depended on international expansion of sales, 2) globalization of the product began before the company developed competitive advantage, 3) it built competitive advantage on its experience in international markets.

Hyundai began exporting to Canada in 1984 and to the U.S. in 1986 (Chung, 1998). Exporting was successful and Hyundai entered Canada with direct investments and plant establishment in 1988. Unfortunately, a more than \$380 million investment into a 100,000-capacity plant was unsuccessful. In a few years, Hyundai had to withdraw manufacturing from Canada and close the plant due to low productivity and unsatisfactory quality at the plant (Chung, 1998). Hyundai were attracted to Canada by Quebec provincial governments grants, but had not assessed the fact that the closest local suppliers were on the distance of miles from the plant. The necessity to buy parts from these local suppliers elevated the cost of production, eliminating the positive effect of high level of automation at the plant (Wright, 2009).

However, this failure did not reverse Hyundai's global strategy. In 1993, they took part in a joint venture in Turkey with a capacity of 60,000 vehicles. Due to low wages level, the plant was operated with labour-intensive technologies, unlike domestic plant in Korea. The majority of parts were shipped from Korea. This investment was not successful and sales were much lower than plant capacity (Wright, 2009).

In 1996, Hyundai established a greenfield investment of \$457 million in India, with the establishment of a fully integrated plant that included both production facilities and R&D facilities with a production capacity of 120,000 vehicles.

The experience of the Canadian and Turkish plants taught Hyundai to be critical with the selection of plant location. After analysing the location of consumers, local suppliers, nature of labour capital and utility conditions, the decision was taken in favour of South India, where cheap marine and railroad transportation offset the drawback of distance from the consumer

market in New Delhi. Being the only manufacturer in the region, Hyundai could acquire a higher market share (Wright, 2009). Encouraging experience in India inspired Hyundai to step into China, which was also successful.

Hyundai decided to return to North America again in 2002, this time to USA as export increased almost four times since 1998, touching 346,000 in 2001 (Wright, 2009). The plant establishment followed the pattern of highly integrated plants in India and China. However, the plant located in Alabama had the most innovative production technology with a high level of automation: a body shop capable of producing for four models, and an assembly line able to operate over monocoque and frame type models (Wright, 2009). The supply base was divided between 40 % local and 60 % Korean firms. The company improved products adapting them to the taste of American consumers.

In a global context, a production base in Europe, which became the second biggest export destination already in the late 1990s, should complement strong presence in American and Asian markets. Research plants were established in America, Japan, Korea and then in Germany. This time, Hyundai was well equipped and ready to enter the heart of the European Union with direct investments. According to officials, the key conditions of a successful expansion into new regions were wise location and efficient utilization of local resources.

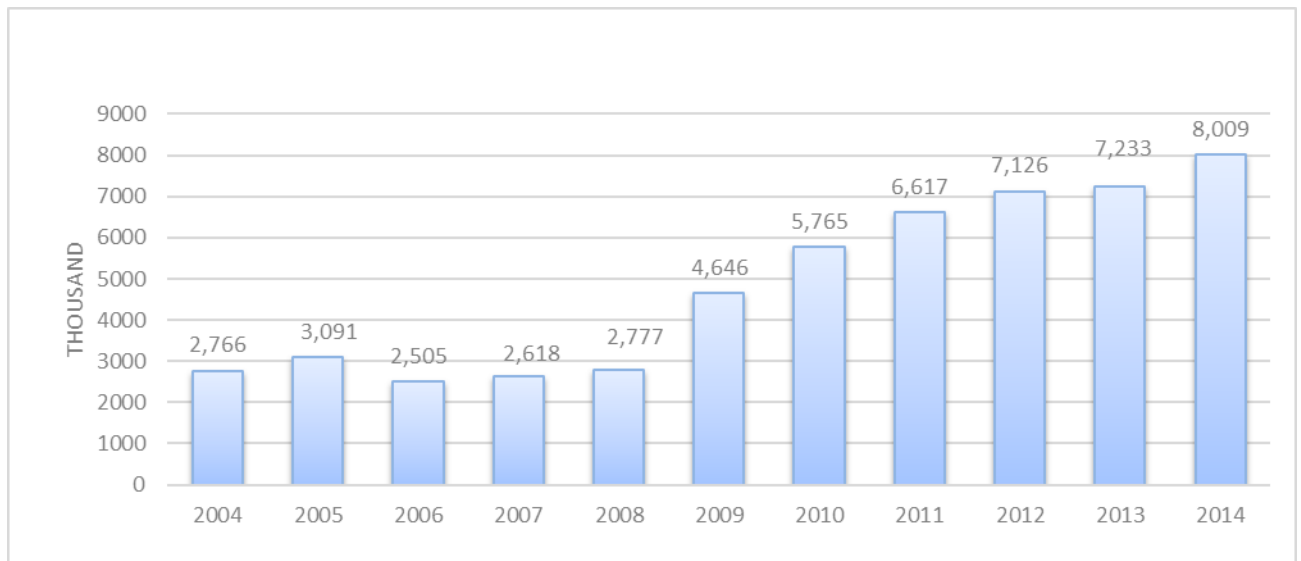
Hyundai has adopted the strategy of lean production and just-in-time delivery as well, building tight relation with suppliers and wisely selecting the locations for production units. The implementation of supply chain harmonization through establishment of production and sales control (P/SC) department in 1980s and its further development allows Hyundai to minimize inventories being able to sustain competitive lead-time, according to Hahn et. al. (2000). Hyundai’s globalization strategy has been efficient and the goal of the automaker of “being among the top-five carmakers” was even over performed. Hyundai has become the fourth largest producer in the world by 2010, as shown in Table 4. Figure 2 shows Hyundai’s global production, and corresponds to the increasing market share.

Table 4: Hyundai global rank and market share by production volume

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Hyundai global rank	9	9	10	10	8	5	4	4	4	4	4
Hyundai global market share	4.37%	4.73%	3.68%	3.63%	3.99%	7.68%	7.42%	8.28%	8.42%	8.04%	8.83%

Source: Author calculations based on OICA Statistics (2016)

Figure 2: Hyundai global production, thousand units



Source: Author calculations based on OICA Statistics (2016)

This success is considered impressive, taking into account that Hyundai was a latecomer in the industry and had no technological advantage (Wright, 2009). Hyundai managed to achieve its competitive position by improving quality and productivity. The company adopted lean production and reorganized logistics creating “value-added network” with permanent suppliers, which enabled just-in-time delivery, control over logistics chain and improved its flexibility. Hyundai was a primary innovator in terms of supplier association use and subcontracting. Even more, the company invested in subcontractors enabling bilateral design of components. The selling point of Hyundai is the highest quality and reliability, which were appraised by consumers and Hyundai was ranked as a fourth-best automaker in Consumer Reports, which assess performance, comfort, utility and reliability of approximately 300 vehicles. (Monroy & Boltaboyev, 2015)

PART III: Analysis

We will now begin our analysis of automotive FDIs in the Czech Republic and Hyundai’s investment in the Moravian-Silesian Region. We will first analyse the automotive industry in the Czech Republic as a whole, to see which factors contribute to it being an advantageous location for Hyundai’s production plant. We then turn to the specific region where Hyundai’s factory is located, and apply the cluster theory to analyse what makes this region in particular interesting for Hyundai. Afterwards, we will analyse the competitive advantage in the automotive industry in the Czech Republic through Porter’s Diamond of National Advantage,

and we will then will analyse if the Hyundai had the necessary ownership, internalization and location advantages to invest in with use of the OLI framework, supported by the knowledge-capital model. As we are interested in how the relevant factors that affected Hyundai's decision to invest, the analysis is based on the situation in 2006 when Hyundai signed the investment contract, unless explicitly noted.

At the end of our thesis, we will summarize our findings, and provide a conclusion to our research question.

5 Motivation for investment

To be able to find out what made Hyundai invest in the Czech Republic, we first have to analyse investor's motivation and reasons why it decided to build their factory in Europe. Generally, the main motivation for companies is to maximize their profit, increase market value and to become more competitive in the global markets. The pressure of competition has become a key driver for FDI, especially for companies from developing economies. Companies have to pay more attention to their competitors, which can be found in many forms both in foreign and domestic markets. FDI can then serve as a mean for strengthening company's position and promoting its growth in the global market. (United Nations, 2007)

Hyundai's decision to locate one of its plants in Europe, in the Czech Republic, can be primarily regarded as a market-seeking type of investment because the plant was built in order to manufacture cars for the European market, which was its second biggest overseas market (Automotive News, 2005). One of the reasons why Hyundai is engaging in overseas expansion can be reflected in its customer-first philosophy (Hyundai Motor Company, 2006). Hyundai seeks to improve its market position and brand image through getting closer to customers. By local production it believes to be more known and accepted by Europeans consumers for which it was an unknown Asian car manufacturer. Hyundai wanted through European presence also increase its profit and global competitiveness.

Additionally, it can be regarded as both strategic-asset and cost-efficiency seeking investment. If we divide Hyundai's European strategy into two parts, where part one include investing in Technical centre in Germany and part two is opening a production plant in the Czech Republic, we can look at the two plants as vertically integrated. Even though the European expansion itself is of horizontal, market-seeking character, there lies a different motivation behind the plant in Germany and the plant in the Czech Republic. We can view the technical centre in Germany as a form of strategic asset seeking, as Hyundai were lacking certain knowledge

capital it would need to expand to Europe. Most importantly, it needed to acquire knowledge about the demand trends and preferences of the European consumers, strengthening its brand name through marketing and improve knowledge about the European business climate as well as ensure that the cars are produced compliant with technical and safety requirements. Having acquired these assets, it could commence its European expansion, and the plant in Czech Republic could be seen as a combination of efficiency and resource seeking investment. The resources they were looking for were primarily skilled and inexpensive labour in its production plant. However, the labour costs in the Czech Republic are higher compared to other countries in Central in Eastern Europe, therefore, the investment cannot be regarded as purely motivated by cost-reduction, but it as mix of different motivating factors.

In the search for a suitable location, Hyundai was considering multiple locations in the Central and Eastern Europe. Alternative host countries that were considered in addition to the Czech Republic were Poland, Hungary and Romania (CzechInvest, 2007).

6 The Czech Republic and investment climate

In this section, we focus on the broader situation in Czech Republic, by analysing country-specific traits that affects the decision to invest in the Czech Republic. We will first analyse the investment climate, then we will analyse factors that could make FDIs in the Czech Republic advantageous and in the last part of this section, and then we will go more in depth in the Czech automotive sector. Throughout the section, we are interested in how this affects Hyundai, and will therefore be concerned with factors that are relevant for Hyundai's investment.

6.1 The Investment climate in the Czech Republic

In this part, we will analyse key information about the investment climate in the Czech Republic at the time³ of Hyundai's entry. This will serve as a base for our further analysis of the Czech Republic as a location for investments in the automotive industry.

6.1.1 Political environment

Political stability is an important criterion when a company chooses a location for their FDI. An unstable political environment increases risk and uncertainty, and increases the chance of regulatory shocks. Grosse and Trevino (2005) state that institutional factors play an important role in FDI inflows, as reduced uncertainty and cost for MNE provides a positive impact on

³ 2006

inflows of FDI. It is therefore important to analyse if there were favourable political conditions in the Czech Republic at the time of Hyundai's investment.

In the nineties, the Czech Republic successfully transitioned from a state planned to a market economy. In 2006, it provided a relatively stable political climate. In statistics by Freedom House (2016) it scored the best possible ranking, and no deterioration was observed. In Governance Indicators presented by the World Bank (2016) show that Czech Republic scored relatively high (percentile rank above 80) at the time of Hyundai's investment in the following indicators: Political Stability and Absence of Violence/Terrorism⁴, Government Effectiveness⁵, and Regulatory Quality⁶ (see Table 5), and this has remained stable since. However, most countries in Western Europe scored above the 90-percentile rank in these indicators. (Worldbank, 2016) Thus, the Czech Republic still had some limitations regarding its political climate. On the other hand, it had better ranking in most of the indicators than the rest of the Visegrad 4 (V4) countries⁷, who are comparable due to historical and geographical proximity. (see Table 5).

Table 5: Governance Indicators in the Czech Republic, Poland, Slovakia and Hungary in 2006

Governance Indicators 2006	Czech Republic	Poland	Slovakia	Hungary
Voice and Accountability	76.44	71.63	75.96	78.85
Political Stability and Absence of Violence/Terrorism	82.21	55.29	70.19	79.33
Government Effectiveness	82.44	67.32	79.02	77.56
Regulatory Quality	83.33	72.06	84.80	85.78
Rule of Law	71.29	60.77	65.07	79.90
Control of Corruption	66.83	61.46	69.76	73.17

Source: (Worldbank, 2016)

As indicated by the Governance Indicators, the most problematic area according to this ranking was Control of Corruption⁸. Corruption scandals of lesser or greater magnitude have been relatively common in the Czech Republic. Corruption or frauds have been confirmed among

⁴ "Political Stability and Absence of Violence/Terrorism measures perceptions of the likelihood of political instability and/or politically-motivated violence, including terrorism." (Worldbank, 2016)

⁵ Government Effectiveness "reflects perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies." (Worldbank, 2016)

⁶ Regulatory Quality "reflects perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development." (Worldbank, 2016)

⁷ Slovakia, Poland and Hungary

⁸ Control of Corruption "reflects perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests." (Worldbank, 2016)

politicians, public tenders and at receiving financial support from European funds and this could potentially harm investing firms (Transparency International Czech Republic, 2013). However, according to Demekas et.al. (2007), domestic corruption is generally not statistically significant for FDI inflows. Another challenge of Czech politics has been the lengthy of discussion and implementation of new laws and reforms, primarily caused by the strong opposition. This could potentially lead to political instability in the country (Freedom House, 2016).

The transition to market economy improved Czech Republic's relationship with important trade partners in Western Europe. Czech Republic became a member of the European Union in 2004, which is beneficial for exports to the European market. The Czech Republic has joined the single market, received financial help through structural and cohesion funds in order to improve local conditions in different areas and harmonized its legal system with EU regulations. This has positively influenced its economic growth and attracted foreign investments, which has resulted in higher living standards (Chmelař, et al., 2014), and it also makes it easier for Hyundai to adjust to the regulation and business climate of trade partners. Germany is an especially important trade partner in Western Europe. Historically, The Czech Republic also has close ties to the Eastern European market, developed through the Warsaw Pact and communist rule during the cold war. Michal Tirpak (2006) writes that proximity to both Western and Eastern markets is advantageous for a car production or assembly in the Central Europe.

