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INDUSTRIAL ZONES AND THEIR SOCIO-ECONOMIC IMPACT ON REGIONAL DEVELOPMENT: THE CASE OF STRATEGIC INDUSTRIAL ZONE NOŠOVICE

diplomová práce

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Prohlášení

Prohlašuji na svou čest, že jsem diplomovou práci vypracovala samostatně a s použitím uvedené literatury a dalších zdrojů.

V Praze, dne 28. srpna 2014

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Bc. Hana Němcová, MPP

Poděkování

Na tomto místě bych ráda poděkovala vedoucí své diplomové práce Ing. Blance Miksové za její trpělivý přístup, vedení a rady během psaní mé diplomové práce. Dále si mé poděkování zaslouží rodina a přátelé, kteří mne během studií a psaní mé práce podporovali a zároveň se mnou měli po celou tu dobu trpělivost.

Abstract

The aim of this master‘s thesis is to analyze and assess socio-economic impacts of strategic industrial zones on regional development. Concretely the thesis concentrates on current impacts of Strategic Industrial zone Nošovice on its closest area within Moravia-Silesia region. The theoretical part is focused on basic terms, concepts related to industrial zones and describes their positives and negatives and based on literature review discusses potential impacts. Further is briefly defined legislation related to Industrial zones establishment and also determines system of funding and support of industrial zones. The practical part first briefly describes industrial zones and its situation within Moravia-Silesia region. Further it concentrates on analysis of SIZ Nošovice and socio-economic impacts related to its establishment and current presence. Impacts are divided in three parts on economic, social and other impacts such as impacts on environment and transport infrastructure. In the end are defined proposals on further regional development in other areas. The thesis is a combination of available data, author’s research and obtaining information from authorized persons related to the topic. For this evaluation are used methods such as description of statistical data, analysis and synthesis of the findings obtained.

Key words: Industrial zones, Regional Development, Socio-economic Impact, Investment Incentives, Nošovice, Hyundai, Moravia-Silesia region

JEL classification: E220, E240, R230, R110

Abstrakt

Cílem diplomové práce je analýza a zhodnocení socioekonomických dopadů průmyslových zón na rozvoj regionu. Konkrétně je práce zaměřena na současné dopady SPZ Nošovice na nejbližší okolí v rámci Moravskoslezského kraje. Teoretická část nejprve vymezuje základní pojmy související s průmyslovými zónami, popisuje jejich možná pozitiva a rizika a na základě literatury diskutuje možné dopady. Dále je vymezena stručně legislativa související s průmyslovými zónami v ČR a také možnosti podpory a financování průmyslových zón. Praktická část nejprve stručně charakterizuje průmyslové zóny a situaci Moravskoslezského kraje. Dále se konkrétně zaměřuje na analýzu SPZ Nošovice a socioekonomické dopady na rozvoj regionu související s jejím vznikem a působením. Dopady této průmyslové zóny jsou rozděleny do tří částí na ekonomické, sociální a ostatní dopady, které zahrnují například dopady na životní prostředí a dopravní infrastrukturu. Na závěr jsou definována návrhy pro další rozvoj regionu v jiných oblastech. Práce je kombinací dostupných zdrojů, vlastního šetření a získávání informací od pověřených osob z problematiky. Ke zhodnocení jsou v práci také použity metody deskripce již známých dat a zároveň analýza dat a syntéza získaných poznatků.

Key words: Průmyslové zóny, Regionální rozvoj, Socio-ekonomické dopady, Investiční pobídky, Nošovice, Hyundai, Moravskoslezský kraj

JEL classification: E220, E240, R230, R110

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Abbreviations

CI	CzechInvest (Investment and Business Development Agency)
CR	Czech Republic
CSO	Czech Statistical office
EU	European Union
EZ	Enterprise Zone
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
HMC	Hyundai Motor Company
HMMC	Hyundai Motor Manufacturing Czech
IZ	Industrial Zone
MIT	Ministry of Industry and Trade
MLSA	Ministry of Labour and Social Affairs
MSK	Moravia-Silesia Region
MRD	Ministry of Regional Development
OECD	Organization for Economic Cooperation and Development
SIZ	Strategic Industrial Zone
RD	Regional Development
RRAJM	Regional Development Agency of South Moravia

Introduction

Industrial zones are usually established in declining, structurally affected or other disadvantaged regions where they should assure refreshment of the economy, create new jobs and generally secure prosperity to the affected region. This situation reflects in recent years a massive construction of industrial zones in Czech Republic which brought many impacts to their closest area as well as to the regions where they were built. Current and future success of the industrial zones is connected with the chosen area and its given characteristics, investor who aims to establish its manufacturing there and also with the support from state which has several tools such as investment incentives how to attract the investor and create for him the best conditions possible. One of the cases is establishment of Strategic industrial zone Nošovice for Korean car manufacturing company Hyundai. So far it was the largest project from Czech state for foreign investor in volume of investment incentives received. Moreover, it is probably the most publicly known Strategic industrial zone in the Czech Republic due to circumstances which accompanied the whole process of establishment. Therefore in my thesis I would like to show the importance of strategic industrial zone Nošovice and to reveal its impacts on regional development and further assess and discuss its real contribution to regional development.

The general aim of the thesis is to analyse and further assess the main socio-economic impacts of industrial zones on regional development, concretely current socio-economic impacts of strategic industrial zone Nošovice establishment on its closest district within Moravia-Silesia region and related municipality Nošovice.

Thesis is divided into two main parts. The first theoretical part describes in the first chapter basic terms, concepts related to industrial zones such as Brownfield, Greenfield or division of industrial zones and factors of localization. Second chapter describes the positives and negatives of industrial zones. Then based on literature review discusses potential impacts and controversial points over the impacts. Further in the third chapter is introduced the state support and interventions which are provided to industrial zones, followed by brief description of Czech legislative framework and main subjects who are related to industrial zone's funding and administration, namely Ministry of Industry and Trade and business and investment development agency CzechInvest.

The second practical part first describes in chapter four main socio-economic characteristics of Moravia-Silesia region, followed by brief introduction about the

industrial zones in the region. Further it concentrates on analysis of SIZ Nošovice. In the last chapter number five are assessed the main socio-economic impacts related to its establishment and current presence. Impacts are divided in three parts. First part discusses economic impacts which reflects main economic indicators such Gross Domestic Product, unemployment rate, average monthly wage etc. Following second part evaluates social impacts reflected in population changes, criminality, social life in the nearby municipality and local communal activities. The third part discovers and assesses other impacts such as impacts related to environment protection and preservation or impacts on transport infrastructure. In the end of the practical part are mentioned several proposals for further regional development in areas which were not mentioned.

For this evaluation are used methods such as description of time series and statistical data from credible sources, analysis and synthesis of the findings obtained.

During the thesis-writing process there were set several auxiliary questions to meet the objectives of the thesis:

1, What are the economic impacts on related area?

2, What are the social impacts and impacts on population?

3, What are other related impacts of the SIZ Nošovice?

4, Are there some recommendations for further positive development of the region?

1 Industrial zones

Industrial zones does not have a long tradition yet in the Czech Republic, first of them were established in the mid-90's of the last century in relation to establishment of the agency CzechInvest. After 1989, there were few regions structurally affected by heavy industry decline due to political and economic system transformation. Therefore, most of the industrial zones took place in those regions as a "solution" or "refreshment" to their socio-economic problems like high level of unemployment, etc. Thus, industrial zones generate many socio-economic impacts to the region, both positive and negative. From the very first beginning it is worth to mention that when assessing the impacts, always depends on point of view and related stakeholders to the problem.

First, it is important to clarify some important terms and concepts related to the topic of industrial zones because there are several attitudes and sources. Thus, first chapter defines those terms and also types of industrial zones and their division.

1.1 Basic terms and concepts

Industrial zones can vary by size, area of establishment, investor's intention, etc. and amount and type of support or subvention partly depends on that. Also, as was mentioned, in some cases, there is no consensus on industrial zone's taxonomy. Therefore it is important to define and explain main terms of this topic which uses Czech Republic, represented by CzechInvest, Czech Investment and Business Development Agency, in its funding programs.

Industrial zone (Enterprise zone)

According to Rules of the Industrial Zone Development Support Program (RIZDSP), industrial zone is described as a comprehensive continuous area of approximately rectangular shape, defined in the binding part of the approved zoning plan of large territorial unit or the approved zoning plan as an area currently covered by objects, used mainly for industrial production, trade, services, or as an area which is suitable to be built-up mainly by objects for industrial production, trade, services. If this is not an industrial zone prepared for a strategic investor, the area must be at least 10 ha in the case of a project implemented in not build-up areas, or at least 5 ha in case of a project implemented

in built-up areas but unused territory. For industrial zone in this program consider also the territory in which you can place objects in industrial production, trade and services on the basis of a conclusive decision on the building's location. The industrial zone is also understood to be intended for the science and technology park (Vindeman 2005, 3).

In a more simple way, IZ is generally defined as a complex set of compact universal objects suitable for a light, hygienic safe production with sufficient transport and high amount of green in between single objects (Průmyslové zóny, 2014b).

According to an official web engaged in IZ in the CR (Průmyslové zóny, 2014b) in these zones, complex operation is situated in the inner part of the zone which are usually not fenced and with possibility of free movement of the visitors within the object. Therefore it is united complex of industry and services with many integrated functions of professional character. The whole IZ complex thus has a possibility to use the common support of each company within the zone by information sharing, consulting, common promotion or to utilize international contacts.

In addition, IZ and their origins are not only a current trend, but it is an economic necessity both in case of large regional towns or cities with small population. The main proof is the grooving amount of these sites in the Czech Republic. Establishment of IZ brings great benefits in terms of job creation and other opportunities related to investor's invested capital. New jobs mainly positively influence regions with high unemployment rate because investment and newly created jobs are hidden opportunities for other suppliers and other related services. The main interest in creating, building and developing most of the IZ has the local government, which aims to attract new investors, who will create the new jobs not only for the city's inhabitants but also for other people from that region (Průmyslové zóny, 2014a).