Foreign investors are facing the same conditions as Czech investors when conducting business in Czech Republic. The foreign companies can either establish a branch office which they register in the Czech Republic or establish a Czech company. The Association for Foreign Investment together with several consulting companies can provide help with the legal and business formalities for foreign investors. (Association for foreign investment, 2016)

Czech business environment is regulated by Czech legislation, which is harmonized with EU legal environment (Čeladník, 2009). The most important legislative is The Commercial Code and the Trade Act, which govern the rights and obligations in business activities. The EU legislative influences especially trade, finance and employment regulations. Membership in other international organizations like for example OECD, WTO and IMF fastens the stability of the Czech legal environment. The General Copyright Treaty protects copyright, patents, and

trademarks. The stability and similarity with EU legislation means there are few legal barriers in place that prevents Hyundai from investing.

6.1.2 Economic climate

Economic stability and growth is an important factor when choosing where to invest. As Hyundai is a profit-maximizing private company, it will look to invest where the expected returns are highest. During an expansion it will seek after solid economies with growth potential. Popescu (2014) writes that inward FDI into Central and Eastern Europe was stimulated by improved economic context, sound macroeconomic environment, low inflation, and openness of the economy, determined by the proportion of export.

Czech Republic is a small, open and export-oriented economy. Since it is export-oriented, it is sensitive to the performance of its export markets, which influence economic performance.

6.1.2.1 Economic growth

In 2005 and 2006, when Hyundai decided to invest in the Czech Republic, the Czech economy reached its historically highest growth of GDP. The economic growth was mainly driven by net exports and consumption. Table 6 shows the development in GDP indicators from 1993 to 2006. During this period, GDP growth was high, and from 1999 the GDP growth has increased. Future growth was expected to be high and stable at the time of Hyundai's investment, and this made investing in Czech Republic more favourable.

Table 6: GDP indicators, market prices in 1000

Indicator	1993	1994	1995	1996	1997	1998	1999
GDP at market prices (current US\$)	\$ 40,452	\$ 47,365	\$ 59,537	\$ 66,775	\$ 61,621	\$ 66,373	\$ 64,719
GDP growth (annual %)	0.06	2.91	6.22	4.28	- 0.67	- 0.32	1.44
GDP per capita (current US\$)	\$ 3,916	\$ 4,584	\$ 5,765	\$ 6,473	\$ 5,980	\$ 6,447	\$ 6,293
	2000	2001	2002	2003	2004	2005	2006
GDP at market prices (current US\$)	\$ 61,474	\$ 67,376	\$ 81,697	\$ 99,300	\$ 118,976	\$ 135,990	\$ 155,213
GDP growth (annual %)	4.29	3.05	1.65	3.60	4.95	6.44	6.88
GDP per capita (current US\$)	\$ 5,995	\$ 6,595	\$ 8,012	\$ 9,741	\$ 11,668	\$ 13,318	\$ 15,159

Source: (World Bank, 2016)

In 2006, the biggest value of GDP was created in the service sector, approx. 60%, and in the industry sector, slightly above 30%. Construction and agriculture shares of GDP were low. The industry sector was dominated by manufacturing, which contributed to GDP by approx. 25%. For more details, see Table 7.

Table 7: Gross Added Value by Sectors (CZ-NACE), million CZK, 2006-2010

Code	CZ-NACE	2006	
	Total	3,037,204	
A	Agriculture, forestry and fishing	74,434	2.45%
B-E	Industry	961,958	31.67%
B	Mining and quarrying	40,695	1.34%
C	Manufacturing	776,768	25.58%
D	Electricity, gas, steam and air conditioning supply	110,653	3.64%
E	Water supply, sewerage; waste management and remediation activities	33,842	1.11%
F	Construction	199,158	6.56%
G-U	Services	1,801,654	59.32%

Source: Author, Based on Data from Czech Statistical Office

The credit rating of the Czech Republic has been stable according to the credit rating agencies, see Table 8. In 2006, Standard & Poor's gave a rating of A-, Moody's rated A1 and Fitch evaluated it by grade A. For comparison, in 2015, Standard & Poor's rated it by AA-, Moody's rated was A1 and Fitch gave a rating A+. According to Trading Economies (2016), the Czech Republic ranks 30th position in the world comparison and outperforms its eastern neighbors. Overall, Czech Republic provided a stable economic climate at the time of Hyundai's investment.

Table 8: Developments of the rating of the Czech Republic

	Moody's	Standard & Poor's	Fitch
2006	A1	A-	A
2015	A1	AA-	A+

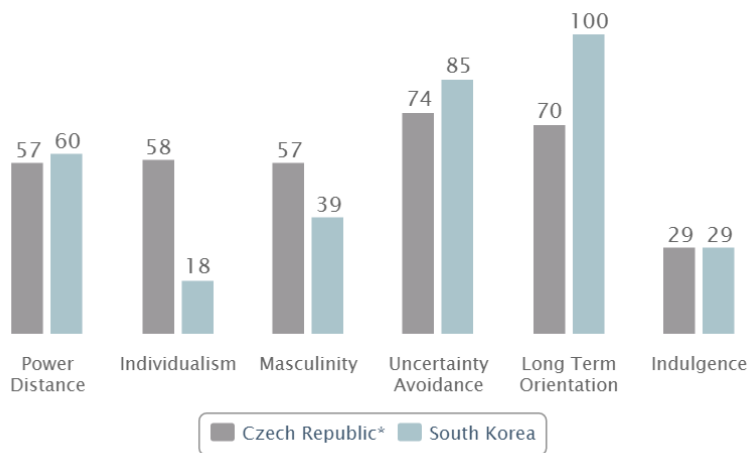
Source: (Czech National Bank, 2016)

6.1.3 Cultural and social environment

Cultural and social factors can play a role in how the company succeeds in the host country. The biggest impact of these factors is in the local business environment, which has informal practices in addition to formal practices. This can affect productivity, where employees of two different cultures have to cooperate. In our case study where a South Korean company enters the European and Czech business climate, the cultural difference can have a substantial impact on the company performance. To identify cultural differences between these two distinct culture systems we will use the cultural dimensions by Geert Hofstede (Geert Hofstede, 2016).

The cultural differences between Czech Republic and South Korea are shown in Figure 3.

Figure 3: Czech Republic in comparison with South Korea by cultural dimension



Source: (Geert Hofstede, 2016)

The **Power distance** variable represent to which extent individuals within organizations anticipate the power to be distributed unevenly. According to Hofstede, both countries score high in this factor, which implies that Czech and South Korean societies are hierarchical: people accept this type of order within organizations, subordinates expect managers to assign them tasks, centralization is popular and autocratic management style is the most preferred one.

Individualism in Hofstede's model stands for the degree of independence of members of society when interacting with each other. With a score of 58 Czech Republic can be characterized as an individualistic society, while collectivistic mindsets prevail in South Korea. In individualistic societies, relationships between employee and employer are based on mutual beneficence and framed with contract conditions, and promotion is based on merits of individuals. For a collectivistic society such as South Korea, long-term commitment to the group, and responsibility for the group members are important. Relationship between the employee and employer are considered in moral terms, and for promotion in-group image of the employee is important.

The **Masculinity** variable describes what is more important for society members: focus on high performance and competition (masculinity) or enjoying the process and the outcome (femininity). With score 57, the Czech society is characterized as masculine and driven by competition, success and achievements. For managers it is important to be determined and confident because conflicts are often solved by battling them out. The South Korean society is more feminine, with such features as solidarity, appreciation of people, consensus-orientation

being important, and problem solving and decision making is based on negotiations and involvement.

Uncertainty avoidance factor is to which extent society tries to escape unknown or intimidating situations. Both Czech Republic and South Korea score high on uncertainty avoidance, indicating that both societies are characterized by rigid codes, and a need for adapting rules that are necessary for emotional comfort and security. Inner impulse pushes the society members to work hard, be precise and busy, while at the same time making them resistant to changes.

Long-term orientation depicts the attitude of the society towards present and future challenges and its links to the past. With a score of 70, the Czech Republic appears to be a pragmatic society. Members of this society have tendency to save and invest. South Korea scores 100 and is one of the most long-term oriented societies in the world. This is why Korean companies are famous for their long-term orientation and priority for steady growth in market shares rather than short-term profits.

Indulgence explains the tendency in society to take control over desires and impulses, and whether members of society often indulge themselves or remain restrained. Both countries score 29 on this variable and share the features of a restrained culture, where pessimism and cynicism are presented at certain degree together with strong control over desires. Moral dependence on the social norm is strong, and indulgence considered as a step away from the moral path.

In general, the Czech and South Korean culture share a lot of similar traits. Having alike scores in power distance, both Czechs and Koreans coworkers will be comfortable in hierarchical organizations with strong management. It implies that integration of Korean and Czech employees on the same production facility will be smooth in organizational terms. However, the individualistic qualities of Czech employees could cause misunderstanding and tension with the Korean management, who belong to a collectivistic culture. It is likely that Korean heads will expect moral commitment from employees, while in Czech individualistic culture this is not typical. Individualistic behavior and attitude could be unanticipated by the management who are used to being responsible for the colleagues as member of the same group, as is common in collectivistic culture. There might also be some difficulties with conflict solving due to difference between Czech and Korean culture in terms of

masculinity/femininity. The Korean management would thus have to adjust their approach slightly to appease the Czech working culture, with regards to individualism and masculinity.

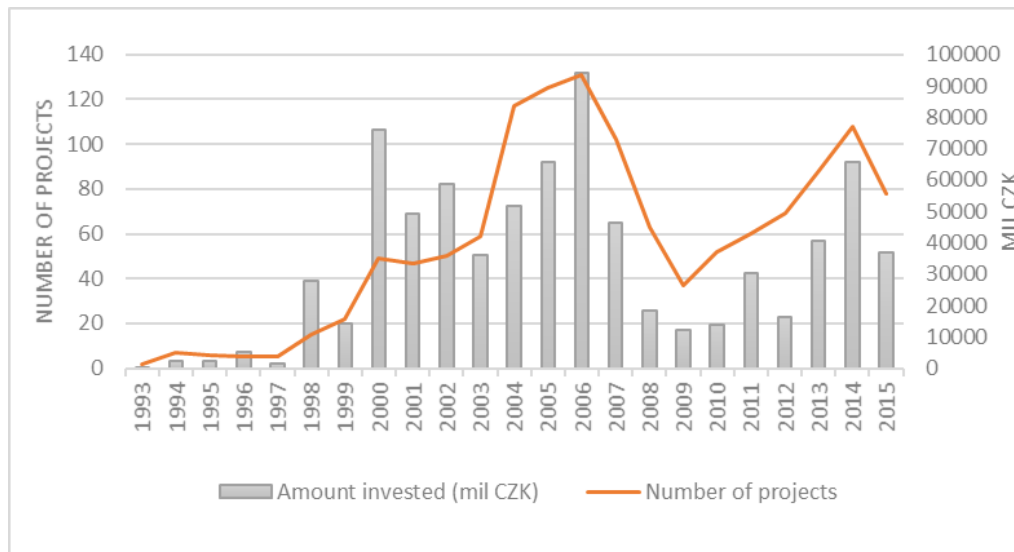
Overall though Korean and Czech cultures seem to be quite similar, with alike scores in power distance, uncertainty avoidance and uncertainty avoidance, and quite similar scores in long-term orientation. These traits should fit well for work in automotive manufacturing, as both cultures are hardworking, committed, punctual and precise and conform to a hierarchal structure. The cultural proximity between the countries makes Czech Republic a favorable location for investment with regards to psychic distance, as the similarities in the cultures reduces the necessity to adjust to a different working culture, which in turn increases the probability for good cooperation between the management and the workers.

6.2 Foreign Direct Investments in the Czech Republic

The Czech Republic has been a substantial recipient of foreign direct investments. According to the database published by CzechInvest (2016)⁹, Czech Republic has received investments in amount of 765 625 million CZK (30 975 million USD) during the period of 1993-2015, and 1297 projects were conducted. In Figure 4 the invested amount and number of projects is shown for every year in a given period. In the first years, the inflows of FDI were very low. This trend changed in 1998, when the Czech government introduced an incentive scheme in order to attract foreign investors and become more competitive (CzechInvest, 2016). Thus, we see that the investment scheme has been an important factor in attracting investors. Because the Czech Republic was undergoing a process of transformation to a market economy, many investments were linked to the privatization in the beginning, where foreign investors invested in originally state-owned entities.

⁹ Database included also domestic investments there were for the purpose of this research excluded

Figure 4: Number of projects and amount invested in million CZK for years 1993-2015



Source: (CzechInvest, 2016)

A good example is the privatization of Škoda Auto by Volkswagen in 1998 where the investment reached 18 996 million CZK (562 million USD). Since then, other big investments followed, especially in 2000, 2006 and 2014. In 2000, the biggest investments were directed to automotive and the electronics sector by leading global players like Bosch, Nemak, LG Philips and Panasonic. 2006 was dominated by Hyundai's investment, which is so far the biggest investment in the Czech Republic. We see that during the period of 1998-2006, foreign investment grew steadily. This is not unique to the Czech Republic, but it is apparent that Czech Republic were becoming an increasingly attractive location for FDIs during this period. The influx of FDIs could potentially be self-reinforcing in the way that previous existence of foreign investors could make the transition to the Czech business climate easier for new investors, than in a homogenised national business climate that is not used to foreign investors. Heneric, Licht & Sofka (2005) regarded Czech Republic and the Central European markets as an emerging automotive cluster, because of high share of goods from automotive sector on national exports and intensity of mutual trade between these countries. This clustering could be beneficial, as a well-established industry makes establishing more productive if companies can enjoy the cluster benefits of higher productivity and innovation. Numerous foreign investments could also send a signal to investors that Czech Republic is a stable environment for investing. This could be particularly beneficial for a country transitioning to a market economy, where investors could be sceptical towards investing too early, in fear of sudden changes in the business climate. The presence of foreign companies, especially in combination with favourable incentives, also signalizes that the government is interested in foreign investors, and

investment would not be met with unfavourable regulations. For a South Korean company, from a country with generally high uncertainty avoidance, this could be an important factor when investing, because they will look for a stable business climate that reduces uncertainty.

When Czech economy was in recession, investments in Czech Republic, as in other places, were considerably subdued, but in 2014 the investment flows were revived. The biggest investment came from South Korean tire company Nexen Tire Corporation to rubber industry in value of 22 764.34 million CZK (1 033.625 million USD), so far the third biggest investment in the Czech Republic. The 10 biggest investments are summarized in Table 9.

Table 9: Top 10 biggest foreign direct investments in the Czech Republic, 1993-2015

Investor	Sector	Country of origin	Investment (mil. CZK)	Investment (mil. USD)	Created jobs	Year
Hyundai Motor Company	Manufacture of motor vehicles	South Korea	34,429	1,402	3514	2006
Toyota/PSA	Manufacture of motor vehicles	Japan	23,500	662	3000	2002
Nexen Tire Corporation	Rubber industry	South Korea	22,764	1,034	1384	2014
VOLKSWAGEN	Manufacture of motor vehicles	Germany	18,996	562	600	1998
Nemak	Manufacture of motor vehicles	Mexico	11,361	317	1361	2000
Denso	Manufacture of motor vehicles	Japan	9,575	243	936	2001
Robert Bosch	Manufacture of motor vehicles	Germany	8,507	237	1485	2000
Matsushita Electric Industrial Co.	Electrical equipment	Japan	8,425	235	1182	2000
Mondi Packaging Paper Štětí a.s.	Paper and wood processing industry	Netherlands	8,397	394	128	2007
IPS Alpha Technology	Electronic	Japan	2,958	120	2100	2006

Source: (CzechInvest, 2016)

When comparing the FDI projects by the sectors, the biggest inflow and number of projects was directed to manufacture of motor vehicles, which is many times higher than the rest of the sectors. Table 10 presents the top 10 sectors by value of FDI. From the total amount of inward FDI, 9.2% (137,486.4 million CZK) was targeted to the automotive sector up to 2005. FDI had a huge impact on the form of the automotive sector in the Czech Republic. The share of foreign investors in the Czech automotive industry was extensive. In 2014, 87% of the automotive sector was owned by foreign investors. (Automotive Industry Association, 2016). The existence of foreign investors in the automotive industry is likely to have positively influenced Hyundai's decision to invest in the Czech Republic. The high number of foreign investors meant that the industry was strong, and likely to stay strong in the coming years, and a diverse, multinational business environment meant that the industry is used to different cultures, which could lower Hyundai's costs of assimilating in the environment.

Table 10: Sectoral FDI in the Czech Republic, 1993-2015

Sector	Investment (mil CZK)	Number of projects
Manufacture of motor vehicles	335,784	392
Electronic	47,843	90
Paper and wood processing industry	47,559	44
Engineering	43,732	126
Electrical equipment	39,894	70
Rubber industry	39,766	22
Metalworking and metal	29,655	75
Non-metallic mineral products	25,208	33
Plastics	24,540	77
Chemical and petrochemical	23,321	41

Source: (CzechInvest, 2016)

Another way to compare the FDI inflows is by country of origin. In total for the period 1993-2015 across all sectors was the biggest investor Germany and then Japan, USA, South Korea and others. The Table 11 presents the biggest 10 investors across industries by the value of investment. Strong presence of investors from Japan and South Korea is beneficial for Hyundai, as the cultures are more similar compared to European culture, making assimilation easier. However, even though there was a presence of Korean investors at the time of Hyundai's investment, it should be noted that many came after the investment. The ones that came later are not directly relevant to Hyundai's decision, but the potential for future Korean investors could have influenced Hyundai's decision, if they were predicting that more Korean investors would follow them to Czech Republic.

Table 11: Top 10 investors by country of origin by invested amount, Czech Republic, 1993-2015

Country of origin	Investment (mil CZK)	Number of projects
Germany	209,633	332
Japan	123,019	128
USA	78,362	212
South Korea	76,397	30
Netherlands	47,858	66
Austria	28,909	49
Switzerland	24,989	59
Great Britain	23,735	91
France	23,133	50
Taiwan	17,647	29

Source: (CzechInvest, 2016)

6.3 Investment incentives

Offering investment incentives is a tool for attracting foreign investors. Countries can offer several types of incentives like subsidies, tax breaks, preferential price of land and other forms of aids. Since incentives are beneficial for investors, it can influence investor's decision when choosing a location for the investment. Every country offers different mix of incentives in order to offer favourable conditions.

6.3.1 Impact of EU membership

In the Czech Republic, the incentives offering is limited by EU law. European Union is prohibitive to any kind of incentives that can distort competition and affect trade between member states. However, there are exceptions arising from the EU policy to improve poorer regions in the area. In order to reduce disparities in income and region opportunities, the countries are allowed to offer investment incentives as a tool for regional development. Additionally, it exempts aids granted in regions or industries in R&D, employment, training or for development of certain sectors. Incentives granted vary according to region of investment and size of the investor. Regions with lower standard of living or high unemployment can offer more favourable incentives than competitive regions and smaller investors can be granted higher aid (in %) than larger investors (Allen & Overy, 2006).

In EU, there are two systems for granting an investment incentive and that is either under an aid scheme or individually. The most common is the use of aid schemes, where a member state offers state aid under uniform conditions for every investor. The scheme has to be approved by the European Commission and then any aid granted in accordance with the rules is not further evaluated. On the contrary, the state aid granted on individual basis must be notified to European Commission and further clearance has to be issued before the aid can be granted. (Allen & Overy, 2006)

6.3.2 Investment incentives into manufacturing sector in the Czech Republic

In the Czech Republic, the investment incentives are regulated under Act on Investment Incentives and it offers incentives to companies in manufacturing sector and the business support services and technology centres sector. In the following paragraph, we will include more detailed information about the criteria for project in manufacturing sector that were in force in 2006 (Allen & Overy, 2006).

In order to qualify for investment incentives, investors had to fulfil following conditions:

- 1) It must start a new production, expand or modernize existing production in order to fundamentally change product or production process.
- 2) Investment into long-term assets must be at least 100/150/200 million CZK depending on the region of investment and at least half of this amount must be an equity investment.
- 3) Furthermore, at least 40% of the total investment must be directed to machinery or production process assets.
- 4) And finally, the investor has to keep the investment for minimum 5 years after the fulfilment of the general conditions and has to comply with Czech environment requirement.

Offered incentives can be divided into following groups:

- Tax incentives (relief of corporate taxes up to 10 years)
- Job creation grants
- Training and retraining grants
- Site support (transfer of public land at a favourable price)
- Financial support for the acquisition of assets (in the case of strategic investments)

6.3.3 Investment incentive for Hyundai and its suppliers

Hyundai's investment was substantially supported by the Czech government's investment incentive scheme. In 2005, the Nošovice region was regarded as a priority region, with high unemployment at 14.65%. In 2006, Hyundai's total investment was applied for state aid for its investment project, which had a total value of 34 428.9 million CZK (1185.36 million EUR). In 2008, the Czech government supported the Hyundai project by the regional investment support in the total amount of 194.49 million EUR. The state aid was granted as follows (European Commission, 2007):

- tax relief for 10 years,
- job creation grant in value of 200 thousand CZK per job and additional 50 thousand CZK if the employed person is disabled or was a registered job seeker for more than 6 months
- financial support for training and retraining of employees in value of 35% of retraining costs

- transfer of technically equipped land in Nižší Lhota and Nošovice at favourable price, where state aid was granted as a difference of market and purchase price in maximal amount of 740 million CZK
- cash grant for capital investments in maximal value 2 414,9 million CZK for purchase of land, construction and equipping of the project facilities

The total value of incentives was stated at maximum of 15% of the project value, 5528.09 million CZK (194.49 million EUR). This amount did not include the training and retraining grant, which means the total aid received was higher than this number (Ministry of Industry and Trade, Czech Republic, 2011)

Hyundai's investment was followed by entry of its suppliers. Dymos, Hysco and Hyundai Mobis located their plants also in the Nošovice industrial zone. The European Commission then evaluated the investment project of Hyundai and these three suppliers as an 'overall project' because of the 'close proximity', and approved the state aid of 15% of the investment value. However, higher state aid was granted to other suppliers that invested separately, as presented in Table 12. (European Commission, 2007)

Table 12: Overview of investment incentives to Hyundai's suppliers

Korean Suppliers	Investment in mill EUR	Investment in mill CZK	Newly created jobs	State aid	Ceiling of state aid (mill CZK)	District	Application Year
PLAKOR CZECH s.r.o.	60.90	1,768.89	504	50.0%	787.22	Novy Jicin	2006
Matador-Dongwon CZ, s.r.o.	15.64	454.20	196	40.0%	167.30	Frydek-Mistek	2006
SEJONG Czech s.r.o.	18.06	524.60	270	40.0%	197.37	Karvina	2006
PHA Czech s.r.o.	11.05	304.12	200	40.0%	121.65	Karvina	2007
DONGHEE Czech s.r.o.	27.68	803.96	238	40.0%	303.54	Karvina	2006
Dymos Czech Republic s.r.o.	29.16	846.83	422	15.0%	117.47	Frydek-Mistek	2006
HYSKO CZECH s.r.o.	19.52	566.89	70	15.0%	81.93	Frydek-Mistek	2006
Mobis Automotive Czech s.r.o.	51.41	1,493.31	840	15.0%	223.49	Frydek-Mistek	2006
Hanwha L&C Czech, s.r.o.	15.52	409.02	99	40.0%	160.32	Frydek-Mistek	2008
GS Caltex Czech, s.r.o.	9.51	238.54	100	40.0%	95.41	Karvina	2011

Source: (CzechInvest, 2016)

Although there is a difference of opinion about the desirability of investment incentives as it can distort the market environment, the incentive was in this case evaluated as rewarding, because the Hyundai investment project would be beneficial for the development of the region. Among the biggest advantages mentioned was the creation of jobs, not only in the new factory, but also with local firms in the industry and service sectors linked to automotive industry. Additionally, the possibility of knowledge spillovers to local firms was also mentioned as a

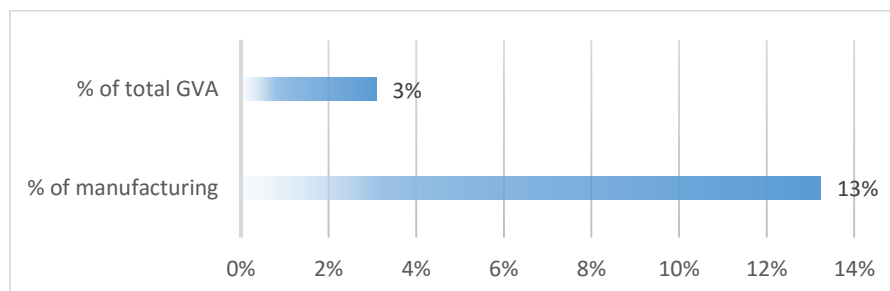
potential benefit of the new foreign factory (Paskovska, 2006). In other words, the Czech government saw the potential for developing and strengthening a regional automotive cluster.

6.4 Automotive Industry in the Czech Republic

In this part, we will analyse relevant information about the automotive industry in the Czech Republic. We will present data, which were available in 2006 in order to analyse the same conditions that Hyundai was facing when making its decision for entry.

The automotive industry has a long tradition in the Czech Republic and it is a very important sector in the Czech economy. Together with metal manufacturing, it is the leading sector in the manufacturing industry. Figure 5 presents the share of automotive sector on gross value added (GVA) in total and in manufacturing in 2006. The automotive sector contributes to the economy since it has a multiplier effect on other sectors. It influences both upstream industries like steel, chemicals and textiles, and downstream industries such as IT and communication, repair and mobility services (European Commission , 2016). In addition, it affects the construction industry when production capacities and industrial parks need to be build.

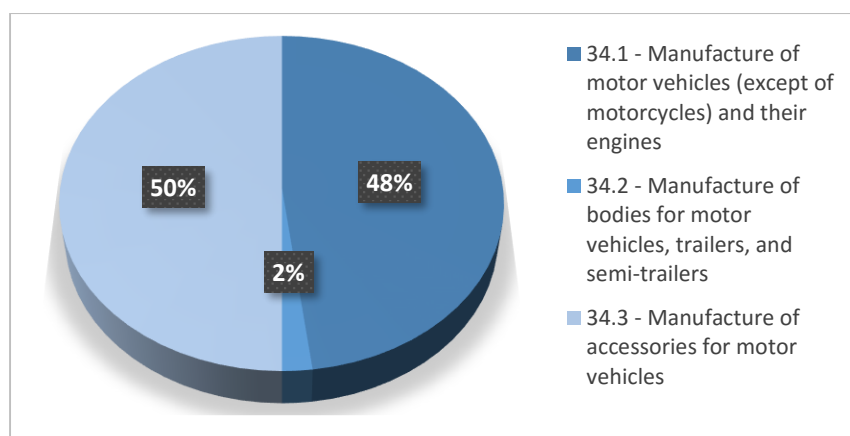
Figure 5: Share of automotive sector on total GVA and manufacturing sector, 2006



Source: (Ministry of Industry and Trade, Czech Republic, 2007)

According to the NACE 34 classification in 2006, it included these subsectors; 34.1 Manufacture of motor vehicles (except motorcycles) and their engines, 34.2 Manufacture of bodies for motor vehicles, trailers, and semi-trailers and 34.3 Manufacture of accessories for motor vehicles. The leading role, with respect to the sales of own products and services in 2006, played subsectors 34.1 and 34.3 as illustrated in Figure 6.

Figure 6: Shares of the groups in receipts from sales of own products and services in 2006



Source: (Ministry of Industry and Trade, Czech Republic, 2007)

The main car producers in the Czech Republic before Hyundai's entry were Škoda Auto, which was privatized by Volkswagen, and the Toyota Peugeot Citroën Automobile (TPCA), the joint venture of Toyota Motor Corporation and Peugeot Citroën. In addition to car manufacturers, there were commercial vehicles manufacturers (Tatra, Avia Ashok Leyland), bus manufacturers (Iribus Iveco, Sor Libchavy) and tram manufacturers (Siemens, Škoda).

In 2006, 848,922 cars and 5,985 commercial vehicles were manufactured. It was a 41.3% increase in total output compared to the previous year. The high increase was caused by the introduction of production at the TPCA factory. In world comparison, Czech Republic ranked 16th in car manufacturing (see Table 13). Škoda produced 65% of the cars and TPCA the remaining 35% (Automotive Industry Association, 2016).