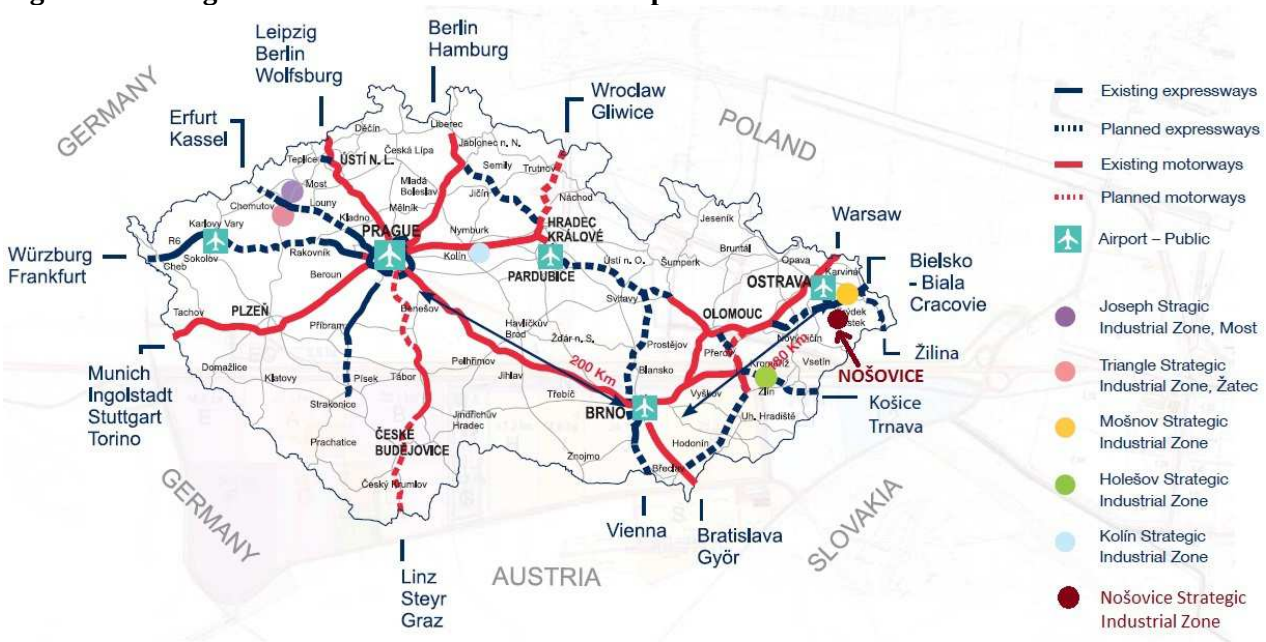
Strategic industrial zone (SIZ)

Vindeman (2005, 3) further describes Strategic industrial zone as a zone which size is at least 200 ha in case of its establishment as a Greenfield or at least 100 ha in case of Brownfield. Zone sizes are determined on the basis of Czech Government Resolution or documents of strategic nature such as zoning (land-use) plan. Also under this heading are designated zones that are prepared for significant or serious investor.

In Czech Republic there are 7 Strategic industrial zones (CzechInvest 2013): 1) Joseph SIZ Most, 2) Triangle SIZ Žatec, 3) Kolín SIZ, 4) Mošnov SIZ, 5) Holešov SIZ, 6) Nošovice SIZ and 7) Škoda Plžeň SIZ as you can see from the map below, except Škoda

Plzeň. In addition, the first 5 above mentioned SIZ still have available capacities and they are not fully occupied. The area of SIZ Nošovice is already completely occupied.

Figure 1: Strategic Industrial zones in the Czech Republic



Source: CzechInvest, 2014a

Sources use several **types of investors**, therefore there is a brief description of the differences by RIZDSP (Vindeman 2005, 1):

Supported investor is a natural or legal person who is committed to the PZ to create new jobs in the manufacturing industry (except those with a focus on primary processing of raw materials), in the fields of strategic services, technology centres and research and development.

Serious investor is considered as an investor who received an occupancy permit on the building use allowance or building permit, or also a permit on the location of the production hall construction in the IZ. Production hall area must reach a minimum area of 1000 m2. In case of use for strategic services and technology centres the minimum area must reach 500 m2 (Vindeman 2005, 1).

Significant investor becomes an investor who has submitted an application for investment incentives or submitted a grant application under the Framework Programme for Support of Technology Centres and Centres of services (Vindeman 2005, 2).

Strategic investor is defined as an investor who intends to create new jobs in the manufacturing industry (except those with a focus on primary processing of raw materials)

on the area of IZ and also intends to invest in tangible and intangible assets more than 4 billion CZK and also create more than 1000 jobs. If the strategic investor considers jobs creation in strategic services, technology centres and science and research, then must spend at least 1 billion CZK, while creating more than 500 jobs (Vindeman 2005, 2).

Investment incentives

Investment incentive is described by Dvořáček (2006) as a term expressing targeted benefits for investors, financially appraised, and also serving to influence investor decisions in favour of investment in the country. Government provides incentives to the investor either through direct financial support or indirect support, which means providing relief from certain conditions that state requires from the company. More about investment incentives and **Foreign Direct Investment** will be explained in chapter 3.

1.2 Division of industrial zones

One of the initial and most important investor's decisions the location where he aims to do business. It could be a dilemma whether to establish it on an already used plot, an old industrial areas known as "Brownfield" where you can expect higher cost for renovation etc. or whether to establish the business on brand new plot so called "Greenfield" according to own ideas but at higher initial costs. Both of these types where is possible to establish a new industrial zone is worth to take into consideration.

There are several attitudes how to divide industrial zones. Basic division is **by type of locality** and we divide them as Brownfield (realization on a built-up area) and Greenfield (realization on undeveloped area or "green field"). Thus, a brief description of these two terms is explained below together with their advantages and disadvantages.

Brownfield

Agency CI (2014b) defines Brownfield as a property (land, building, premises) which is not effectively used, also neglected and possibly contaminated which represents burden for environment. It arises as a remnant of industrial, agricultural, residential and other activities. Rydvalová and Žižka (2006) adds that Brownfields are old and not used objects located both in urban areas or free landscape and typical characteristic is that they were used for economic activities.

Authors also explain that Brownfield can be referred to a concept of "depressing zone". The main cause of Brownfields authors indicate as restructuring of the economy coupled with a decline in the primary and secondary sector evidenced by the gross domestic product and employment (Rydvalová and Žižka 2006). Other positive and negative effects of Brownfields are mentioned below (Hladík 2005):

Advantages:

- Fast move-in possibility, easier further move-in
- Relatively low initial costs and smaller business liabilities
- Possibility only to rent the object
- Enables relatively easier and fast run of operation
- Proximity to urban centres, existing technical infrastructure
- Urban buildings compactness, residential, transport and other ties of citizens to the city

Disadvantages:

- Unfavourable initial image
- High probability of building reconstruction, modernization or remediation of environmental damages
- Danger of other inconvenient situation detection with consequent cost increase or operation delay
- Investor's distrust to its possibilities oppose to free area of Greenfield

Greenfield

Greenfield is most commonly known for environmentally clean site without prior building development or it can be called as development on a "green field" (Kunc, Tonev, Klapka 2008). Rydvalová and Žižka describes Greenfield as an intention that is by planning documentation predetermined for commercial or residential purposes only.

Its positive and negative effects are summarized below (Hladík 2005):

Advantages:

- Tailor-made solution for particular investor, own image
- Zero cost on renovation
- 100% ownership control (own management and employees recruitment)
- No (minimal) environmental damage
- Own corporate culture

Disadvantages:

- High initial investment costs (building and putting into operation except the case of only renting)
- Time-demanding putting into operation (employees recruitment, requalification, training
- Demanding administration (bureaucracy, building permit, occupancy permit, etc.)
- More serious liability
- Insecurity of good building's tradability
- Supporting suburbanization process and changes in spatial-temporal behaviour of the population
- Weakening the position of the city and urban ties
- Time-consuming commuting and related traffic congestions

In relation to the topic, Kunc, Tonev and Klapka (2008) raises a question whether to prioritize IZ in form of Greenfield or Brownfield. They conclude that in the CR is more common to build on a Greenfield than to revitalize already built areas. Jež (2008, 4) adds and confirms the Czech evidence that maybe it is not so obvious at the first moment, but generally, establishment of Greenfield is mostly cheaper than Brownfield and more preferred by investors. On the other hand, Brownfield has higher societal contribution but at much higher renovation costs.

Finally, according to Horáčková (2013, 28) it is obvious that both these variations have its positives and negatives, but primarily it depends on assumptions and needs of particular locations. Thus, it is not entirely clear which of the solutions is more suitable both from economic and social criterion.

Furthermore, a study called "Industrial parks development – programme for Czech Republic", which was drawn up for CzechInvest agency by foreign consultants, defines **six basic types of industrial zones and development parks**: local industrial zone, regional industrial zone, strategic business industrial park, business park of regional importance, business park of national importance, and special development park (RRAJM 2006, 28). But this division faces a problem of correct taxonomy and definition of zones and it is difficult to recognize a difference between zone and park. In general, industrial park should

represent a higher standard in terms of environment, management and services provided than an industrial zone. However, the differentiation is not easy, thus it can be more practical to divide the **zones by importance and size criterion** (RRAJM 2006, 29):

Local industrial zone – it is defined as not too large plot with sufficient transport accessibility. Premise is a connection to adequate technical infrastructure and communication technologies. One of the most important characteristics are low construction and operation costs and appropriate business environment in that area.

An example in the CR: IZ Pohořelice – South Moravia Region (Mačková 2008, 33)

Regional industrial zone – this type is a larger industrial zone close to a municipality with at least 40 000 economic active inhabitants in maximal driving distance 45 minutes. There are very high requirements on technical and transport infrastructure; optimal would be connection to a communication of 1st class or highway and a railway connection. There should be designed parts for ancillary and industrial use as well.