Table 13: World Car Production by Country, Top 16 Countries, in 2006

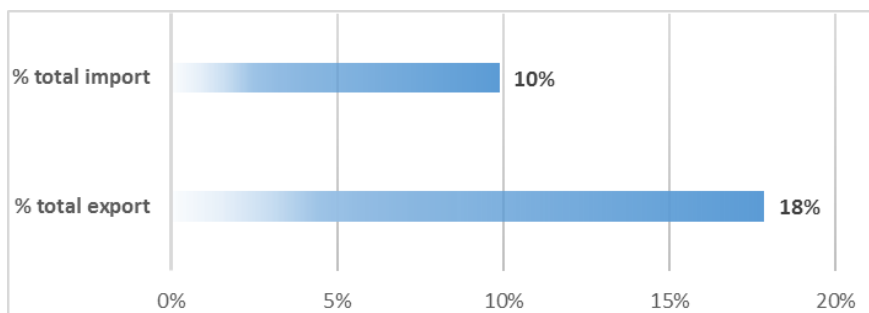
Rank	Country	Cars	Com. Vehicles	Total	% Change
1	Japan	9,756,515	1,727,718	11,484,233	6,3%
2	Germany	5,398,508	421,106	5,819,614	1,1%
3	China	5,233,132	1,955,576	7,188,708	25,9%
4	USA	4,366,220	6,897,766	11,263,986	-6,0%
5	South Korea	3,489,136	350,966	3,840,102	3,8%
6	France	2,723,196	446,023	3,169,219	-10,7%
7	Brazil	2,092,029	519,005	2,611,034	3,3%
8	Spain	2,078,639	698,796	2,777,435	0,9%
9	India	1,473,000	546,808	2,019,808	24,2%
10	UK	1,442,085	206,303	1,648,388	-8,6%
11	Canada	1,389,536	1,182,756	2,572,292	-4,3%
12	Russia	1,177,918	330,440	1,508,358	11,6%
13	Mexico	1,097,619	947,899	2,045,518	22,4%
14	Italy	892,502	319,092	1,211,594	16,7%
15	Belgium	881,929	36,127	918,056	-1,2%
16	Czech Rep.	848,922	5,985	854,907	41,3%

Source: OICA, Production Statistics, 2006

6.4.1 International trade

The international trade with goods from automotive sector is significant. The Czech Republic is a net exporter in the automotive sector and this sector takes a substantial part of total exports as showed in Figure 7. The highest share, 55%, of exports was produced by subsector 34.1 (vehicle manufacture) and 42% by 34.3 (suppliers). The vast majority of car production in 2006 (91.2 %) was exported, and suppliers exported most of their production. Import in this sector is less significant, mostly formed by the import of supplies for local manufacturers (Ministry of Industry and Trade, Czech Republic, 2007).

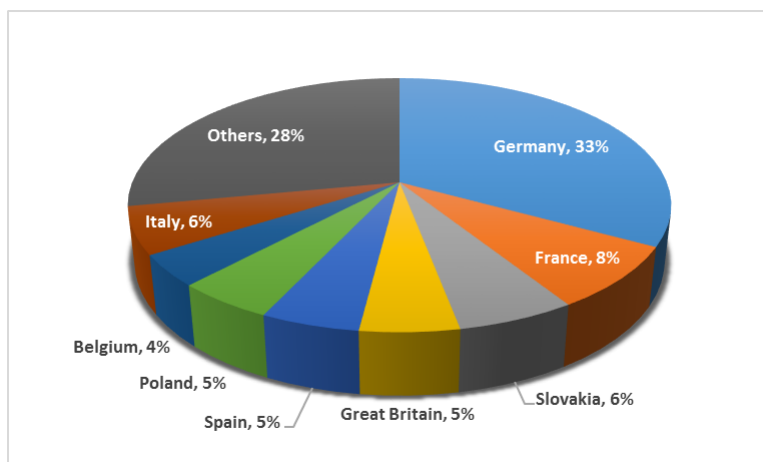
Figure 7: Share of automotive sector on total import and export in 2006



Source: (Ministry of Industry and Trade, Czech Republic, 2007)

Regarding territorial structure of trade, the biggest volume was traded with Germany, not only because it was a neighbouring country but also because of the cooperation of Škoda Auto and Volkswagen. Other significant trading partner is France, mostly because of the TPCA plant. Other bigger partners in export are presented in Figure 8. (Ministry of Industry and Trade, Czech Republic, 2007)

Figure 8: Territorial structure of exports in automotive sector



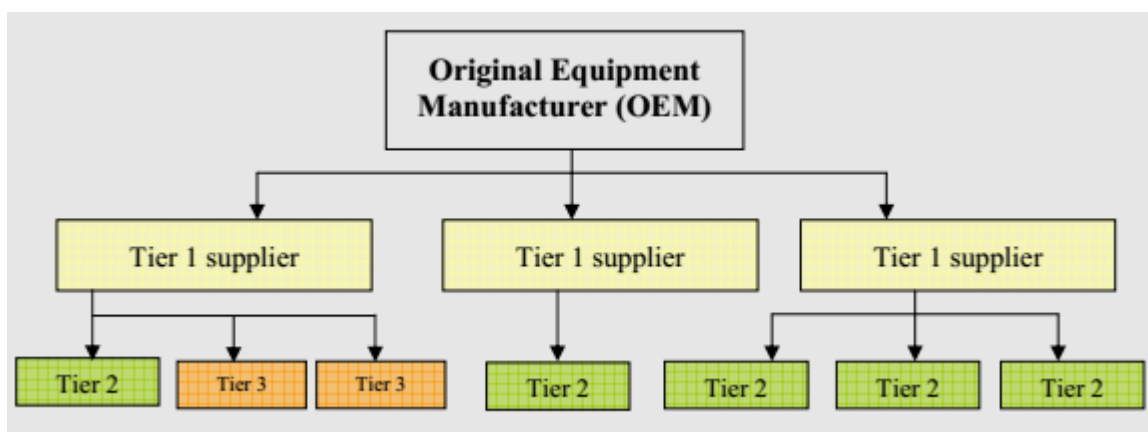
Source: (Ministry of Industry and Trade, Czech Republic, 2007)

6.4.2 Suppliers

An important part of the automotive industry is the suppliers, manufacturers of spare parts and accessories. They contribute to this sector by 56% with respect to GVA (Ministry of Industry and Trade, Czech Republic, 2007). In general, the automotive supplier firms are geographically following car manufacturers (OEMs), especially the suppliers of Tier 1. The current situation in global automotive industry pressures the suppliers to lower the costs and to be efficient with respect to use of just-in-time delivery in the industry. Since there is considerably high share of manual work, suppliers are choosing locations with low labour costs but with skilled labour. (Halesiak, Mrowczynski, & Orame, 2007). Therefore, high concentration of automotive suppliers can be observed in the Czech Republic. They also followed the big OEMs.

The suppliers are classified hierarchically according to the level of cooperation with OEM and position in the value chain. Picture 5 illustrates a possible structure of automotive supply network. OEM manufacturers the final product with different parts that are manufactured by the suppliers. Suppliers from category Tier 1 supplies the OEM directly, and high level of cooperation is required since some parts need to be specifically designed. Suppliers from Tier 2 or 3 produce less extensive parts. Tier 2 either delivers parts directly to OEM or to Tier 1 suppliers. Tier 3 suppliers deliver the production to Tier 2 suppliers. The supply chain can follow further with the same logic (International Monetary Fund, 2006).

Picture 5: The Structure of Automotive Supply Chain



Source: (International Monetary Fund, 2006)

Czech Republic has an extensive network of suppliers from all tiers, and 46 of the top 100 automotive suppliers have their base in the Czech Republic. (CzechInvest, 2009) To name a few, the most famous are foreign companies Bosch, Continental, Magna, and Denso, and Czech companies Brano Group and Brisk Tabor. Unfortunately, the data about automotive suppliers

from 2006 are not available. Table 14 captures the status in 2016 and it is important to mention that some companies are suppliers on multiple levels. Even though Hyundai attracted the entry of many supplier firms and the amount of suppliers has grown, we can still state that the Czech Republic had a substantial network of suppliers before its entry.

Table 14: Number of Suppliers in the Czech Republic, 2016

Tier 1	260
Tier 2	351
Tier 3	425

Source: CzechInvest 2016

The presence of numerous and diverse suppliers positively affects the automotive industry environment and most of the known European car manufacturers are using spare parts made in the Czech Republic (Czech Trade, 2016). The locations of suppliers of Tier 1 are presented in Picture 6. With the exception of one region, automotive companies are represented throughout the Czech Republic. In 2006, the Czech Republic was regarded as a leader in the production of typical automotive parts in the Central and Eastern European region, especially car bodies, breaks, safety systems, shock absorbers and lighting equipment and it had 2,5% share on world export in automotive parts (Halesiak, Mrowczynski, & Orame, 2007).

Picture 6: Automotive suppliers' locations in the Czech Republic, 2014



Source: CzechInvest, 2015

6.4.3 Technology and R&D

According to CzechInvest, Czech Republic has favourable conditions for research and development. Many companies built their R&D centres in the Czech Republic, the investors are summarized in Table 15.

Table 15: R&D centres in the Czech Republic, by firm and country of origin, 2008

Investor	Country of Origin
Kostal	Germany
Valeo Systemes Thermiques	France
Nippon Kayaku	Japan
Mercedes-Benz	Germany
Hella KG Hueck & Co. Lippstadt	Germany
Autopal	USA
Blata	Czech Republic
Ricardo	Great Britain
Naretec	Czech Republic
Behr Czech	Germany
Hayes Lemmerz International	USA
Volkswagen	Germany
Continental Teves	Germany
MSV Systems	Czech Republic
Alcoa Fujikura	USA
Aufeer Design	Slovakia
Denso	Japan
Indet Safety Systems	Japan
TRW	USA
Swell	Czech Republic
Ingersoll Rand	USA

Source: (CzechInvest, 2009)

Furthermore, the Czech Republic has traditionally good academic and institutional base for automotive-related education. Therefore, it can offer skilled technicians and specialists for automotive companies. In 2006, the Czech Republic had the second highest percentage of engineering, manufacturing and construction graduates at tertiary level when compared with other countries with automotive industry (CzechInvest, 2009). There are nine universities, which offer study programmes in technically oriented fields. In addition, most of the universities have their own R&D and technology centres and are cooperating with companies in the automotive sector. (Czech Trade, 2016)

6.4.4 Labour market

As Hyundai were seeking to employ in the host country, the national labour market is an important factor. Since Hyundai is mainly employing directly in the automotive section, this is the most relevant and will be analysed in more detail later. However, the general labour market affects Hyundai, both by indirectly affecting the labour market in the automotive industry, and by directly affecting its suppliers.

Performance of the Czech economy is reflected by the situation in the labour market. In 2006, the rate of unemployment was below EU average and the rest of countries of V4, see Table 16. Approximately 4 million people were employed in the national economy and approximately 30% worked in manufacturing. The automotive industry employed approx. 115 thousand employees, which was 2,9% of total employment. The average wage in the automotive industry was growing faster than the national average, and was considerably higher than the national average in 2006.

Table 16: Labour market indicators, 2006-2014, Czech Republic

Labour market indicators	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Unemployment rate										
<i>Czech Republic</i>	7.9	7.1	5.3	4.4	6.7	7.3	6.7	7.0	7.0	6.1
<i>European Union</i>	8.9	8.2	7.2	7.0	9.0	9.6	9.6	10.5	10.9	10.2
<i>Hungary</i>	7.2	7.5	7.4	7.8	10.0	11.2	10.9	10.9	10.2	7.8
<i>Poland</i>	17.7	13.8	9.6	7.1	8.2	9.6	9.6	10.1	10.4	9.2
<i>Slovak Republic</i>	16.2	13.3	11.0	9.6	12.1	14.4	13.5	13.9	14.2	13.3
Average number of employees in the national economy (thousand)	3,915.2	3,952.4	4,015.3	4,039.0	3,826.5	3,792.3	3,783.5	3,787.0	3,764.2	3,791.3
<i>Manufacturing</i>	1,183.9	1,196.5	1,225.1	1,222.8	1,068.1	1,043.5	1,064.7	1,063.6	1,051.7	1,065.6
<i>Automobile Industry</i>	114.8	117.5	117.4	117.4	107.0	105.4	109.3	109.8	109.3	110.7
Average wage (thousand CZK)	18,283	19,447	20,927	22,653	23,425	23,903	24,466	25,100	25,051	25,702
<i>Manufacturing</i>	17,359	18,536	19,961	21,631	22,104	22,998	23,798	24,572	24,892	25,651
<i>Automobile Industry</i>	21,183	22,591	24,214	25,888	26,276	27,970	29,246	30,222	31,368	32,125

Source: Inflation Report III/2015, Czech National Bank

Labour costs in the Czech Republic were significantly lower than was the EU average. However, labour costs in other countries of V4 were slightly lower than in the Czech Republic, see Table 17. Tirpak (2006) mentions qualified and inexpensive workforce as an important advantage of the Central European region in car manufacturing. He points out that productivity level is growing rapidly (Table 18) while costs are relatively low, a combination of high value for car producers in the region as it supports their competitiveness.

Table 17: Labour costs per hour in euro, whole economy (excluding agriculture and public administration)

Labour costs per hour in euro, whole economy (excluding agriculture and public administration)	2004	2008	2012	2013	2014	Non-wage costs (% of total)	Industry 2014
EU	19.8	21.5	23.9	24.2	24.6	24.40%	25.5
Czech Republic	5.8	9.2	10	9.8	9.4	27.10%	9.6
Hungary	5.9	7.8	7.4	7.4	7.3	23.20%	7.7
Poland	4.8	7.6	7.9	8.1	8.4	18.70%	8.4
Slovakia	4.1	7.3	8.9	9.2	9.7	26.50%	10.1

Source: (Eurostat, 2015)

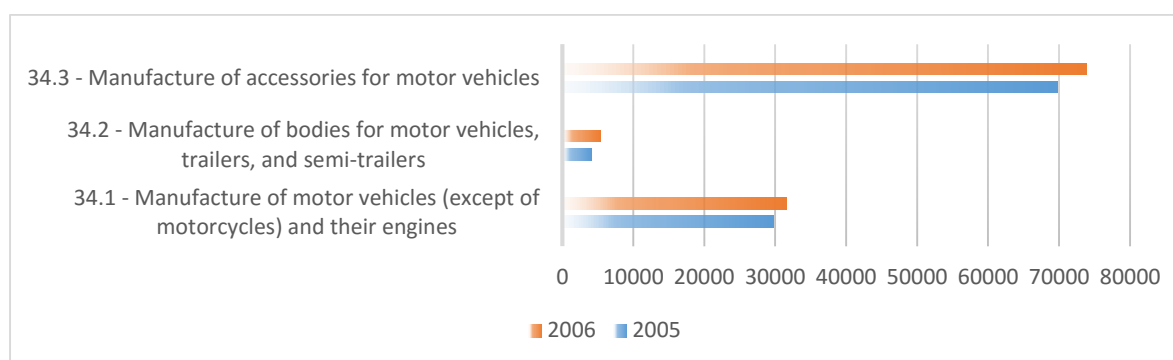
Table 18: Nominal labour productivity per person employed, index EU28=100

Nominal labour productivity per person employed (ESA2010), index eu28=100	2006	2007	2008	2009	2010	2011	2012	2013	2014
Czech Republic	75.1	77.6	75.2	77.0	75.4	77.0	75.6	76.0	77.6
Hungary	67.2	66.6	70.5	72.7	72.5	72.8	71.2	71.8	70.4
Poland	59.7	61.1	60.8	64.5	69.5	71.7	73.6	73.6	73.7
Slovakia	71.1	76.1	79.3	79.0	81.9	79.6	80.9	82.7	83.4

Source: (Eurostat, 2016)

According to statistics from 2006, 110,748 people were employed in the automotive sector (in NACE 34), especially in automotive accessories manufacturing, see Figure 9. However, with increasing share of production automation, especially in manufacturing of motor vehicles, the part of labour needed will gradually decrease. Concerning the manufacture of accessories, no change of labour capacity was predicted since in many cases the manual work cannot be replaced (Ministry of Industry and Trade, Czech Republic, 2007).