By the first two types an important role plays regional development agency as a promoter of those zones.

An example in the CR: IZ Znojmo, IZ Ostrava – Hrabová (Mačková 2008, 33)

Zone of strategic importance – a completely prepared area with minimal size of 100ha (by using Brownfield) or 200ha (in case of Greenfield), preferably with resolved proprietary relations, and in only one public official ownership. Most favourable location is close to a highway, railway and airport. This zone is presented for large (strategic) investment projects and in the zoning (land use) plan is emphasized its industrial use. Another condition is 180 000 inhabitants in driving distance up to 45 minutes. It is desirable to have a professional implementation team for this type of zone.

Additionally, strategic zones preparation is realized in cooperation of Ministry of Industry and Trade with CzechInvest and local government (CzechInvest 2013(1)).

An Example in the CR: SIZ Nošovice, SIZ Kolín, SIZ Škoda – Plzeň (Mačková 2008, 33).

To sum up, Local industrial zone has only general economic importance. It does not create many new jobs as Regional industrial zone which at the same time has an impact on the whole region as well as a greater economic function for both municipality and region. The greatest economic impact has Strategic Industrial zone. Its establishment can have a significant impact on the whole country's economy and supply many new jobs. It is connected with innovations and technological development. Larger and of higher quality

industrial zones creates better multiplication effect which in the end increases GDP growth (Mačková 2008, 34).

Another author provides other **classification**; for example **by ownership** we divide the zones to private industrial zones which were established from private society initiative or public industrial zones which are in municipality's or city's ownership (Petrošová 2005, 8).

Last mentioned division is **by principal (prevailing) activity** in the zone to administrative, business (commercial), manufacturing, science and technology (Petrošová 2005, 8).

1.3 Localization factors

Before we start to talk about socio-economic effects of the industrial zones on particular region, there will be briefly explained some important localization factors and points about localization which usually have a significant influence on investors decision where to establish the industrial zone.

Authors Wokoun and Damborský (2010) define localization as a process of locality selection for a particular activity; each location then has some natural resources available and combination of such sources should be optimal for economic activity location. Other authors then explain localization as a multidimensional economic problem which is not related only to subjects who are interested in entrance to particular area but also subjects already acting in that area (Macháček, Toth, Wokoun 2011).

Blažek and Uhlíř (2002) define localization as the process of selecting a site for a particular activity, offering optimum combination of resources which minimize costs, assuming that firms maximize profits. But localization factors should not be considered as static, since their meaning changes over time.

When it goes to spatial organization of production, authors explain that it reflects relation between demand, supply and price which depends on distance's influence on costs, potential sales, hierarchy and relations of competition, conurbation zones and transportation corridors, level of dispersed population and population impact on market zones creation, consumers mobility, etc. Whereas the subjects of localization are not only comparative advantages or economic effects; important are also its effects on the territory,

ways of scarce resources and available capacities distribution, or spatial distribution of economic and institutional systems (Macháček, Toth, Wokoun 2011).

To sum up above mentioned ideas and other theoretical evidence from these authors (Macháček, Toth and Wokoun 2011), the **key localization factors** are:

A, Transport - producer will locate nearby the market (sales place) in case that its final product is of large volume or weight or deteriorates fast. Or he decides to locate the production nearby the source of natural resources (entries of production) in case of resource-demanding production.

B, Distance from competition - that is important especially for small and medium enterprises.

C, Human resources - prior is their price, quality, structure and productivity, additionally can be important also the rate of unemployment (if it is too high, it demotivates investors because the labour force can seem as unemployable).

D, Technical and social infrastructure – decisive factors are infrastructure's quality, density and price.

E, EIA (Environmental Impact Assessment) – a complex investigation of expected impacts of planned intentions on environment. In recent years it has crucial importance in enterprise's location.

F, Natural conditions – this factor is of decreasing importance in recent years due to technological development and decreasing transport costs.

Other reasons that may encourage investors (particularly large and multinational) to localize can be according to Blažek and Uhlíř (2002) an effective legislative framework, corruption-free environment, efficient bureaucracy, financial system and unrestricted foreign trade, proximity to the homeland (resp. Parent company), market potential and stable political and economic environment.

Finally, among other factors which have indirect impact on localization belong internal environment in the company, image of the municipality (region), tradition, habits, history, ties of citizens or businesses to the territory, etc. (Blažek, Uhlíř 2002).

2 (Socio-economic) Impacts of industrial areas on the region

With any new establishment of industrial zone most of the people have first on mind its positive effects such as new jobs creation and start up business environment. On the other hand it is also important to think about possible risks and negatives which the IZ can bring. Even more important what about to think at first is what is the reason to build a new IZ in particular area and what problems it should solve. Moreover, when a municipality or state aims to build a new IZ on its area, they should think how to impress potential investor and how to be prepared as much as they can to offer him the best conditions for business development. On the other hand it is wise to have first a confirmed contract with the investor to avoid uncertainty of having created industrial zone's base without investors and having problems to occupy such area which cannot be returned into initial shape. Thus, this chapter discusses the socio-economic impacts on particular region based on literature and evidence review.

2.1 Assumptions of industrial zones creation

There are several reasons why to build a new IZ. This subchapter discusses characteristics and interesting points related to IZ creation based on scholar studies and other evidence, mainly from the United States[1]. Also, as an assumption of IZ creation can be considered everything what precedes the physical creation, i.e. everything what should the municipality or state do in advance to attract investor to choose their location and run business in that IZ (Mačková 2008, 34).

Several authors agreed that enterprise zones are mostly established to stimulate economic activities both in urban and rural areas (Hirasuna and Michael 2005) because economic development is accompanied by social development (Hebert et al. 2001). Another common characteristic of enterprise zones is concentration on manufacturing production (Peters and Fisher 2002). Except economic activity stimulation it is also desirable to restrict leaving of businesses from those economically declining regions (Bondionová, Engberg 1999). Hirasuna and Michael (2005) further develop this idea these

[1] In the United States, the definition of industrial zones slighty differs from the Czech Republic. The IZ can be called as „enterprise zone" (EZ) which is characterized as mostly economically disadvantaged, neglected areas which are provided by tax and other reliefs in order to support employment and economic growth. The difference is that IZ in the CR does not include residential and other areas. For more information see charter 1.1 (Horáčková 2013, 5).

zones are compared to other areas characteristic by higher unemployment rate, lower incomes, lower labour supply (or lower well-paid labour supply), larger areas of unused land or higher amount of unused property. Thus, according to Rubin and Wilderova (1996) primary aims of enterprise zones in these economic declining areas are job creation, used usually as a measure of zones success, and private investors attraction which should result in creation of comparative advantage in that area which would reverse negative economic development.

On the other hand, there are opinions against the idea of enterprise zones as a tool of economic refreshment in disadvantaged areas. Hirasuna and Michael (2005) found out that enterprise zones are probably more successful in already established economically prosperous areas than in stagnating or declining ones. In such cases, important role also play criteria for benefits acquisition within the EZ; the more they are complicated, the less they will lead to an economic activity growth. In relation to this fact, Hebert et al. (2001) notice that if the zone is transformed to an enterprise zone, then there should be reflected not only economic opportunities but sustainable development and strategic vision as well.

Nevertheless, industrial (enterprise) zone studies can deal with several problems. Rubin and Wilderova (1996) argue that there is an insufficient amount of quality data and it is difficult to divide effect caused by enterprise zone definition from other economically development factors and initiatives. Greenbaum and Engberg (2004) point out that except the lack of data it is problematic to generalize research results due to enterprise zone's heterogeneity and also distortion of obtained data from officer's, entrepreneurs, locals and other subject's (who are interested in enterprise area) interviews. In addition, Greenbaum and Engberg advice that for correct measurement of the incentives impact on investment decision it is useful to investigate gross flows, how the enterprises arise, decline, expand and how these movements contribute to net change. Furthermore, Busso and Kline (2008) miss concentration on detail regarding to aggregate data use. Finally, the lack of actual data is causes the fact that enterprise zones does not copy any statistical unit, such as municipality or district, for which are usually data provided (Moore 2003). Thus, as a statistical unit is usually considered a district or county where is the IZ located but the problem is when the statistical unit is too large that there can be many other subjects which can distort the data or even other IZ can occur.

On the other hand, below are listed the most significant positive and negative impacts related to industrial zones presence from Czech Republic's realty, supplemented by brief explanation.

2.2 Benefits and positive impacts

According to several authors studies and other resources, there are listed with brief explanation the main areas on which have industrial zones positive effects:

Macro-indicators – Arrival and presence of new investors decreases the unemployment rate in the region. Thus, GDP rises at least in a short term because in long term the new IZ should replace present declining sectors (i.e. coal mining). Increased labour productivity should increase also wages. Usually it leads also to rise in exports (MPO 2004).

Investment to new infrastructure (transport, technical) – With IZ establishment always comes transport or technical infrastructure construction because IZ locate usually on the urban periphery or free plot where is necessary to built completely new infrastructure network, especially to connect it to present road and railways. Thus the transport can be diverted from city centres what leads to improvement of environment and quality of life in the cities.

Synergic effects on regional development – Industrial zone creation is one of the regional development tools. Cities and municipalities put efforts to make the region more attractive for the investors and prevent the region from population outflow. Arrival of new investors and their managers causes increase in use of local services and leisure activities (hospitality, sport centres, shopping areas, wellness, etc.) which reflects tourism and other sectors development. Thus, even less attractive regions develops which decreases differences among them. Other great benefits are funds going to public budgets (Wokoun et al. 2010).

Localization – In case of strategic investor, its suppliers usually tend to have a manufacturing plant close to the SIZ which enables cost savings and more efficient use of sources and increasing competitiveness on the markets. It is mutually beneficial. Also shared public transport and development of supply chain can occur. Basically it creates a little industrial city (Wokoun et al. 2010).

Increasing demand for Real Estate – A new establishment of IZ makes free sites and real estate in near and even bit distant localities more attractive.

Utilization of Brownfields and other objects intended for business – New IZ can attract more suppliers who can utilize older surrounding industrial objects and do not have to build a new plant on a Greenfield.

State benefits provided – In case of IZ state offers to entrepreneur financial subsidies in forms of subsidized loans, state guarantees, initial investment subvention, new created jobs subvention, tax reliefs, social and health insurance discounts, etc. Inflow of foreign capital and investment of domestic investors to the IZ occurs (MPO 2004).

2.3 Risks and negative impacts

Following the previous subchapter, based on several author's studies and sources synthesis, in this one are listed the main areas where can have industrial zones negative effects, complemented by brief explanation:

Abuse of provided benefits – this situation can occur when the investor only uses the benefits provided by state and after a necessary time period leaves for another benefits.

Risk of resignation – In case of less attractive IZ in the end can be a problem to reach predicted occupancy. Business plan is not real, investor cannot obtain the loan, needed partners and finally resigns from the project. In the end for city remain empty sites and debts for several years (Činčura 2005).

Irreversible damage to the landscape and environment – Construction of large enterprises in a distant area causes many negative effect like noise increase, higher dust level, local environment pollution, or damage of the roads from truck which do not use only main communications but also lower-class roads going through urban peripheries and neighbouring villages. Also the danger of ecologic disasters arises. Another problem is suburbanization process deepening in relation with IZ construction which can have a fatal impact on landscape character. This pattern occurs especially in former communist countries (Horáčková 2013, 18).

Increase in Real Estate (property) prices in the vicinity of new IZ – Already at time when the proposals about the possibility of industrial zone establishment in particular area are made, it leads to speculations with nearby land and real estate. The speculations consequently increase its prices.

Unsatisfactory Real Estate according to investor's requirements – Investors usually have high requirements on the state of buildings which can collide with the realty.

Political factor – Support of large strategic projects from politicians is highly publicised which brings the risk of populism and therefore reactions from public. Politicians then usually tend to ascribe the successful establishment of the strategic zone (at the expense of small and medium enterprises, so called crowding-out effect). It results in unnecessary burden on national budget (Jež 2008, 8).

Resistance (opposition) from residents – Citizens from surrounding area usually disagree with the initial intention of IZ establishment for several reasons such as environment pollution, waste of public funds for the construction and investment incentives. Other reason could be the land purchase and acquisition for place here should IZ stay and related problems (Wokoun et al. 2010).

Market distortion – Jež (2008, 8) explains that selective investment incentives interrupt the assumption of economic theory that capital is efficiently allocated under condition that all returns from business are taxed by the same level. Because in a market economy distribution of capital and goods has the same importance as production. Thus, investment by subventions and selective tax reliefs directs to projects which are at particular time preferred instead of investment which is based on profit (Patria Finace 2007).

Selection effect – Today it seems that state supports mostly large foreign companies and thus creates enterprises which are, as Jež (2008, 8) explains, "too big to fail". That means a high risk for state.

2.4 Controversy over impacts

Even after taking into consideration above mentioned pro- and counter- arguments about industrial zones, still it is difficult to sum up whether it has conclusively positive or negative effects on region. Below are mentioned other important findings from evidence and literature, divided into several main sections, which can confirm and also refuse above mentioned reasons.

First section will explain why **Industrial zones** can be considered **as a tool to overcome economic burdens.** Wokoun et al. (2010) states in a publication about Foreign direct investment and regional development that final contribution of IZ exceeds its

negative impacts which are usually evaluated as minimal. Based on 9 case studies, this study identifies socioeconomic and environmental impacts of industrial zones in the Czech Republic. It concentrates prior on changes in employment, GDP, incomes, budgets of municipalities on whose cadastral area is IZ located, competitiveness of the region, labour supply fluctuation, employees' commuting distance, environmental distortion (air and water source quality, noise), impact on criminality, housing capacities, changes in nature of landscape, impact on surrounding infrastructure, impact on nearby city or municipality image and building up PR in the region. In the end authors assess industrial zone's presence in summary positively with significant positive impact on employment (Wokoun et al. 2010).

Another interesting point brings to the topic finding of Bostic and Prohofsky (2006) that from welfare point of view of individuals who were employed based on Program of Enterprise Zone Support is clear that participation in industrial zone is more profitable for those who were before entering the program relatively poorer. Additionally, in general the income and wage benefits were observed only in a short run.

Second section gives reasoning that **enterprise zones** can or cannot be a **source of employment.** Oppose to the above mentioned positive impacts, other authors researching enterprise zone's impact on employment in California agree that EZ does not bring significant benefits to the target area (Neumark and Kolko 2010). In their opinion, these EZ reduce the amount of initial firms and support increasing tendencies of the companies within EZ (Neumark and Kolko 2010).

Another study about concept of enterprise zone as a tool for economic development in conjunction with minority ownership shows that EZ actually contributed to enterprises development and some kinds of jobs. However, companies in minority ownership were not accepted as important participants of the program (Gloverova 1993). In addition the study comes up with a general conclusion that incentives not necessarily change economic behaviour in case of localization, revitalization and job creation within the EZ (Gloverova 1993).

On the other hand, Bondionova and Engberg (1999) do not find any direct tie in relationship between incentives in zones and local employment. Neumark and Kolko (2010) reason this weak effect of incentives on hiring new people in EZ within total employment as a problem that incentives are provided for disadvantaged workers only, thus it leads only to a substitution of high qualified workers by less qualified. Occasionally it is possible to substitute labour by capital as a consequence of more advantageous

incentives. Additionally, authors argue that in enterprise zones the employment would be created even without incentives (Neumark and Kolko 2010).

To sum up, some studies maybe confirms relation between the program for enterprise zone support and growth of economic activity, including employment, but some authors claim that such a complex economic growth was possible to gain only in some urbanized areas (Rubin and Wilderova 1996). Authors add that direct relation between development incentives and investment growth was not confirmed; some companies within the zones created or extended their activities even without incentives because the traditional localization factors like market vicinity or transport accessibility are generally more important than investment incentives (Rubin and Wilderova 1996).

To have a case related to **Czech environment**, Baštová and Dokoupil (2010) derived **three basic negative impacts of industrial zone support** (Plzeň - Borská pole) **on labour market** in Plzeň related to local labour force quality, nationality structure and level of real wage per month:

1, In case of labour force quality authors observed a pressure on it degradation. Industrial companies, especially foreign investors, require more manual skills with elementary education rather than higher educated workforce.

2, Impact on real wage per month authors assess as minimal as a consequence of low wages which are one of the main attractions for foreign investors. Therefore it is less probable that investors would increase wages on expenses of higher production costs. In fact, investors more likely decrease wages to reduce production costs, especially if there is a high competition of labour supply in particular region (with high level of unemployment).

3, As a consequence, Czech citizens do not want to work at these conditions despite a high level of unemployment, thus a paradox occurs that Czech investment incentives helps to solve unemployment problems in neighbour countries because finally are hired mostly Polish and Slovak nationals, followed by Ukrainians, Mongols, Moldovans and Vietnamese.

Based on these three negative facts, authors conclude that initial aim to create new jobs for local workers suffering from industry restructuring in the city is not fulfilled (Baštová, Dokoupil 2010).

In the end of this subtopic there is other evidence from Czech Republic. Hlaváček (2002), on case of Chomutov region where the unemployment increases since the 90’s of last century explains, that its main causes are declining traditional mining industry in the

region and consequent orientation on services, including tourism, which unfortunately cannot absorb all released labour force. He sees the solution of high unemployment rate, among others, in regional industrial zone's support as well as local economy's restructuring and diversification towards manufacturing industry and strategic services (Hlaváček 2002). Also, Hlaváček (2002) assesses IZ's impact on employment as positive, but he warns towards future that under pressure of mutual competition the increasing amount of industrial zones will lead to a situation when it would not be possible to assure investors for all of them. On the other hand, author argues that IZ are not able to absorb all released labour force because the release process is faster than new jobs creation process (Hlaváček 2002).

Third part mentiones several points related to **localization factors** other from already listed. As important factors of localization for enterprise within the zone, Hirasuna and Michael (2005) identify for example distance from customers and suppliers, costs related to recruiting and requalification of employees or costs related to environment (such as sanitation of ecologic disaster, assimilation to new environment which requires specific conditions, etc.), intense traffic and increased traffic jams in the area, cultural and leisure time opportunities nearby the area. Finally, also attraction by the locality itself or other altruistic reasons can be a motivation to localize business in the zone (Hirasuna, Michael 2005).

Other important factors which can have an influence on the EZ support explain Turner and Cassell (2007). According to authors it is more probable that states will adopt a programme to support enterprise zones in case that they have higher share of urbanized population or in case that their neighbour countries already have implemented such support programme (Turner and Cassell 2007). Additionally, authors found out that despite enterprise zone adoption should have mean a state's binding to life condition's improvement in the most neglected areas of the countries, this bound was continuously weakening due to internal political demand, as a consequence of political and bureaucratic apparatus emphasis, and external competition in investment and amount of opened jobs (Turner and Cassell 2007). The final effect caused that from spatially targeted programme oriented on disadvantaged areas aid became a nationwide incentive programme oriented on state's competitiveness enhancement, which should prevent from entrepreneurs outflow to other countries, and a significant increase in number of new zones occurred (Turner, Cassell 2007).

Another disputable topic related to industrial and enterprise zones are **incentive programmes and their impact**. Hirasuna and Michael (2005) warn to respect individual zones specifics when creating the incentive programme and also advice to avoid united surface application on whole state's area. As a tool of complex economic growth, EZ should provide a long term profitability to localized enterprises, thus it should not be a rule that firms would use only short-term incentives and after its exhaustion would quit their activities in the zone (go bankrupt or move somewhere else) (Hirasuna, Michael 2005).