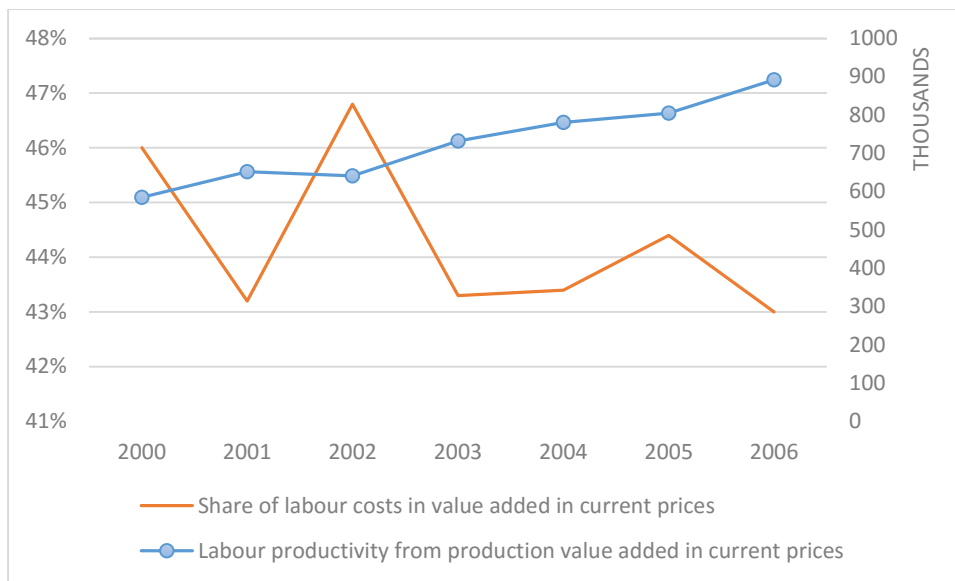
Figure 9: Number of employees in automotive industry in its subsectors, 2005 and 2006



Source: (Ministry of Industry and Trade, Czech Republic, 2007)

Employees earned higher wage (22,591 CZK) than was the national average (19,447 CZK) (Czech National Bank, 2015). As presented in Figure 10, the labour productivity from production value added in NACE 34 was growing, and the share of labour costs in value added was conversely decreasing.

Figure 10: Labour productivity and share of labour cost in NACE 34



Source: Author; based on data retrieved from (Ministry of Industry and Trade, Czech Republic, 2007)

Thus, the productivity growth was higher than the wage growth in both Czech Republic in general and the automotive sector in particular, strengthening Czech Republic's position as an advantageous location for automotive production. There is however a danger that rising wages in the long run could reduce the benefit of investing in the Czech Republic if the wages approach the level of Western European countries, but the wage gap is still substantial and this is not a problem as of yet.

7 The Moravian-Silesian Region

In the previous section, we focused on the automotive industry in the Czech Republic in general. We now turn our attention to the specific region where Hyundai invested. Hyundai's factory is located in the Nošovice, which is a small town in the eastern Czech Republic. In 2002, Nošovice was chosen by the Czech government for building a strategic industrial zone. Strategic industry zones are built in order to improve economic situation in the problematic regions and serve together with investment incentives as a tool to attract foreign investors (CzechInvest, 2011). The Nošovice industry zone is 260ha large and the largest industry zone in the Moravian-Silesian region. The region is part of an automotive cluster containing several firms on different levels of the value chain that spans across the border into south Poland and western Slovakia. There was a registered automotive cluster in the region in 2006, and this has developed further since Hyundai's investment.

According to Porter, locating in a cluster can be advantageous for a company since it can offer productivity and innovation benefits. He argues that firms often establish their subsidiaries in cluster locations. Clusters can vary in size, from being in a small city to spreading across national borders. We will analyse the cluster at the investment location at the time of Hyundai's entry and if so, how did it influence Hyundai's location decision.

7.1 Automotive cluster in the Moravian-Silesian Region

In order to find out potential benefits of the cluster for Hyundai, it is necessary to capture the main cluster participants and analyse their impact on the cluster climate. The goal is not to present every participant but to capture and identify the most important cluster connections. In 2006, the Moravian-Silesian cluster was very much in the growing phase. The economic activity revolved around several large car manufacturers, mainly in southern Poland and western Slovakia, surrounded by smaller firms and suppliers.

The first step in the cluster mapping is, according to Porter (2008), to identify large or alike firms in the cluster. Directly in the Moravian-Silesian region, the traditional commercial vehicle manufacturer Tatra Trucks has been located and operated in Kopřivnice since 1850. The other large manufacturers at close range (radius of 100km) were located across the border. In south Poland, a General Motors factory is located in Gliwice, and a Fiat plant is located in Tychy (Buliński, 2010). In Slovakia, the KIA factory was located close to Žilina. Further, it is important to analyse other companies in the automotive supply chain. Upstream participants include suppliers of different levels. Suppliers in the automotive sector are hierarchically divided in tier 1, 2 and 3, as presented earlier. However, many companies operate in more categories and participate in cross-industrial activities. Table 19 presents all Tier 1 suppliers that were present in the Moravia-Silesia region prior to the announcement of Hyundai's investment. Since the automotive industry has a long tradition in the Czech Republic, in addition to new foreign suppliers, it can also offer traditional Czech manufacturers. Some of the traditional companies even used to supply carriages in the past. The supply base of tier 1 is being supplied by even more supplying companies from tier 2 and tier 3. Moreover, the region is traditionally known for coal and steel industry. The availability of the steel, which is one of the key raw materials in automotive production, favours this location for the emergence and preservation of automotive cluster. The biggest firms in the steel industry and metallurgy are Vítkovice Machinery Group (established in 1828), Třinecké Železárny – Moravia Steel¹⁰

¹⁰ Producing bearings, gears, springs, suspensions, and axles for Škoda and Rolls Royce

(1839), and ArcelorMittal Ostrava (1992). Besides steel, other materials used in automotive industry are aluminium, advanced plastics, rubber and glass. Since raw materials can make up to almost 50% of manufacturing costs, it is important for OEMs to choose price competitive and available suppliers of raw materials (Investopedia, 2015). Therefore, it is reasonable to assume that presence of the steel industry in this region should be regarded as a significant variable in the cluster.

Table 19: Supplier base in automotive industry in Moravian-Silesian region before Hyundai's entry

Supplier base before Hyundai's entry	
Name	year
BRANO a.s.	1862
CDS CZ, s.r.o.	2004
Continental Automotive Systems Czech Republic, s.r.o. Frenstat plant	1999
D A S spol. S.r.o.	N/A
Duflex, s.r.o.	1990
Erich Jaeger, s.r.o.	1999
HAGEMANN a.s.	1930
Hanon Systems Autopal Services s.r.o.	1879
HOBES spol. S.r.o.	1992
KOMAS, spol. S.r.o.	1992
MASSAG, a.s.	1828
RONAL CR, s.r.o.	N/A
Stant Manufacturing s.r.o.	2004
STROJCAR s.r.o.	N/A
SUNGWOO HITECH s.r.o.	2005
Tafonco a.s.	1850
Varroc Lighting Systems	1879

Source: Author, based on CzechInvest Suppliers Database and companies' websites

However, Hyundai's investment in Nošovice was accompanied by the whole fleet of its suppliers of tier 1 and partly tier 2. The entry also attracted other companies from tier 1, 2 and 3 to establish themselves in this area. According to Rumpel et al. (2016), three types of automotive companies in this region can be differentiated. The first group is the original companies, such as Tatra Trucks and its suppliers, the second group is the European automotive suppliers and their R&D centres, and the third group is Hyundai and its Korean suppliers.

Other participants are from the downstream side of the supply chain. It includes distribution channels for both new and used cars; services linked to cars, like petrol stations car wash, and maintenance service; and specialized consultants, legal and finance advisory etc.

Other important cluster participants are various institutions that serve as a source of information, technology, infrastructure etc. Prior to Hyundai's entry, the Moravian-Silesian region hosted several R&D and technology centres of supplier firms, including Siemens VDO Automotive, Hayes Lemmerz International, Visteon Autopal, Varroc Lighting Systems and later also Behr Czech, Continental Automotive Systems, and Hella Autotechnic (CzechInvest, 2012). Furthermore, many companies cooperate with Czech technical universities. Companies based in Moravian-Silesian region cooperate mostly with local VŠB -Technical University of Ostrava and with Brno University of Technology. In addition to the universities, other educational institutions include a specialized school for the automotive and machinery industry in Kopřivnice, which offers study programs at vocational, high school and college level. Also important are economically oriented and language schools, which can teach necessary skills for managers in the global industry. Education institutions are important cluster participants, since they are a leading source of the specialized and technically educated workforce, which is a key resource for automotive companies. Many companies cooperate with students through the offer of internships, assigning topics of master thesis or vocational practice. In return, the schools are introducing specialized study programs for new technologies.

In 2006, the official cluster organization, the Moravian-Silesian Automotive Cluster c.a., was founded in order to support and enhance innovations, competitiveness, export capacity for firms, entrepreneurs and other institutions (Moravskoslezský automobilový klastr, 2016). Similarly, The Czech Machinery Cluster is located in Ostrava, and also impacts the automotive cluster because of the industry relatedness which we discussed earlier. In addition, regional governmental agencies like Moravian-Silesian Region and Regional Development Agency influences the region by promoting development of the region. Especially important are investments and development on the transport infrastructure. On a national level, Czech Automotive Industry Association, and export and international trade oriented associations like CzechInvest Agency, CzechTrade, Czech export bank etc. are important by helping exporters reach international markets. The national government influences the cluster members through legislative measures, especially in transport area, taxes, work regulations, investment incentives etc. Because the automotive industry is labour-intensive the Employment Department has a significant role that can help to find a suitable workforce. In addition, the Moravian-Silesian Region was in 2002 considered as a problematic region that needed structural change, due to high unemployment, and a dependence on the mining industry, which were being decreased, and therefore got substantial support from the government. The region

also gets support from the EU funds for region development through Regional Operational Programme Moravia Silesia (Regionální rada regionu soudržnosti Moravskoslezsko, 2016). Both the support from Czech government and EU benefits the participants in the cluster by increasing the value of the available public goods and help the cluster to grow further.

Although we are concerned with the regional cluster in this section, it should also be mentioned that the region is considered part of a broader automotive cluster that includes Czech Republic, Poland, Slovakia and Hungary. This region has been referred to as “the New Detroit” or “East Detroit.” In 2008, these countries produced 2.6 million vehicles, which made the region the ninth largest manufacturer of automotive in the world. (Frost & Sullivan, 2008) In Czech Republic, there are two regional automotive clusters. In addition to the Moravia-Silesia cluster, there is a cluster in Central Bohemia that includes the Škoda Auto and the TPCA plant. Although the linkages in the broader cluster are weaker than in the regional cluster, it is safe to assume that the Moravian-Silesian cluster also benefit from the existence of the broader automotive cluster.

7.2 Hyundai’s interest in the region

The importance of a well-developed local environment is evident if we look at the failure of Hyundai’s previous plant in Canada. As mentioned earlier, Hyundai were attracted to Canada by Quebec provincial governments grants, but had not assessed the fact that the closest local suppliers were on the distance of miles from the plant. The necessity to buy parts from these suppliers elevated the cost of production, making it unsustainable.

When investing, it was important for Hyundai to achieve a high level of productivity in a short period after establishing the plant. Thus, Hyundai needed access a significant amount of both skilled and unskilled labour. At the time of the investment the region had an unemployment rate of 14,65 %, meaning there was sufficient available labour in the region. Establishing in the central Bohemian cluster would mean Hyundai had to compete for labour with the already established Škoda and TPCA plants, and establishing across the border in Poland would mean they had to compete for labour with Fiat, General Motors or MAN in Poland, or Kia and Volkswagen in Slovakia. By establishing the plant on the Czech side, Hyundai could enter the cluster and reduce the risk of increasing labour cost by reducing the risk of competition for labour from the other big firms. Traditionally Czech Republic has relatively low labour mobility compared to Poland and Slovakia (European Commission, 2008), meaning that establishing a plant on the Czech side, Hyundai has a bigger possibility to attract workers from

across the border, than the risk of losing labour to the plants in Slovakia and Poland. At the present time, 97% of Hyundai's employees are Czech citizens, meaning that they haven't fully exploited the possibility of attracting qualified labour from across the border (Hyundai Motor Manufacturing Czech, 2016). Due to the importance of establishing the plant quickly, Hyundai were interested in a location where the plant could be built quickly and effectively. Thus, they were only interested in greenfield zones, and were generally uninterested in brownfield areas as construction in these areas usually takes more time, and is more costly and more technically complicated (Czech Property Market, 2016). Due to the help of the Czech government, who contributed to securing the location and making it ready for the production of the plant, Hyundai were able to have the plant ready for operational use in within just 18 months. This effectiveness was likely a contributing factor in choosing the Nošovice region for the plant.

In addition to Hyundai itself, the company would benefit from having their suppliers access qualified workforce. In addition to using local suppliers, several other suppliers followed Hyundai and established plants in the region. Thus, it seems strengthening the cluster itself by stimulating new business formation in the area was a part of Hyundai's strategy. Although the cluster was already well-developed on the Slovak and Polish side, it was less developed on the Czech side. There was an unused potential on the Czech side within the cluster, which Hyundai could utilize by having several of their main suppliers establish themselves in the region.

An important advantage of establishing the plant in this region is the proximity to the KIA factory in Žilina, located only around 80 km from the plant in Nošovice. Hyundai Motor Group is the majority owner in Kia Motors, so by locating the plants in the same cluster would be mutually beneficial as they could enjoy increased benefits from cooperation and cluster participation, while not being in direct competition with each other. One example of cooperation benefits between Hyundai and Kia, is the production of transmission by Hyundai who are also used by Kia (Hyundai Motor Manufacturing Czech, 2016). There is of course a risk of cannibalizing resources from each other, but the strategic partnership would strengthen their influence in the cluster giving them stronger bargaining power in the region, while being able to share information and innovations.

The region's developed infrastructure and governmental plans for further development of the infrastructure was also a beneficial factor for Hyundai. Especially, good connection to the KIA factory; Vienna, where central management and international supplies arrives by plane; and fast access to regional suppliers was of importance. The investment was part of a larger

governmental plan to strengthen the region by further strengthening of the infrastructure, meaning Hyundai would benefit from governmental spending, and by acquiring substantial bargaining power as an important employer in the region, Hyundai could influence the government to prioritize development that benefited them. The strengthening of the cluster itself could also increase governmental motivation to further develop the region.