Other authors conclude that if states and localities are competing in the offered incentives, it leads to incentive increase, and further to tax reduces and the public budget is burdened by lower incomes and higher expenditures (Peters and Fisher 2002). Moreover, authors declare that since 1998 appeared a negative tax rate on new investment, when in many cases the tax reliefs of new production exceeded its taxes (Peters and Fisher 2002). One of prerequisites for enterprise zones is preferred job creation than capital investment. Peters and Fisher (2002) thus explain that possible effects of incentives for firm's technology selection and for relative use of labour and capital in the production process does not depend on financial incentives volume, but on prices of capital and labour changes. They further explains from more economic point of view that if the incentives reduce more cost of capital than cost of labour, above mentioned could cause due to substitutability of labour for capital an implementation of more capital-intensive production (Peters and Fisher 2002). If this substitution effect is strong enough, in the end the net effect of enterprise zone's incentive can reduce employment rather than increase (Peters and Fisher 2002).

Authors add another idea that a presented aim of enterprise zones is to support fiscal surplus achievement which then can be used for improvement of education system infrastructure, employees training and retraining; on the other hand, if there are fiscal losses, it weakens local and state government's ability to provide public services (Peters and Fisher 2002). Author's research demonstrates that the more incentives will the governments offer, the more loses of income they will have (Peters and Fisher 2002). A permanent reduction of taxes on new investment or jobs is more likely to produce positive revenues than their temporary cuts and even with the same force for job creation because it prevents companies' movements for new incentives (Peters and Fisher 2002).

Peters and Fisher (2002) finally show that the enterprise zones have little or no impact on the facility's growth, so they have little or no impact on employment. Incentives in EZ do not have a strong impact on firm's localization decisions because most areas are

located in deprived areas, which suffer from many other deterrent localization factors such as high crime rates, poor infrastructure, low-skilled workers, etc., so these factors usually exceed the incentives in a decision-making process (Peters and Fisher 2002). In other words, places where the growth is evident, enterprise zones can strengthen this trend, but in deprived areas, incentives are seldom sufficiently large to help to achieve significant changes in the area. In turn, higher incentives mean higher costs, which can lead to fiscal losses locations (Peters and Fisher 2002).

And what is the position of Czech subjects related to and responsible for investment incentives? Ministry of Industry and Trade of the Czech Republic (2004) ranks among the main goals of investment incentives the motivation of foreign and domestic investors to invest in manufacturing industry (especially in technology). Positive effect of incentives then MIT illustrates on balance of payments result, when the current account balance of companies which received incentives was so positive that it was able to finance a major part of country's current account deficit (MIT 2004). MIT further explains that firms which have been provided with incentives also significantly contributed to the gross domestic product's amount (about 3%) and on added value of the manufacturing industry contributed about 15% (MIT 2004). When talking about unemployment, we can state that firms which used the incentives potentially reduced it; directly and indirectly by created jobs (MIT, 2004).

Another subjects who are in opposition to the positive evaluation of the incentive's performance in the Czech Republic are Schwarz et al. (2007) who argues that the investment incentives which are now in the Czech Republic also connected to the industrial zones, recently became a widespread policy instruments and its use is justified by economic growth, declining unemployment, recovery of public finances due to increases in pension payments and social insurance, and a decline in volume of paid out unemployment benefits. In addition, government promotes investment incentives as a selective support for certain enterprises, increase in region's competitiveness, and improving conditions to run a business. However, the authors mainly question those positive effects of investment incentives (Schwarz et al. 2007):

1, A statement that investment incentives are a tool for regional disparities removal disproves author's research and on the contrary comes with the discovery that incentives deepen unemployment.

2, Investment incentives supposedly should have an ability to change the structure of employment but this statement is negated on the basis that new jobs are occupied by

domestic workers in terms of just changing the place of work and not from the status of unemployed to employed. Consequently, there is only a shift of workers between firms or sectors instead of unemployment decrease. In general, in terms of unemployment rate, it has been observed that investment incentives did not significantly affect the changes in unemployment since the incentives headed to regions where the unemployment rate was lower. Even despite the fact that the job creation costs with use of investment incentives are significantly higher than without them (Schwarz et al. 2007).

3, According to the authors, spill-over effect is overestimated because besides revenues, costs are not taken into account, but without costs it would be impossible to carry out investment incentives (Schwarz et al. 2007).

4, Investment incentives due to selective tax reliefs make an impression that they help reduce a tax burden on the economy. However, the authors argue that incentives increase the amount of budgetary expenditures, i.e. also the level of taxation. Furthermore, if we include to the fiscal costs associated with investment incentives all tax revenues, sacrificed in favour of incentives, we find out that fiscal revenues are actually higher than fiscal costs (Schwarz et al. 2007).

5, Incentives are referred as conform market-based tool of economic policy. However, in reality they rather distort market, what reflects the support of large, mainly foreign companies that receive benefits at the expense of small and medium-sized companies. Large firms are becoming “too big to fail” and so they assure themselves the state support also for future. Thus, the cornerstones of national competitiveness which influence investors' decisions should be instead of investment incentives a political stability, law enforcement, low taxes, a functioning infrastructure and a quality work force (Schwarz et al. 2007).

In the last section are discussed the **impacts of zones in the suburbanization context.** To the topic of socio-economic impacts of industrial zones on regional development is important to mention that industrial zones establishment is closely related to suburbanization process which is currently a frequent pattern in former communist countries. Sýkora (2003) says that new millennium started the suburbanization process in housing, business, storing, production and other activities. He adds that composition of population is quite inertial and the suburbanization results have in most of the cases an irreversible impact on landscape as well as distribution of population within the landscape; in case of industrial zones it is new objects construction and use (Sýkora 2003). Author explains that impact of suburbanization include increasing commuting distance for work

which can consequently result in higher burden of transport infrastructure and increased air pollution (Sýkora 2003). Building development in suburban areas is characterized by low density and high spatial segregation, while local concentrations of individual human activities (housing, employment, shopping, etc.) what raises the cost of building and operating the technical infrastructure and amenities (Sýkora 2003).

Economic suburbanization topic is also undoubtedly related to the question under what conditions will the industry move from the old and more expensive location to a new with lower costs. Rauch (1993) answers, that an obstacle to relocation may be firms sunk costs. This inertia can be overcome by developers of industrial parks through discriminatory valuation of land over time (Rauch 1993).

Brief summary of findings

Although many positive and negative impacts of the industrial zones were mentioned, in the end the zone cannot be viewed as an instrument to solve all problems of the region. This is related to the fact, that according to summarized evidence a direct positive impact of industrial zones on employment was not evident. Furthermore, it was not confirmed that industrial zones have led to the dominance of large enterprises or firm's dislocation (Horáčková 2013, 21). In general, industrial zone, especially outside the inner city, attracts more new enterprises.

Last but not least has to be mentioned that IZ's impact on employment, economic growth and other indicators, same as relations between IZ and different types of incentives, must be taken into account the heterogeneity of zones itself as well as of areas where it is located. Finally the results can differ from zone to zone and region to region, despite inexact data due to used methodology, clarity of answers and data availability (Horáčková 2013, 21).

Thus, after all this above mentioned arguments arise several questions how these defined socio-economic impacts in realty influence our particular Moravia-Silesia region, especially what is the real impact of SIZ Nošovice on nearby municipalities. Analysis and discussion about available information and those real impacts on Nošovice and other municipalities in nearby area will be a subject of the practical part of this thesis.

3 Funding opportunities and related Legislation to industrial zones

Even though some smaller projects such as industrial zones are in most of the cases initiated by the local government units (municipalities, cities), it is not possible to realize these projects only from its own resources. In case that the municipality would decide to finance all construction costs of industrial zone by itself, it would mean to run into debt for a long time period. That's why were formed subsidy programmes under rule of CzechInvest agency (Prumyslove zony 2014a). Establishment of industrial zone has also its legal rules which have to be respected.

3.1 Support and state interventions

Before we start to explain the Czech system of funding and support to industrial zones, I would mention some ideas about the support in general. It is obvious that the world is gaining a centralist approach to support state intervention in the form of investment incentives. One of supporters of this approach, a former director of CzechInvest Martin Jahn (2002, 21) explains that investment incentives are virtually provided in all countries of the EU, OECD, developing countries and thus Czech Republic is pushed to such a system of international competition. In his words, these interventions do not cause such major market distortions. He continues that globally we cannot say that Czech investment incentives cause distortion of the market – from Czech economy's point of view, investment incentives distort Czech economic competition to a certain extent, but this disruption is outweighed by the investment's benefits (Jahn 2002, 21).

This is an opinion from one of the state interventions supporters, who justifies it with the necessity to fight for investors in international competition. But there is an alternative way – a liberal approach which does not support these state interventions in the free market. However, international policy follows the first direction and leaders have chosen to support investment incentives and partial management and intervention to the market. Nowadays, when the subsidy system is already introduced, it is not easy to enforce a drastic change in approach and efforts of some politicians to reconsider the position usually meet with opposition. It essentially a political decision and pressure on politics (lobbying) is very strong. The idea to disable all subsidies and make the state by its

approach to incentives a separate unit is very difficult to support in international society, especially when Czech Republic as an EU member is pushed by its directives (. The future will show whether chosen path is correct or whether some turn-over occur.

3.2 Legislation in the Czech Republic

A prerequisite for industrial zone establishment is to define its legislative framework. Building a new plant in the Czech Republic is a similar procedure as in other European countries. The Czech Republic offers an effective planning process and rapid construction capabilities. In most cases, it takes about one year to go from a completely vacant Greenfield site to completion of a new facility. This time span can be shortened to less than one year in municipal industrial zones, where land plots and infrastructure are already prepared and local officials have been trained by competent authorities (like CzechInvest) to effectively support investors (CzechInvest 2011b).