However, the investment of Hyundai in this location was accompanied by controversy regarding building an industry zone in this town. Nošovice are famous for their sauerkraut (which in 2007 got protective registration from EU), and part of the industry zone was originally cabbage fields. There was problem with the purchase of land from locals and from collective farmers. The Moravian-Silesian region, which was responsible for preparing the industry zone for Hyundai, almost had to stop the preparations because 5% of the properties were not purchased. In the end when the region almost had to use the hardest measures, to expropriate land, the owners decided to sell their properties and the region could continue with industry zone preparations for Hyundai's investment (Bortlíčková, 2005). This created a hostile investment environment for Hyundai, which could negatively affect them, as much of the workforce is local and it is in Hyundai's interest to preserve a good relationship with the locals. In the end though, it does not seem that this problem affected Hyundai considerably, and the investment was finalized.

In order to enjoy the full benefits from being located in the cluster, it is important that Hyundai participate actively in the cluster. Neither Hyundai nor any of its suppliers are currently members of the cluster organization. The fact that Hyundai brought most of its suppliers with them, instead of buying from local first tier suppliers, could indicate that the existence of a cluster was not as important when choosing the location as the proximity to the KIA factory, and that Hyundai intended to create their own cluster containing their own suppliers. At the time of investment, Hyundai stated that they intended to purchase from their own suppliers and not use the local suppliers. It should be noted that this was also said prior to the KIA investment in Slovakia, but KIA quickly began to purchase from local suppliers as well. Thus, being located in a cluster could be a significant factor, as Hyundai now has the opportunity to change their strategy and buy from the established suppliers, if that should be beneficial in the future. Also, Hyundai's main suppliers are themselves cooperating with local producers, and thus benefit from the cluster. The fact that Hyundai located its R&D in Germany indicates that Hyundai were not primarily focused on exploiting innovation created by the cluster, but the access to cost-reducing labour and resources played a more important part. It seems

strengthening the cluster was more in the interest of the Czech government than Hyundai. Hyundai's primary interest seems to be locating a place where it could reduce costs of production, set up its own suppliers in close proximity, and have short distance to the KIA factory. The Nošovice region thus provided this. Nevertheless, both Hyundai and their suppliers benefit from having a well-developed cluster around them, and we find it likely that the existence of a cluster affected Hyundai's decision to some extent.

8 The Diamond Model

According to Porter, if a nation or industry has a competitive advantage this adds value for all the companies within the industry or country. To understand why Hyundai decided to locate their plant in the Czech Republic, it is relevant to analyse the competitive advantages in the Czech automotive industry that Hyundai could benefit from. Czech Republic has a long history of vehicle production, which can lay the foundation for competitive advantages in the automotive industry. Being a part of EU, Czech Republic offers not only an internal market, but access to the whole European market as well.

In this section we will further analyse the conditions from previous chapters, to show how these conditions create national advantages through Porter's Diamond of National Advantage. As earlier, we are focusing on the situation in 2006, which was relevant for Hyundai when making the investment decision.

8.1 Factor conditions

As mentioned in the theoretical framework, the most valuable factors are those that are specialized to industry needs, because such factors are scarce and difficult to imitate. The Czech Republic is highly industrialized, and held several global automotive manufacturers at the time of Hyundai's entry, Škoda Auto, TPCA, Tatra Trucks, Avia, Iveco and Sor Libchavy.

The production of cars is a highly complex process that involves numerous relevant factors. As mentioned earlier, Czech Republic has a well-developed resource pool of qualified labour, and the labour productivity in the Czech automotive industry was rising in 2006, allowing manufacturers in the country increase production of quality vehicles at reduced labour cost. The quality of labour stems from the long tradition of car production in the Czech Republic. Pavlinek (2015) states that a developed infrastructure, together with industrial tradition are important in car production. The car industry in Czech Republic dates back to the foundation of Škoda in 1894, and Czech Republic has been able to develop professional engineers and

workers that are highly capable in the field over several decades. Michalikova and Galeotti (2010) highlights a labour force with high technical skills as a competitive advantage of the Czech Republic. Strach and Everett (2006) are also naming skilled labour force as an advantageous feature of the automotive industry in Czech Republic. Porter stresses that the key factors to create a competitive advantage are created, not inherited. Thus, the access to skilled labour represent a competitive advantage for the Czech automotive industry. The labour is also available for a lower wage than in Western Europe. As presented in investment climate analysis, the labour costs per hour in the Czech Republic were around 5.8 euro, which is almost four times lower than labour costs per hour in EU (19.8 euro), but slightly higher than in Poland and Slovakia, where the figures are 4.8, 4.1 respectively.

Because the lower production costs was the main reason Hyundai were looking at Central and Eastern Europe as their location for the plant in the first place, it is relevant to compare the competitiveness in Czech Republic with other countries where Hyundai could have invested in this region. Molendowski and Malgorzata (2013) compared the competitiveness in Czech Republic with the Poland, Slovakia and Hungary.¹¹ Note that this study is on the competitiveness of the countries in general, and not specific to the automotive industry, and is therefore not fully representative of industry-specific competitiveness. However, when combined with additional analysis, it still provides valuable insight. With regards to factor conditions, they split the analysis into basic and advanced factors. The basic factors included labour activity rate (the amount of population constituting labour supply), GDP per capita in the industry, labour productivity rate and average wage per hour. Advanced factors were number of employees in R&D, R&D expenditure and local capacity for innovation. Molendowski and Malgorzata concludes that Czech Republic has the highest level of factor conditions of all countries, and the factor conditions contributed to giving Czech Republic a competitive advantage over the other countries, and they attribute this mainly to due to strong results in the advanced factors. In labour productivity per hour were the Czech Republic is the highest in the region: 67.2¹² per person in 2004, compared to 49.9, 56.6 and 63.5 in Poland, Hungary and Slovakia respectively. Molendowski and Malgorzata also noted that the productivity rate has risen, and their study is conclusive to what we have previously mentioned about the automotive industry. This indicates that the quality of workforce is strong and

¹¹ The study was conducted for the years 2004, 2007, 2009 and 2011. In our thesis, we are most concerned with the 2004 levels, as this is data from before Hyundai's investment, and this is used unless otherwise noticed. However, results were mostly stable at all recorded years.

¹² An index where EU average = 100

improving and that competitive advantage of the skilled labour in Czech automotive industry is sustained. Strong industrial tradition and manufacturing history are outlined as competitive features of the Czech Republic, in the research of Strach and Everett (2006), Haiss et. al. (2009) and Radosevic and Rozeik (2005). Long history of automotive production creates and further enhances the technical skills and quality of the workforce as well as industry infrastructure.

Regarding R&D in the automotive sector, companies such as Škoda and Iveco has established and developed their own R&D facilities. Automotive engineering also is a focus for private R&D institutions located in the Czech Republic. In the public sector technical universities in Prague, Pilsen, Brno, Ostrava and Liberec offer capacity and facility for R&D in engineering as well. FDI in the automotive sector contributes to the growth of R&D expenditures in the sector as well, according to CzechInvest (2016). High level of R&D activity in automotive sector contributes to the competitive advantage of the industry.

8.2 Demand conditions

The automotive sector is highly customer-driven, and the demands and level of its sophistication pressure firms to innovate. As the Czech automotive industry is highly export-driven, the manufacturers follow trends from foreign customers and the production is driven by internationalized demands.

Ernst & Young (2012) report the average age of the vehicles population is 14 years old, while the replacement tempo is slow. According to Automotive Industry Association, the aging of the Czech auto fleet is connected with inability to buy new or younger cars due to low disposable income in the population. Among the most popular in the Czech Republic were Škoda Octavia, Volkswagen Golf and Ford Focus. This implies that the nation is used to a middle-price segment of cars, but appreciate good quality. Czech demand preferences and trend can also be observed by analysing new car sales in the Czech Republic, see Table 20. (Loire, Paris, Ward, & Weiss, 2008)

Table 20: Top 10 brands for the amount of new cars registered in the Czech Republic

Rank	2006			2007			2008		
	Brand	Sales	Share	Brand	Sales	Share	Brand	Sales	Share
1	Škoda	51833	41.8%	Škoda	49094	37.04%	Škoda	44530	31.0%
2	Renault	8156	6.58%	Ford	8474	6.39%	Ford	10897	7.59%
3	Volkswagen	7116	5.74%	Renault	7477	5.64%	Renault	9189	6.4%
4	Hyundai	6028	4.86%	Volkswagen	7044	5.31%	Volkswagen	8956	6.23%
5	Peugeot	5772	4.66%	Peugeot	6532	4.93%	Hyundai	7377	5.14%
6	Ford	5414	4.37%	Hyundai	6528	4.93%	Peugeot	7111	4.95%
7	Citroën	5348	4.31%	Citroën	6092	4.6%	Citroën	6817	4.75%
8	Toyota	4506	3.63%	Toyota	4997	3.77%	Toyota	5528	3.85%
9	Opel	3238	2.61%	Kia	4526	3.41%	Kia	5479	3.81%
10	Fiat	3048	2.46%	Opel	4165	3.14%	Opel	4030	2.81%

Source: Author, data retrieved from (Automotive Industry Association, 2016)

As stated above, the motive for Hyundai's investment is to reach the broader European market, and as the automotive industry is highly export-driven, it is important to analyse the demand conditions of the European market.

New car registrations from 2005-2007 are presented in Table 21. The EU15¹³ countries represent a larger market, but markets in the new members¹⁴ are growing rapidly. This indicates that there was a large, unsaturated market among the new members, mainly from Central and Eastern Europe. Halesiak, Mrowczynski, & Orame (2007) notes that the average car in the Central and Eastern Europe was 20 per 100 inhabitants, well below the average of 50 per 100 inhabitants in Western Europe. Thus, the potential for growth in the Central and Eastern European markets was substantial.

Table 21: The European car market: new cars registrations

	2005	2006	change from 2005	2007	change from 2006
EU15	14,111,851	14,367,268	1.8%	14,363,818	-0.02%
EFTA	392,908	395,745	0.7%	429,825	8.61%
EU15+EFTA	14,504,759	14,763,013	1.8%	14,793,643	0.21%
New EU members	749,361	1,056,041	40.9%	1,209,793	14.56%
EU25	14,861,212	15,423,309	3.8%	15,573,611	0.97%
EU25+EFTA	15,254,120	15,819,054	3.7%	16,003,436	1.17%

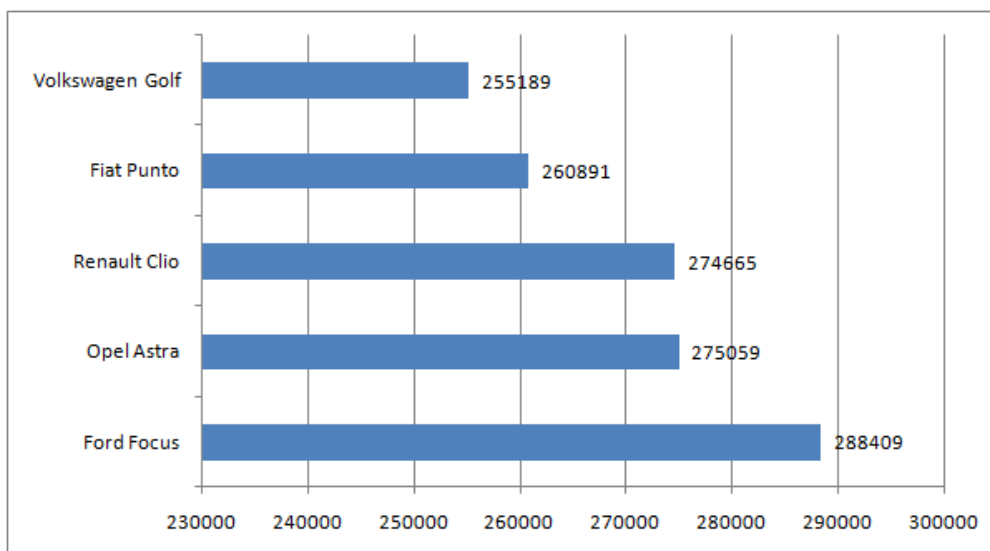
Source: Author calculations based on statistics from European Automobile Manufacturers Association, (ACEA, 2016)

¹³ EU15 include Austria, Belgium, Denmark, Finland, France, Greece, Germany, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, Sweden & the UK

¹⁴ New members include Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia & Slovenia

In the analysis of the European automotive industry for 1995-2006, Loire et.al. (2008) mentions changing society and evolution of demand as a major driver for the future of the industry. They highlight that in developed economies the necessity for mobility is still high and rising, but environmental awareness and concerns require the industry to innovate and upgrade in the development of environmentally friendly technologies. Growing urbanization creates demand for smaller cars, while demand for differentiation is nevertheless preserved. Increased energy prices pressure producers to make cars with less fuel consumption, though performance should be preserved. As authors state, the car has become a mean of transportation rather than a "prized possession". The trend is visible when looking at the top-selling cars in Europe: small and efficient cars of moderate price are the leader (Figure 11).

Figure 11: Europe top-selling vehicles by units, Jan-Jul 2006



Source: *The Wall Street Journal Online*, (JATO Dynamics Ltd., 2006)

Taking into account the information above it can be concluded that, in general, demand on the European market is of high sophistication. Consumer preferences for personal cars can vary but what is persistent is that they require technological improvement in general terms. This is pushing the industry to innovate and develop. Because the Czech automotive industry is exporting to the European market, this is strengthening the competitiveness of the industry. However, because traditional manufacturers in Western Europe are facing the same demand, it is unlikely that the demand condition gives the Czech automotive industry a competitive advantage over the industries in Western Europe. However, the demand of Western Europe is generally of higher sophistication than in Eastern Europe, where lower purchasing power and modest need lower the sophistication and people set for less expensive options. Adapting to the demand preferences of Western Europe could give the Czech automotive industry a

competitive advantage over industries in Eastern Europe that are focused on national markets or the Eastern European market. However, as most automotive industries are export-oriented, countries in Eastern Europe who are also part of the EU single market are facing the same demand conditions and possibility to export as the Czech automotive industry. It is therefore unlikely that the Czech industry could sustain a competitive advantage over any EU country with an automotive industry based solely on demand conditions.

8.3 Firm strategy, structure and rivalry

As mentioned earlier, competitiveness in the global automotive industry is fierce, forcing manufacturers and suppliers to innovate and improve efficiency in production in order to survive. The increasing competitiveness on a global scale has made multinational manufacturers move production to the countries of emerging markets in order to reduce production costs, and Czech Republic has been the recipient of numerous foreign direct investments in the automotive industry. Because of this, firm strategy and structure in the Czech automotive industry is largely dominated by the models of global producers. The foreign investors in the Czech Republic have long experience, and have over time developed expertise and a structure that is well suited for the industry. The presence of international firms allows traditional Czech firms to pick up valuable knowledge as well, and the competitiveness of the Czech automotive industry is likely to benefit from this.