Czech **land planning processes** are similar to other EU countries, therefore a construction project generally has to be approved by the relevant authorities in the following steps (CzechInvest 2014b):

1. Environmental Impact Assessment (EIA) – fact-finding procedure
2. Environmental Impact Assessment (EIA) – full EIA procedure *
3. Planning permit
4. Integrated permit *
5. Building permit
6. Final approval

(* Step 2 and step 4 apply only to extensive investment projects that exceed the limits stipulated by the respective law. Most investment projects in Czech Republic are not included in this group)

Additionally, to above mentioned steps are related some important legal norms. An overview of the most important regulations that are the basis for the industrial zones building is listed below (Czechinvest 2011b):

• **Act no. 183/2006 Coll., Building Act** – It allows the start of construction work and other decisions necessary for use of the building. There is a need for the construction of industrial facilities in line with the master plan of the site, since municipalities should in the future with the construction of PZ count and thus prevent potential property disputes.

• **Act no. 100/2001 Coll., On environmental impact assessment** - Based on this law is often necessary to draw up a document of the EIA, depending on the nature of the business plan.

• **Act no. 76/2002 Coll., On integrated pollution prevention and control**

• **Act no. 500/2004 Coll., Administrative Code** - This is essentially a process of administrative authorities, their decision-making and issuing statements.

• **Act no. 40/1964 Coll., The Civil Code** and the **Act no. 513/1991 Coll., The Commercial Code** - jointly governing the conclusion of relevant agreements in cases of ownership transfers to a property.

• **Act no. 137/2006 Sb., Public Procurement Act** - Applies because as the IZ, or preparation of land for IZ is implemented from public money and selection of suppliers is carried out on a competitive basis.

• **Act no. 128/2000 Coll., Municipalities Act** - Determines the duties to place a previously disclosed intention to sell the property owned by the municipality on the official board under the threat of transaction annulment.

• **Act no. 129/2000 Coll. Regions Act** - Determines the same obligations as the Municipalities Act, only the subject is region.

• Act no. 114/1992 Coll., On Nature and Landscape protection,

• Act no. 185/2001 Coll., On waste,

• Act no. 254/2001 Coll., On Waters,

• Act no. 86/2002 Coll., On air,

• Act no. 334/1992 Coll., On the protection of agricultural land,

• Act no. 344/1992 Coll., CN,

• Act no. 265/1992 Coll., On laws to register in Land Register

3.3 Subjects related to industrial zone's funding

An important role in industrial zones funding plays particular subjects and their grant programs. The main emphasis is naturally placed on funds from Czech government, especially from Ministry of Industry and Trade, Ministry of Regional Development and local government units (municipalities, regions).

3.3.1 Ministry of Industry and Trade

Ministry of Industry and Trade is the central government body for the state industrial policy, trade policy, foreign economic policy, integrated raw materials policy, coordinate foreign trade policy in relation to individual states, ensures negotiating of bilateral and multilateral trade and economic agreements. Under ministry's auspices also the agency for business and investment development CzechInvest takes care of industrial zones and investment incentives issues (MPO 2014).

3.3.2 CzechInvest

Business Development Agency CzechInvest was established in November 1992. The main objective is to strengthen the competitiveness of the Czech economy, particularly through the promotion of small and medium-sized enterprises, business infrastructure, innovation and also to attract foreign investors in the manufacturing industry, strategic services and technology centres. The agency is responsible for business support and development from EU funds and the allocation of state investment incentives. Since 2004 is part of the Agency also 13 regional offices, which are located in all regions of the country. CzechInvest cooperates with local and regional government, universities and other institutions in the development of the business environment in Czech Republic (CzechInvest 2014d).

Since the beginning of its existence, CzechInvest has taken part in 2,477 investments worth USD 31,866 million. Projects mediated by CzechInvest have resulted in the creation of 254,519 jobs. Thousands of other jobs have been created in related investments. Czech Republic supports the establishment of new industrial zones through **the Industrial Zone Development Programme** which has already provided USD 570 million in financial support (CzechInvest 2014a).

CzechInvest provides services to investors, in particular in following areas (CzechInvest 2014a):

- Consultancy pertaining to the property market in the Czech Republic
- Consultancy pertaining to financial support from public sources and EU funds
- Site selection within the Czech Republic according to the client's requirements
- Site inspections tailored to the client's needs
- Registration of properties in the database of business properties
- Monitoring of the business property market

- Supports suppliers and manages the database of Czech suppliers
- Assist in the implementation of investment projects
- Provides service for foreign investors already operating in the Czech Republic (the so-called. Aftercare)

In addition, CzechInvest administers Business Property Database, the most extensive database of business properties in the Czech Republic. Due to the database, municipalities and business entities can offer suitable spaces for business. The database provides information about more than 350 Industrial zones and land plots, more than 300 Industrial parks and production halls, more than 150 Office spaces and more than 20 Science and technology parks (CzechInvest 2014a).

In terms of industrial zone support in the Czech Republic is worth to mention within above described the current trend to support and develop IZ in high-tech industry and innovation through various incentives.

In connection with the thesis topic which is about SIZ Nošovice and Moravia-Silesia Region, it is worth to mention that CzechInvest's largest investment in the Moravia-Silesia region was just establishment of SIZ Nošovice for car manufacturing company Hyundai from Korea which invests there since 2006 in volume of approximately CZK 300 000 and employs more than 3000 persons (CzechInvest 2013). Additionally, the second largest investment in this region was construction of manufacturing factory for SUNGWOO HITECH company, also from Korea, within another important industrial zone Ostrava-Hrabová in volume CZK 2 500 mil. which brought creation of more than 1000 new jobs (CzechInvest 2013).

3.4 Industrial zone's development support

In area of industrial zone support is necessary to be aware of its motives, its development in recent years and introduce the concepts of **investment incentives** and **foreign direct investment**. The state budget support of IZ began in the 90's, by not only construction of new IZ (Greenfields) but also by the regeneration of already existing business properties (Brownfields). Among the main reasons was the necessity of industrial restructuring, enhancing the competitiveness of the Czech Republic in the market of foreign direct investment and reduce unemployment. Within the business support of Czech

and foreign investors, it began with direct investment incentives and also with creation of industrial areas (Průmyslové zóny 2014).

Since 1998 were granted subsidies from the System of Industrial Zones Development Support for its development and regeneration of that areas and objects for use in the manufacturing industry, strategic services and technology centres. In the period 2000 – 2006 followed **Industrial Zone Development Programme** (Pochtiolová 2010). In 2001, the programme was extended by 4 sub-programmes. This programme was continuously followed by **Business Real Estate and Infrastructure Support Programme** which was in operation till 2013. In the years 2004 to 2006 the grants were provided also from Structural Funds of the EU, especially from European Fund for Regional Development, through the Operational Programme Industry and Enterprise in the years 2007 - 2013 and the Operational Programme Enterprise and Innovation (Pochtiolová, 2010). More about both programmes is mentioned below.

3.4.1 Industrial Zone Development Programme

At the very beginning there was a Industrial zone support programme 1998 - 2005, which laid down the conditions for granting the aid and has defined rules that must be followed (Průmyslové zóny 2014a). Target group of development support were the municipalities, associations of municipalities, regions, development companies and major investors. The form in which the aid has been provided, was through direct grants, interest subsidies, refundable financial assistance from the state budget and gratuitous or preferential transfer of state property to support the development of industrial zones. Industrial zone support programme served to create new jobs, increase the competitiveness of the investment environment, especially in economically disadvantaged or structurally affected regions of the country. The main administrator of the program is the Ministry of Industry and Trade. This program draws funds only from the state budget, supports only projects or strategic industrial zone, where occurs an incentive investor (investor who receives investment incentives) (Průmyslové zóny 2014a). Following Industrial zone development programme (2000-2006) includes since 2001 four other programs devoted to the possibilities of building and revitalization of industrial areas.

The names of the programmes are (CzechInvest 2013):

1, Industrial zone preparation

2, Regeneration of industrial zones

3, Construction and rehabilitation of rental objects

4, Accreditation of industrial zones

3.4.2 Business Real Estate and Infrastructure Support Programme

Since the Business Real Estate and Infrastructure Support Programme builds on the previous program, they have common the main targets. The new program followed the previous one smoothly since 2005 and puts more emphasis on the brownfields and strategic projects in the field of technology and research centres (Průmyslové zóny 2014a). This program also contains four main points. Despite they have different names, each contains the same goals as in the previous programme.

The names are (CzechInvest 2013):

1, Preparation and development of industrial zones

2, Regeneration of disused sites - brownfields

3, Construction and reconstruction of objects

4, Marketing and management of business real estate

3.4.3 Investment incentives

One of the tools to support investment in industrial zones is use of investment incentives which occur in Czech Republic in 1998, based on the government resolution and further legislatively valid are since 2000, regulated by the Act no. 72/2000 Coll., On Investment Incentives (CzechInvest 2014c). Through an amendment to this Act from February 24, 2000, effective since July 12, 2012, apply apart from the investment incentives in implementation and expansion of production in manufacturing industry also investment incentives in the field of technology centres and strategic services centres. Investment incentives specifically include for both beginners and established producers discount on income tax extended from 5 to 10 years, financial support for job creation, training and retraining, transfer of plots, including infrastructure for a discounted price. Additionally, there is a new institute of strategic investments, a possibility of processing and technology centres to get more financial support for capital investment up to 5% of the cost, except above listed investment incentives (CzechInvest, 2014c).

However, CzechInvest announced that from July 1, 2014 start to apply the new rules of the European Commission for regional aid. The maximum possible level of public support in the form of investment incentives in the Czech Republic decreases from 40

percent to 25 percent for large enterprises, what accounts for 95 percent of all current applicants for investment incentives. Lower will be support for medium and small firms which are asking for support from EU structural funds rather than on investment incentives. In the case of medium enterprises, the aid will be reduced from 50 to 35 per cent in the case of small from 60 to 45 percent (BusinessInfo 2014).

The original, more favourable conditions the agency CzechInvest guaranteed by projects submitted till mid-March 2014. This reason partly caused increased investors interest because the agency received a record-high number of applications for investment incentives; only from 1 January to 30 June 2014 the Agency received 108 applications in contrast to whole year 2013, when applied only 98 investors (BusinessInfo 2014).

Changes must be also implemented to above mentioned Czech Act on Investment Incentives. The amendment, which is now prepared by the Ministry of Industry and Trade, on one hand should harmonize European and Czech rules, and on the other hand should offer additional benefits to investors to remain for them Czech environment sufficiently attractive and competitive. The act should be valid in the first quarter of 2015 (BusinessInfo 2014).

But investment incentives do not serve just to stimulate domestic investment but also to attract foreign direct investment. The basic definition according to OECD (2008) states that it is an investment that reflects the lasting interest of a resident of one country or a direct investor of business in another country, where he invests. Foreign direct investment reflects a long-term relationship between the investor and the enterprise, where he invested, and where the investor has a significant share of influence on the management of the company in the form of 10% or more of voting rights in the company (OECD, 2008).

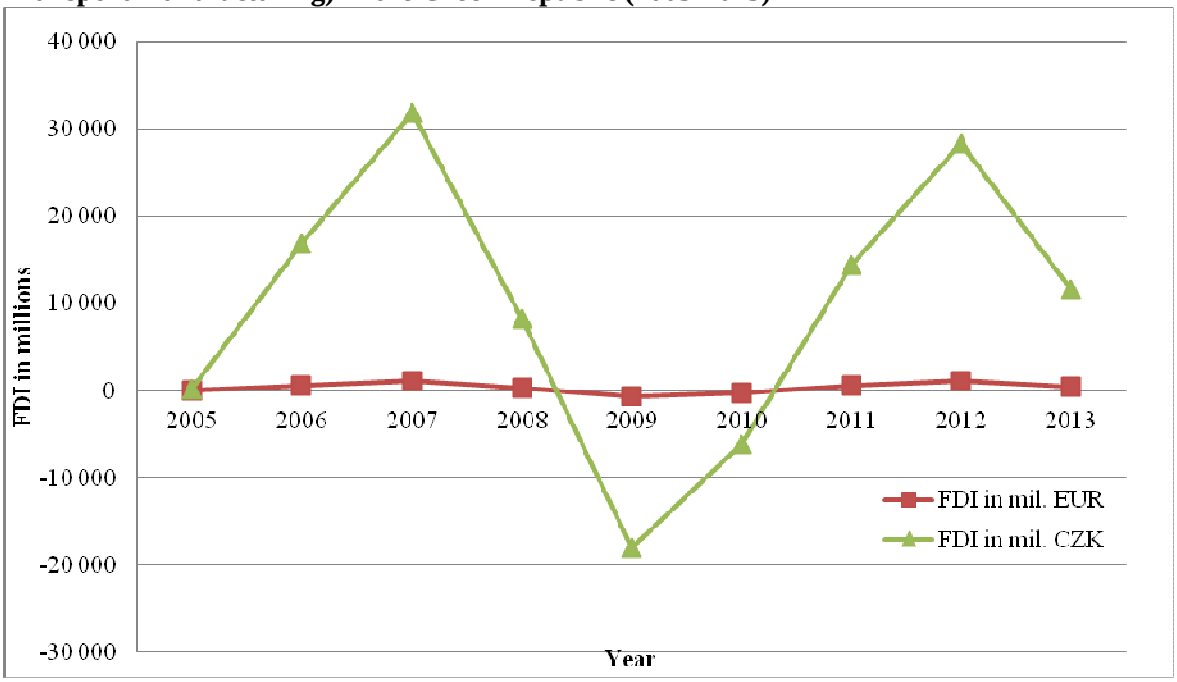
3.4.4 Foreign Direct Investment (FDI)

Foreign Direct Investment is worldwide accepted as one of the most important economic development catalyst. RRAJM (2006) describes FDI is an investment into manufacturing industry and strategic services which does not consist of financial operations and development funds or grants. Investor partly has the property rights and contributes to company’s development into which he decided to invest (investor’s ownership share is more than 10%).

Furthermore, RRAJM (2006) explains that FDI is a combination of capital and managerial inputs, common exchange of know-how together with open way to global markets. It has a significant impact on economic development, especially in structurally disadvantaged regions where targets its influence. FDI and its attitude also depend on region's economic development. More developed countries mostly support FDI in strict framework of rules and development strategies. Experience of developed economies says that responsible, structured and long-term regional policy can reduce the risks related to FDI to an acceptable level.

As we can see from the graph below, in Czech Republic the most significant inward of FDI was in the year 2007 when the main purpose was decision of Korean investor Hyundai to establish the strategic industrial zone in Nošovice. In the following years the inward decreased due to economic crisis but since 2010 the amount of FDI in CR is continuously increasing except the situation in last year.

Figure 2: Inward Foreign Direct Investment by Machinery Industry and its Equipment (incl. Transport manufacturing) in the Czech Republic (2005-2013)



Source: Czech National Bank, 2014, own data processing

FDI as any other tool of support (subvention) has its positives and negatives which are summarized according to RRAJM (2006) below:

Advantages:

- Capital coverage of restructuring
- Creation of new jobs
- Infrastructure development stimulation
- New management methods and experience
- Additional qualifications and labour force productivity growth
- Availability of new technologies
- Increased exports – improvement in balance of payments
- Competition and competitiveness growth
- Tax benefits at national and local level
- Quality supply services development

Disadvantages:

- Local market disruption
- Missing linkage between the company and local economy
- Additional costs for investment incentives
- Unequal competition in investment incentives selection process
- Key sectors dominated by foreign owners
- Possibility of sudden termination of cooperation with related consequences
- Dissatisfaction of local residents
- Possibility of profit repatriation

4 Industrial zones in Moravia-Silesia Region and SIZ Hyundai Nošovice

This chapter introduces practical part of the thesis, therefore it first describes main characteristics about Moravia-Silesia region related to industrial zones and their situation within the region, followed by analysis of the Strategic industrial zone Nošovice and its diverse impacts which will be in more detail analyzed and assessed in the next chapter number 5.

4.1 Basic characteristics about Moravia – Silesia Region

Moravia-Silesia region lies on the north-west of Czech Republic, in one of the most peripheral part of the state. The region neighbours with 2 countries, on the north and east with Poland and on south-east with Žilina region of Slovakia. The border character of region creates favourable conditions for effective cooperation in the sphere of production, infrastructure development, environment protection, cultural and educational activities and especially in the field of tourism. For this purpose, the region has currently four Euroregions - Beskydy, Praděd, Silesia and Cieszyn Silesia (ČSÚ, 2014).

Administrative breakdown

Regional capital is Czech third largest city Ostrava with more than 300 000 inhabitants. As you can see from the figure below, Moravia-Silesia region is administratively divided into 6 former districts: Bruntál, Frýdek-Místek, Karviná, Nový Jičín, Opava and Ostrava-city, moreover there are 22 administrative circuits of municipalities with extended powers (MEP), where counts 300 municipalities, including 42 cities[2]. Its area of 5427 square kilo meters occupies 6,9% of the territory of the Czech Republic which ranks the region on sixth place among all the regions (ČSÚ, 2014).

[2] For more informatik about the administrative breakdown see the figures in apendix 1 and 2.

Figure 3: Moravia-Silesia region and its location in Czech Republic

Source: ČSÚ, 2014

Natural resources and Environment

Besides the natural resources, the region is also rich in mineral resources - especially in strategic domestic resources of coal, natural gas and other raw materials such as limestone, granite, marble, slate, gypsum, gravel, sand and brick clays.

Since the 19th century and times of Austrian-Hungarian monarchy Moravia-Silesia region belonged, and still belongs among the most important industrial regions of Central Europe. But today its focus of economic activity on industry structure causes many problems related to the restructuring of the region since 1990's, which is also connected with the solution of social problems, especially unemployment rate.

Other serious patterns from the past massive industrial production are environmental issues and pollution. Moravia-Silesia region remains among the most polluted regions in the Czech Republic, as in the past were heavily polluted all components of the environment. Since early 1990's, there is significant improvement in the environment due to the decline in industrial production, increased use of environment-friendly technologies and significant investments in environmental protective precautions. Today, as the most problematic issues seem soil and groundwater contamination as a consequence of industrial activities, mining subsidence and pollution of surface water and air. In the region we can observe significant differences in quality of environment among

districts due to natural surface and different economic development in particular areas of the region. The most polluted areas are concentrated in the central and north-eastern part of the region (Ostrava, Karviná, Třinec) due to heavy industry and mining. On the other hand the peripheral parts of the region dispose of 3 protected landscape areas – Beskydy, Jeseníky and Poodří.

Population

As you can see from the table 1 below, Moravia-Silesia region is with the population over 1 226 thousands of inhabitants third most populous region in the Czech Republic, however with its 300 municipalities belongs to the regions with the least number of settlements. This corresponds to a population density of 226 inhabitants per km2, while the national figure is 133 inhabitants per km2 (ČSÚ, 2014). Furthermore, according to Czech statistical Office (2014), in municipalities up to 499 inhabitants live less than 2% of the population, in the municipalities from 500 to 4 999 residents over 24% of the population, in the municipalities from 5 000 to 19 999 inhabitants live 14% of the Region. But what is exceptional within Czech Republic - most of the population (almost 60%) lives in cities with more than 20,000 inhabitants. In regional capital Ostrava live almost 300 000 inhabitants which is roughly a quarter of the region's population. The region disposes of several large cities with population over 50 000, i.e. Havířov, Karviná, Frýdek-Místek and Opava.

Problems resulting from low natality rate are a key feature of the current situation not only in Moravia-Silesia region but also throughout whole country, therefore population is aging gradually. In addition to ongoing natural population decline occurs in the M-S region unlike to the rest of the country since 1993 to the continuous decline in population by migration to another regions.

Economy

Moravia-Silesia region dispose of favourable conditions for business development (for example the highest labour productivity per hour in the Czech Republic outside Prague) used after year 2003 many investors. The region now builts not only on the dynamically growing automotive industry and its know-how, but also on the development of activities related to information technology, which diversify track of the economy. In recent years, in the region arose number of successfully developing small and medium-sized companies using local knowledge in the traditional fields. The period of prosperity is

related to the number of newly created jobs. However, also Moravia-Silesia region had to face the global economic crisis, but on the other hand its current consequences can bring many opportunities for further economic development. In the recession period, companies usually create pressure on productivity which is usually accompanied with innovation implementation and closer cooperation among institutions in research and development (Strategie rozvoje MSK 2012).