The competition of international firms increases rivalry on a national level, and forces companies to innovate. In the study of Molendowski & Malgorzata (2013), Czech Republic had the highest level of rivalry in all of the analysed years. They also considered variables for assessment of firm strategy, structure and rivalry on an international level. The variables used were incentives for international investors, prevalence of foreign ownership and prevalence of trade barriers. Czech Republic has slightly lower values than Slovakia for these variables, but stands higher than Poland and Hungary. Again, this is for Czech Republic as a whole, but as the automotive industry is a substantial part of the national industry, their findings supports the idea that rivalry in the Czech automotive industry is high. When establishing a plant in the Czech Republic, Hyundai had to compete directly with Škoda, Toyota and Peugeot-Citroen in the Czech Republic and because the industry is export-based, it also has to compete with other manufacturers throughout Europe. The competition is fierce, and this forces the companies to innovate, which makes the national industry more competitive.

8.4 Related and supportive industries

One of the most important segments of related and supportive industries for the automotive sector is a chain of automotive suppliers. As mentioned in the analysis of Czech automotive industry, the Czech Republic has a variety of local suppliers due to long history of automotive manufacturing. During recent decades, acquisition of Škoda Auto by Volkswagen and new plant establishment by TPCA group attracted a large number of suppliers of the parts and components to the Czech Republic (Guidote, 2008), (Tirpak, 2006). Haiss et al. (2009) also conclude that large base of suppliers attracts investments to the automotive sector and to the Czech Republic in particular. The supplier chain of car components and systems combined with effective logistics, which are extremely important for modular production and just-in-time delivery, are strong in the Czech Republic, adding value to its industry competitive advantage. As stressed by Porter (1990), the companies within the industry benefit the most if the industry suppliers are global competitors themselves. This is a representative feature of the automotive suppliers in the Czech Republic. As stated in the industry analysis above, 46 of the world top 100 automotive suppliers have a presence in the Czech Republic. The presence of supplier firms that are internationally competitive strengthens the competitiveness of the national industry.

This is consistent with results of research of Molendowski & Malgorzata (2013), where the quantity of local supplier, state of cluster development, telecommunication, transport infrastructure and educational system are the considered variables for measuring the level of supporting industries in general. They conclude that the Czech Republic is a leading country in the region in terms of quantity of local suppliers, clustering of the industry and tertiary education level.

Competitiveness is further strengthened by the quality of education and high amount of technical graduates from Czech universities. As mentioned earlier, the Czech Republic had the second highest percentage of engineering, manufacturing and construction graduates at tertiary level when compared with other countries with automotive industry. In addition, most of the universities have their own R&D and technology centres and are cooperating with companies in the automotive sector.

Commodities used in automotive manufacturing are also present in the Czech Republic. Mentioned earlier, the steel production cluster in Moravia-Silesia makes the region advantageous for its supply of local and reasonable steel at low transaction costs. As steel is

the most used commodity in automotive manufacturing, access to local steel and other commodities within the Czech Republic contributes to the industry's competitive advantage.

8.5 The role of the government

After the communist era, the new government in the Czech Republic abandoned protective and subsidizing policy towards automotive industry letting in foreign investments and expertise. Already in 1991 Volkswagen acquired a stake in Škoda Auto. Paul O'Shaughnessy (2007) states that the success of the Škoda Auto privatization was due to the Czech government's ability to identify a foreign owner that would turn the company into a competitive one.

As presented earlier, the Czech government created diverse investment incentives for foreign enterprises. With entry in EU these incentives had to be harmonized with European law and prohibition policy towards incentives that were distorting competition (Allen & Overy, 2006). The Czech government's incentive aimed at increasing the inflow of foreign investments has had a positive effect on the competition and development of the industry. Membership of the European Union has further developed the access of foreign investors in the Czech Republic, increasing the competitiveness further. As with the Hyundai investment, the incentives are often aimed at reducing unemployment, and thus works as a way of increasing labour activity in the industry and improving quality of labour. The investments also focus on creating regional strategic industrial zones, which make the local regions more competitive through benefits of clustering.

The Czech government further strengthens the automotive sector through funding of the educational systems and R&D centres. Overall, the Czech government's focus on developing the automotive industry, especially through increasing the presence of internationally competitive companies and a focus on the development of innovation and labour resources strengthens the competitiveness of the Czech automotive industry.

8.6 Implications for Hyundai

When expanding to Europe, Hyundai firstly invested in a technology centre in Germany, before opening the plant in Czech Republic. Germany, along with other countries in Western Europe, also have a long tradition with automotive manufacturing, and this indicates it was not primarily interested in innovation provided by the Czech automotive industry, but rather the skilled and inexpensive labour Czech Republic provided. However, as Czech Republic has higher wage level than other countries in Central and Eastern Europe that Hyundai were interested in investing in, cost-reduction alone cannot explain why Czech Republic was chosen.

The decision to locate in Czech Republic was likely influenced by a competitive advantage in the Czech automotive industry over the alternatives in Central and Eastern Europe. Molendowski & Malgorzata (2013) describe Czech Republic as a “competitive leader” when compared to Poland, Slovakia & Hungary. Michael Porter (2007) highlights availability of scientists and engineers, quality of primary education, quality of math and science education, absence of trade barriers, intensity of local competition, decentralization of economic policymaking, extent of regional sales, stringency of environmental regulations, local suppliers quantity, local suppliers quality and presence of demanding regulatory standards as competitive features of the Czech automotive industry. Based on these findings, and our further analysis above, we find it likely that the Czech automotive industry holds a competitive advantage over other industries in the Central and Eastern Europe, and this helps explain why the Czech Republic was chosen as the desired location for Hyundai’s European production plant.

9 OLI and the knowledge-capital model

According to the OLI framework, a firm engages in FDI when it has an ownership advantage over its rivals abroad and it is more beneficial for it to exploit it internally than to sell it in the market. To locate abroad instead of utilizing it domestically, it must have a location advantage arising from the use of ownership advantage abroad.

In this analysis, we would like to assess whether Hyundai possessed the necessary advantages according to the OLI framework in order to engage in FDI in the Czech Republic. The analysis will be supported by the knowledge-capital model. As our focus in the thesis has been on why Hyundai chose the Czech Republic in particular, the location part of the framework is given the most attention. However, some aspects of the location part of the framework have already been analysed. These are still relevant, but to avoid too much repetition, not all of these will be mentioned explicitly in this analysis.

9.1 Ownership advantage

The main assumption of the OLI framework is that a firm has an ownership advantage, which can be favourably utilized abroad. As reviewed in the Hyundai global strategy, it had no competitive ownership advantage when it started to expand abroad. It was regarded as a latecomer in the automotive industry with no specific technological advantage. Nevertheless, Hyundai’s foreign involvement started with export to North America in early 1980s, while the company was expanding its domestic sales. According to Wright (2009), Hyundai went abroad having no competitive advantage yet, which goes against the principles of the OLI framework

that states that Hyundai must have had an ownership advantages in order to go abroad. An alternative explanation for this comes from the imbalance theory, which helps to explain why firms without an ownership advantage engage in FDIs. These companies are motivated to invest abroad by a deficiency in order to balance ownership disadvantage by obtaining new assets. This theory applies for the beginning of Hyundai's international expansion. Firstly, Hyundai needed to expand abroad since there was no growth potential in its home country, since South Korea was a small country and the automotive market was limited. Secondly, Hyundai as a latecomer was motivated to improve its competitiveness and global position in the industry and to gain knowledge from abroad. As a latecomer and MNE originating from South Korea, Hyundai was subsidized by the Korean government and expanded abroad in order to gain knowledge and to improve its competitiveness. Thus, Hyundai created an ownership advantage by going abroad that it did not already possess.

Building new plants in South Korea and abroad, Hyundai gained Ownership advantages of the second and third kind: multinationality and advantages of common governance. They include access to the resources of the parent company at marginal cost, economies of joint supply, ability to obtain inputs on favoured terms for the plants in South Korea and better knowledge about international markets, geographic differences, advantage in factor endowments and markets for the subsidiaries abroad. By the time it moved to Europe to establish a subsidiary, Hyundai had acquired its competitive advantage in international strategy and management expertise through both successful and unsuccessful international expansions in the past. Additionally, through foreign presence it has improved quality and productivity and gained an advantage in logistics called 'value added network', which has enabled it to provide flexible and just-in-time delivery. The knowledge of what to look for when expanding abroad and how to utilize the local resources have led to the improved performance and ranking of Hyundai among global car producers.

Markusen refers to ownership advantage as mostly composed by knowledge capital the MNE possesses. Fragmentation feature of knowledge-based assets is the ability to transfer and use these assets in production to foreign affiliates (Markusen, 2002). In the case of Hyundai's Czech plant, this feature is presented by the fact that management board of Hyundai Motor Manufacturing Czech consists of highly qualified Korean managers, who has been working with the Hyundai Group since the 80s and 90s. The management, which has a long track record of professional experience in Hyundai, can ensure successful transfer of knowledge, expertise and experience, bringing the vision and the strategy of the company to the new facility. This

fact supports the idea that by the time when Hyundai engaged in European production, it possessed valuable intangible assets such as efficient production management, efficient organizational and marketing systems, management expertise, human capital experience etc.

As described in the knowledge-capital model, production of knowledge-based assets requires skilled human capital and should be located where the necessary workforce is plentiful, while the location of manufacturing facilities is dictated by the ability to obtain inexpensive non-skilled labour. We see this pattern in Hyundai's facilities establishments for serving the European market: R&D and production sites are located in different countries. Before engaging in production in Europe, Hyundai Motor Group established the R&D centre in Russelsheim, Germany in 2003 in order to “ensure that every Hyundai and Kia which comes to Europe meets the demanding standards of European customer” (Hyundai Motor Group European Technical Center, 2016). It then opened production facilities in Slovakia and the Czech Republic, for Kia and Hyundai respectively, where labour is less expensive than in Germany. It implies that company strives for product innovation and diversification, which are also ownership advantages. The numerous worldwide facilities strengthen Hyundai’s ability to transfer knowledge-based capital to multiple locations. The R&D factory in Germany in particular, is able to serve Hyundai and Kia production plants in Czech Republic and Slovakia.

The imbalance theory can also offer insight on Hyundai’s European expansion. As it was primarily a market-seeking expansion, there were several knowledge-based assets, especially information about the European market, that Hyundai did not possess at the time it decided to expand. Opening the R&D facility in Germany before opening the Czech factory allowed Hyundai to acquire an ownership advantage through research and exploiting knowledge spillovers in Germany. This was an important part of the expansion, as all the cars produced at the Czech plant are new models, designed specifically for the European market.

9.2 Internalization advantage

Internalization advantage is the most abstract variable in this framework. It represents a product or a process, which is preferably performed internally rather than externally. The reason to exploit it internally is to protect know-how from leakage or to preserve a quality which otherwise would not be reached through external production. Hyundai evidently possess an internalization advantage, as can be observed in the strategy of its international expansion. The entry modes of Hyundai have always been with local presence either in a form of wholly owned subsidiary, M&As or joint venture. However, entry mode via joint venture turned out to be not

very suitable, and is used only when it is necessary, i.e. in the case of entering China. In the Czech Republic, Hyundai decided to enter through wholly owned subsidiary, which is the entry mode with the lowest dissemination risk and the highest level of control.

Moreover, together with Hyundai, its first tier suppliers entered Czech Republic, and three of them were located directly in the same industrial zone. First tier suppliers interact with the manufacturer on daily basis and receive detailed information about the components requested. Close cooperation involves a great share of information and know-how exchange. In a competitive environment, using external suppliers for such a close cooperation, could lead to competitors picking up valuable information, which would be unfavourable for Hyundai. Cooperating with its own main suppliers could therefore protect Hyundai from information leakage. When Hyundai's own suppliers follow Hyundai to the Czech Republic, this also allows for closer control of each level of the value chain, and can ensure effectiveness in production when the cooperation between the suppliers and Hyundai. If Hyundai had to adapt to the customs and operational procedures from foreign, external suppliers, the internalization advantage would be weakened, as the use of external suppliers could slow down the production process because Hyundai would have to spend time by ensuring about the quality and by explaining its specific requirements. Hyundai's global strategy revolves strongly around lean production procedures and just-in-time delivery. This is more achievable when Hyundai has suppliers it knows it can depend on in the local environment, so having its suppliers move abroad is an advantages when it comes to preserving internalization advantage.

Hyundai is secretive with its strategy, and rarely discloses information publically, which indicates a desire to reduce information leakage. When moving to the Czech Republic, Hyundai brought its Korean management with them instead of using local management. This both protects the company from information leakage, and ensures the internal processes are done according to Hyundai's strategy. This strengthens the impressions that it has internalization advantages, and keeping the information from leaking out of the business is a priority of Hyundai. Since Hyundai wanted to start the production as soon as possible, and managed to build the plant in a short time, benefits of use of international suppliers was the most suitable for its strategy. This is however not positive for the local industry, because this kind of knowhow protection hinders the potential spillovers to the local suppliers, which could have gained new knowledge through close cooperation with a global car manufacturer.

Thus, Hyundai protects its ownership advantage by entering through a wholly owned subsidiary, with the use of own loyal management and conglomerate suppliers.

9.3 Location advantage

The main decision for MNE when considering to locate abroad is whether it is more favourable and profitable to build a local subsidiary or to serve the market by exporting. Both exporting and building a subsidiary keeps ownership and internalization advantages of the company, however, location advantage can be gained only through local presence. According to the OLI theory, Hyundai decided to invest in the Czech Republic because when locating there it gained a location advantage. In this part we will analyse which variables could be the source of Hyundai's location advantage which led to decision to build a manufacturing plant in the Czech Republic.

As analysed earlier, the Hyundai's investment in Europe was primarily market-seeking. However, as the R&D centre is located in Germany, it also contains vertical traits, because different levels of the value chain is located in different areas within Europe. This division indicates that the location advantages Hyundai were looking for were not primarily higher innovation capacity, but a location where it could achieve high production with access to a relatively inexpensive workforce.

By locating the production plant in the Czech Republic, Hyundai got an access to both Czech and European market. According to Tirpak (2006), The Czech Republic is perceived by its location in Central Europe as a gateway to both Western and Eastern European markets. It offers good a geographical position for reaching these markets and also has historical and cultural connections to both markets. Even though the Czech Republic doesn't offer a large domestic market, the most important location advantage if offered with respect to market access for Hyundai was an access to European Union which was the Czech Republic already a member at the time of investment. The importance of market access and size was highlighted as a variable for FDIs in the Central and Eastern European region in researches of Torissi et al. (2008) and Bellak & Leibrecht (2005). As the market in Eastern Europe is less saturated than Western Europe, choosing a location where Hyundai could easily access both markets was of importance. Tirpak's (2006) states that especially fierce rivalry is in the small passenger car segment pushing production to the countries with low cost of factors. The author connects the appearance of assembly plants in the Czech Republic, Poland and Hungary with developed infrastructure in the region, as infrastructure conditions go on the front line in current

conditions of modular production and just-in-time delivery. That is why efficient logistics network is so important both for the supply of the parts and sale of final products.

Petr Pavlinek (2015) mentions Central and Eastern Europe as a prime example of the “integrated peripheral market”. The idea behind this definition is that MNE enters into less developed economies in order to increase competitiveness in more developed markets by means of transferring production to peripheral areas that closely neighbour prosperous markets in Western Europe and offer lower production costs, mainly due to lower wages. Pavlinek compares Central and Eastern Europe with Mexico and Spain like examples of location export-oriented low-cost production plants in peripheral areas closely located to developed countries’ markets. Pavlinek stresses that geographical location of the Czech Republic played a superior role in attracting FDI rather than differences in the institutional environment, as all the Central and Eastern Europe countries were engaged in competitive bidding for FDI through low wages. The geographical proximity of Czech Republic to original equipment manufacturers in Germany and France can also be considered as attractive factor giving Czech Republic leading position in Central and Eastern European region as stated by Haiss et. Al (2009).

At the same time, membership of the European Union also makes the political and legal climate in the Czech Republic more stable, as Czech Republic must follow certain rules and regulations made in the EU. This stability is beneficial for Hyundai when investing in Czech Republic, as it reduces risk and uncertainty connected to investing. EU’s legislation grants free trade within the union, so locating a plant in the EU also helped to overcome trade barriers and lower the associated costs. At the time of investment, there was no free trade agreement between the European Union and the Republic of Korea, hence, there were trade barriers between these two regions, which made exporting more costly. South Korea signed a free trade agreement with EU in July 2011 (European Union, 2011). Before the free trade agreement, Hyundai faced 10% tariffs for exporting to EU. After the agreement, the tariffs were lowered to 6,6% and 4% for small cars and midsize and large cars respectively, with perspective to eliminate the tariffs completely. However, this agreement has been met with criticism from European automotive producers, because they are losing their market share against Hyundai and Kia. The trade agreement was written in a way that it is possible to invoke a safeguard clause that can freeze falling tariffs or even reintroduce them. Hyundai defended its position arguing that most of its cars that are sold in Europe, 55%, are locally produced, and the rest is imported from Turkey, India and South Korea (Reed, 2012). The disagreement illustrate how fragile international trade agreements can be. By establishing a plant within the EU single market, Hyundai could

safeguard itself from future changes to trade agreements and trade disputes, and thus it strengthens Hyundai's location advantage.

Another location advantage is to diversify its currency portfolio, and reduce risk connected to currency fluctuations. If producing in Korea, an appreciation in Korean won would make cars more expensive for foreign customers. Hyundai has had trouble with this in the past, when its export fell due to appreciation of the Korean won against dollars (Reid, 2005). By producing and selling cars in a single market Hyundai could protect against foreign exchange rate volatility. This was stated as an important motivation for Hyundai when establishing plants abroad (Reid, 2005). However, Czech Republic is not part of the Eurozone, so there is still some exchange rate risk between Euro and Czech Koruna.

As mentioned earlier, Hyundai's current strategy is based on the lessons learned from its international expansion in the past. Hence, the crucial condition for Hyundai when choosing a location for its subsidiary is the availability of suppliers and possibility to build up an effective supply chain network.

Other location advantage arises from benefits for supply chain. Effective supply chain has to deal with several conflicting goals and needs to be well coordinated. It needs to provide a sufficient product variety on the market with possible shortest lead times and be at the same time cost-efficient (Hahn, Duplaga, & Hartley, 2000). Building a local plant in a target market can enable Hyundai to reach these goals easier, more efficiently and more smoothly. Producing cars locally shortens lead time since the length of transportation time substantially shortens. This results in faster and more flexible response to local demand. Furthermore, the local plant is specialized to produce cars designed for European market so it carries less types of inventory for production than if it was manufacturing several types of cars for different markets. Also, when a new model is introduced, it affects only local supply chain and not the central one. The distance between Europe and South Korea is big, so if short lead time should be reached through exporting, air transport is needed. This option is very expensive. To make the delivery cheaper, the best option is to use boat transport but this is very slow. Therefore, the local production with local transportation served by trucks and train offers serving a market in cost-effective manner. The Czech Republic can offer this because it has a good road, railway and air connection with other European countries.

The automotive industry has a long tradition in the Czech Republic and many supplier firms have been established in the country for decades. However, the investments by Volkswagen

Group into Škoda Auto or joint venture of Toyota and Peugeot attracted substantial number of new automotive suppliers to establish their subsidiaries in the Czech Republic. Therefore, the Czech Republic possess a great suppliers network at all tier levels which are necessary for a car manufacturer. The local availability of suppliers enables to sustain an effective supply chain management, which is crucial for Hyundai's success. Another important factor was the geographical proximity to Hyundai's sister company KIA Motors factory in Žilina. By locating both factories close to each other, Hyundai could enjoy the benefits arising from economies of scale and mutual cooperation. The biggest benefit arises from the possibility of using holding suppliers and to cooperate in the supply chain. Hyundai's suppliers are producing transmissions for both Hyundai factory and KIA factory. In addition, the proximity to the R&D centre in Germany makes the cooperation between these subsidiaries focused on European market easier.

The decision to locate in the Czech Republic was most likely motivated by the local conditions of the country that would favour Hyundai's production. As analysed by Michalikova and Galeotti (2010), the Czech Republic could offer high-quality labour with high technical skills for relatively low costs when compared to Western Europe. The supply of skilled labour as an important characteristic of the Czech Republic is also stressed by Pavlinek (2015). The low costs of labour were often mentioned by researches as the main variable for FDI's targeted to the Central and Eastern European region but resulted in conflicting views. The labour in the Czech Republic has the highest labour costs in the Central and Eastern European region, and therefore the labour costs could not be the only decisive variable when choosing this location. Moreover, as Šípek, general director of the Czech Automotive Association, pointed out, the labour costs accounts only 8% to 15% of total costs of car production, indicating lower importance of labour costs in the automotive industry (Ward's Auto World, 2006). However, as Hyundai employs 3440 at the Czech factory, labour prices must still be considered as a significant variable. As we presented in the investment climate analysis, the Czech Republic can offer higher labour productivity compared to other countries of Central and Eastern Europe. Even though wages are rising, especially in the automotive sector, the productivity growth is higher. Tirpak (2006) also highlights the combination of high productivity and low costs of labour in Central and Eastern Europe as favourable factor for car producers' competitiveness.

Therefore, the favourable characteristics of productive, but inexpensive labour in the Czech Republic in the automotive sector could have played a major role when deciding to locate in the Czech Republic since it could have been a source of competitive advantage against other

car producers. Another aspect of the labour market in Czech Republic that could be important for Hyundai, taking into account their negative experience with labour associations in Korea in the 1980s (Chung, 1998) is labour legislation, which are quite liberal in the Czech Republic.

One important variable in the OLI framework is the possibility of investment incentives. Allen and Overy (2006) in their report claim that investment incentives are an appealing factor for FDIs. In the case of Hyundai, the generous incentives were provided. As described earlier, Hyundai was supported by 194.49 million EUR through the incentive scheme. The importance of investment incentive in the Czech Republic was also outlined by Pavlinek (2015) and Guidote (2008)

Additionally, Dunning also mentions the importance of psychic distance for location decision. The Czech Republic and South Korea are quite close in terms of psychic distance according to Hofstede's framework, as presented in the respective part of the analysis above. They are similar in the power distance, uncertainty avoidance and indulgence conditions, while Korea is slightly more feminine and long-term oriented. This should make Czech Republic a favorable location for investment by Hyundai, as the need to adapt business practices to a different culture is smaller. However, because individualism is stronger in the Czech Republic, this could represent a challenge for the Korean manager, as they would have to adapt their business culture slightly to adapt to the practices of Czech Republic.

Cultural proximity of the Czech Republic could be a valuable location advantage. However, Hyundai's disregards cultural proximity as a factor in its global strategy (Wright, 2009). On the other hand, the psychic distance proved as a significant variable in case of Japanese investors according to findings of Strach & Everett (2006). They also found out that higher presence of Japanese firms and expatriates in the Czech Republic attracts other Japanese investors. Although the psychic distance was claimed to be disregarded by Hyundai, an increase of Korean investors in the Czech Republic and the fact that Hyundai were able to bring their Korean suppliers with them can be seen as a measure to reduce the psychic distance. This can be interpreted that a psychic distance and a presence of other Korean investors, could have had an influence on location decision made by Hyundai.

Main Findings and Conclusion

Our thesis has aimed to answer the question "What made Hyundai decide to locate their European plant in the Czech Republic?"

Hyundai's expansion to Europe is primarily of market-seeking character, as Europe was Hyundai's second largest export market at the time of the investment, and Hyundai wanted to establish a stronger presence in the region. As our OLI analysis show, Hyundai had ownership and internalization advantages when investing in the Czech Republic.

The OLI analysis also show that Hyundai had location advantages which made it more profitable to expand its presence in the European market through FDI rather than exports. Firstly, there were trade barriers in place that limited Hyundai's export possibilities and made export more expensive. By locating within in European Union's single market, Hyundai both avoided these trade barriers and shielded itself against future trade disputes. Locating abroad also reduced the risk of losing export due to currency fluctuations, which Hyundai has had trouble with in the past. In addition, transport of motor vehicles is costly, and by locating in Europe Hyundai could reduce its transportation costs. Having a shorter distance between the production plant and the market also increases Hyundai's ability to make just-in-time deliveries, which is an important part of Hyundai's global strategy. A close proximity to the market makes it easier for Hyundai to follow the trends of European demand, sustain a thorough understanding of the European market and pick up know-how from local competitors and other players in the European automotive industry. This is illustrated by the fact that the three main cars produced at the Czech plant were specifically designed for the European market through research done at Hyundai's German R&D facility.

The previous paragraph summarizes the most important reasons for why Hyundai wanted to expand to Europe in general. We will now answer why it chose Czech Republic for its production plant in particular.

As mentioned, before investing in Czech Republic Hyundai opened a technology centre Germany, that serves as the Company's European headquarter and main R&D centre. Thus, the main motivation for the Czech plant was not to benefit from innovation in the Czech automotive sector. Hyundai's strategy was to innovate at the facility in Germany, where access to high-skilled scientist were plentiful, and locate the production plant at a location where it could benefit from the innovation done at the German facility, while reducing the costs of production at the production plant. Fierce competition within the industry has forced manufacturers to reduce costs, and Hyundai were therefore looking for a location in Central and Eastern Europe, where wages and cost of production was lower than in Western Europe.

Thus, the main motivation behind opening a plant in the Czech Republic was to reduce cost of production.

However, the wages and costs of production is higher in the Czech Republic than other countries in this region, meaning lower cost of production alone cannot explain why Hyundai chose the Czech Republic. The reason for choosing the Czech Republic is because Czech Republic is a competitive leader in the region and holds a competitive advantage over other countries in the Central and Eastern Europe, as shown in our analysis of Porter's Diamond. This competitive advantage comes, among other factors, from the strong traditions of car manufacturing in Czech Republic, access to a high amount of skilled labour, the presence of a well-established network of internationally competitive automotive suppliers on all tiers of the value chain, a focus from the government to strengthen the automotive industry. In addition to this, the Czech Republic provided a safe investment climate that were already the home of a large amount of foreign investors and a stable political environment. The proximities between Czech and South Korean culture also favours Czech Republic as a location for investment for Hyundai.

Another important advantage of the Czech Republic is its geographical location within Europe. Bordering with Germany in the west, it has close connection with the Western European market. Its connection to Germany makes cooperation between the production plant and the R&D facility run smoothly. Membership in the European Union grants Hyundai full access to the European market, on the same level as establishing a plant in any Western European country would. At the same time, the Czech Republic is also tied closely to Eastern Europe, both historically and geographically. Czech Republic is thus seen as a gateway to both the Eastern and Western European markets. Having access to the Eastern European market is important, as this market is less saturated than the Western European market.

For Hyundai, locating the plant in close proximity to the Kia factory in Žilina was of importance. Therefore, the location in Czech Republic, only 90km away from the Kia factory, was favourable to Hyundai, and an important reason as to why it chose this exact location. The plant is located in Nošovice, and is part of a regional cluster. As analysed in the cluster theory, the cluster was already established at the time of Hyundai's investment, and has grown due to the presence of Hyundai. Locating in a cluster allows Hyundai to enjoy benefits due to increased productivity and innovation. However, it is unclear how big importance the cluster

played in Hyundai's decision. For Hyundai, proximity to the Kia factory, and the possibility to bring its Korean suppliers with them was probably of more importance than the cluster itself.

Lastly, an important factor was the investment incentives supplied by the Czech government. Hyundai got both financial support and tax relief from the Czech government, and this was probably of huge significance. Had the incentives not been provided, it is likely Hyundai would look for other locations where it could receive incentives. Nevertheless, during Hyundai's previous expansion to Canada, it also received investment incentives, but had to close the factory due to low productivity because the location was unfavourable. This shows the importance of choosing a location that is favourable in the long run, not just in the short run due to initial incentives, and Czech Republic provided this location.

Further suggestions and limitations

Our thesis is based on available research that has been conducted for the automotive industry in Europe and Czech Republic, and is therefore limited by the data available. In some areas, there is very little research done, and more data could have strengthened our analysis. This especially regards the local conditions in the Moravia-Silesia region, where very few studies have been published. In our thesis we have based our conclusion on the fact that there is a cluster in the regional, and this should theoretically strengthen the productivity, but it would therefore be interesting to study the cluster in more detail, to investigate the linkages between the firms and in the regions, and see how it effects the productivity. It could be especially relevant to compare productivity in the cluster before and after Hyundai's entry. Also, our thesis is focused on Hyundai's decision to invest, and we have not thoroughly analysed if the investment was successful or not. We know that the factory is still running, and that Hyundai is increasing its sales within Europe, so the factory seems to have been a success. This however, should be analysed in more detail.

Hyundai is very secretive with their strategy, and very reluctant to give information publically. For this reason, most of the research that has been done on Hyundai, including this thesis, has been done from an outsider's perspective. More information about the internal decision process in Hyundai could potentially shed more light on this topic, but this is unfortunately not available.

We have in this thesis have been focused on the last decade, and 2006 in particular, as this was the relevant time when Hyundai decided to invest. The macroeconomic environment has changed dramatically since this time, especially due to the financial crisis that severely limited

economic activity. Because of this, FDI in the Czech Republic was also lowered substantially. However, the Czech economy has recovered and foreign investment is again on the rise in the Czech Republic, and is approaching the levels it was before the crisis. Even though the situation naturally is not identical now and then, this thesis could be relevant for other foreign investors looking to invest in the Czech Republic, as the advantages of the Czech Republic as an investment location, especially in the automotive industry, still exist to a high degree today.

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