Table 1: Position of Moravia-Silesia Region in CR in selected indicators in years 2000 and 2012

	unit	Moravia-Silesia region		Share on CR (%)	
		2000	2012	2000	2012
TERRITORY (state to 31. 12.)					
Area	km^2	5 554	5 427	7,0	6,9
Number of Municipalities		301	300	4,8	4,8
Population Density	person/km^2	**229**	**226**	**130**	**133**
Share of urbanized population	%	**77,1**	**77,4**	**70,9**	**70,9**
ENVIRONMENT					
Share of protected areas on territory	%	.	17,3	.	15,9
POPULATION					
Population (state to 31.12.)	person	1 269 749	1 226 602	**12,4**	**11,7**
MACROECONOMIC INDICATORS					
GDP	mil. CZK	**221 093**	**392 198**	**9,7**	**10,2**
per capita	CZK	**172 735**	**319 314**	**220 949**	**365 955**
LABOUR MARKET					
Employed in total	1000 person	530,5	543,0	11,2	11,1
industry and real estate building	%	44,0	42,5	39,5	38,1
General unemployment rate		**14,3**	**9,5**	**8,8**	**7,0**
Average gross wage per month	CZK	12 966	22 111	13 484	23 634
In industry		14 328	24 772	13 544	24 128
UNEMPLOYMENT (state to 31.12.)					
Unplaced unemployed people	person	94 609	81 099	**20,7**	**14,9**
CRIME, TRAFFIC ACCIDENTS					
Offenses detected		41 792	40 623	10,7	13,3
per 1000 inhabitants		32,7	33,1	38,1	29,0
Traffic accidents in total		19 069	8 145	9,0	10,0
per 1000 inhabitants		14,9	6,6	20,6	7,7

Source: ČSÚ, 2014, own data processing

Although there is a strong industrial tradition in the region, performance of regional economy is to a great extent driven by the concentration of export-based heavy industry and to them linked value chains in field of raw materials processing and engineering disciplines, which are major exporters of knowledge on advanced foreign markets around the world. Firms within these chains have high research and development and innovation potential. According to Strategy of Moravia-Silesia region development (2012), in terms of research, development and innovation, the region can also build on the existence of a number of intermediary institutions, clusters and initiatives. Also cooperation between public, academic and private sectors in comparison with other regions is at a high level.

Employment

However, despite the current downturn in heavy industry and mining, according to the Labour Force Survey work in industrial sectors more than a third of the total of 543 000 persons who are employed in the national economy; another 12,6% work in trade and repairs of goods. In addition to these traditional industries, in the region continues to pursue production and distribution of electricity, gas and water supply, manufacture of transport equipment, means of transport and chemical and pharmaceutical industry. The average gross wage in the Moravian-Silesian Region was in 2012 by almost CZK 1 800 lower than the national average, while following the Prague, Central Bohemia, Pilsen and South Moravia region placed as the fifth highest wage in the country, per employee it amounted to 23 291 CZK (ČSÚ 2014). Distribution of wages among industries is similar to those in other regions. As you can see from the table above, by the end of year 2012, Gross Domestic Product (GDP) in Moravia-Silesia region reached 392 198 mil. CZK which contributed by 10,2 percent to the country's GDP (ČSÚ 2014). By 2012, GDP per capita ranged in M-S region 319 314 CZK compared to country's average of 365 955 CZK, confirming the long term trend that Moravia Silesia region's economy places below the state's average (ČSÚ 2014).

The industrial structure of the region is currently causing many problems, which are associated especially with a higher proportion of unemployed persons. With the relatively lowest unemployment rate places on the first place district Frydek-Místek what can be caused by placement of strategic industrial zone Nošovice and its suppliers within the district, which can absorb relatively high amount of work force. On the contrary, a high proportion of unemployed person exhibit district Bruntál and Karviná which place on the

last positions among all districts in the Czech Republic. Crucial negative issue is the share of long-term unemployed (over 12 months) above the national average.

Transport

After the split of Czechoslovakia, Moravia-Silesia region was relatively unluckily placed in the position of north-eastern border region, on the border with Poland and Slovakia, the most remote from direct contact with the Prague metropolis and economic incentives from developed EU countries. Today, D1 motorway between Lipník and Bohumín with length of almost 80 km partly solves transport services and economic recovery. Road communication system further supplement 2 main international roads to Poland and Slovakia - I / 11 (E 75): Opava - Ostrava – Český Těšín - Mosty u Jablunkova and I / 48 (E 462): Nový Jičín - Frýdek-Místek - Český Těšín, which pass through the eastern part of the region. Moravia-Silesia region intersect two railways of European importance, electrified lines no. 270 and no. 320. Line no. 270 is an important part of the main rail routes of Czech Republic Prague - Bohumín. Aviation transport is ensured by the international airport in Ostrava-Mošnov, the second largest airport in the Czech Republic, the length of runway 3500 meters allows landing of all aircraft categories without restrictions (MSK, 2014).

Education, Research and Development

Level of education in Moravia-Silesia region is lower than Czech average, even though the region provides a good quality system of education and there are present 13 colleges and 5 universities (VSB - Technical University of Ostrava, University of Ostrava, Silesian University in Opava, Ostrava Business School and the College of Social and Administration, Institute of Lifelong Learning Havířov) which noticed and increasing number of students in recent years. Additionally, most of the universities are technically oriented.

Other alarming fact is that Moravia-Silesia Region already more than ten years records a negative balance of migration, especially high-educated people in working age. If this trend will not be reversed, the movement of inhabitants out from the region will continue and together with aging population it will negatively affect regional competitiveness.

Further development of research and development-based innovation activities in the future will not be possible without increased interdependence and cooperation of knowledge institutions and industry. Hence, there is a need of continual process of innovation system strengthening in the region to divert a negative trend in public research and development funding.

Despite the above mentioned facts we can state that the Moravian-Silesian Region has fundamentals on which it can build in the future. If it will successfully utilize its field specialization, knowledge-based traditional industries and the development of new markets for use in global scope, it has the potential to become a dynamic, fast-growing developing pole Central Europe. To fulfil these promises, according to Strategy of Moravia-Silesia region development (2012) it is necessary from Moravia-Silesia region to:

- Create conditions for the development of research, development and innovation and for and for business involvement of local firms into global value chains.
- Stimulate the labour market and increase its ability to capture into participation in the economy most of the suitable inhabitants.
- Increase an emphasis on lifelong learning and the development of skills and competencies.
- Offer quality environment and conditions improving quality of life that will be attractive not only for residents but also for its visitors.

4.2 Industrial zones in Moravia – Silesia Region

Moravian-Silesian Region supports from the 1990's preparation of industrial zones, their documentation and construction of infrastructure. Region also searches for suitable investors for these zones to which it can offer very favorable conditions. Moravia-Silesia region became in recent years due to the industrial zone construction boom and continuity of its industrial tradition a region with one of the highest amount of industrial zones in the Czech Republic. Currently, as you can see from the table below, there are approximately 15 industrial zones available (RIS, 2014). The relatively higher utilization rate of industrial zones in M-S region may be related to the industrial character of the region, and thus with greater use of their assumptions such as tradition, technical and transport facilities, manpower, tolerance to the effects of industry.

The region disposes of sufficient amount of industrial zone in diverse state of preparation and occupancy. Some of them are fully occupied, some offer free capacities and some industrial zones are still completely free (see the table 2 below, zones in yellow colour offer free capacities). Average level of occupancy of industrial zones in Moravia-Silesia region ranges around 74 percent (MSK, 2014) and exactly the purpose of use and share of occupancy of offered sites belong to monitored indicators of industrial zone's success.

Among the most successful industrial zones in Moravia-Silesia region belong:

- **Industrial zone Karviná - Nové** Pole and **Industrial zone Kopřivnice** – on area of both of them settled the highest amount of investors (already had to extend capacity) and they seem as prosperous industrial parks. IZ Karviná was prepared in the 90's as a pilot project of industrial zone establishment in the Czech Republic.
- **Industrial zone Ostrava – Hrabová** – it is one of the most successful IZ in the region due to its area of 120ha, amount of created jobs approximately 7000, number of investors 45. The zone still offers free capacity for new investors.
- **Industrial zone Krnov – Červený Dvůr** – due to its full occupancy of initial capacity, it had to extend the area.
- **Strategic Industrial zone Nošovice** – prepared for strategic investor, an important global car manufacturer Hyundai Motor Manufacturing Czech (HMMC). More about this zone will be described in following subchapter.
- Other successful projects are type of **industrial zone Bolatice** – its area is mostly occupied by smaller business subjects.

Table 2: Industrial zones in Moravia Silesia Region in 2014

Industrial zone	Area	Available	Utility Networks equipment
Bolatice	20 ha	0,9 + 2,5 ha	fully equipped
Business Park Ostrava	-	-	-
Český Těšín - Pod Zelenou	12 ha	0 ha	fully equipped
Frenštát pod Radhoštěm - Martinská čtvrť	2,3 ha	0,7 ha	fully equipped
Frýdek-Místek - Chlebovice	12,4 ha	0 ha	fully equipped
Frýdek-Místek - Lískovec	8,2 ha	0 ha	fully equipped
Frýdek-Místek - Kasárna Palkovická	26,6 ha	26,6 ha	in realization
Havířov - DUKLA INDUSTRIAL PARK	23,9 + 15,2 ha	23,9 + 15,2 ha	in realization
Hladké Životice - Průmyslová zóna u D1 Exit 330	31,5 ha	31,5 ha	in realization
Karviná - Nové Pole I a II	45 + 9 ha	6 ha	fully equipped
Krnov - Červený Dvůr I a II	48 ha	17 ha	fully equipped
Multimodální logistické centrum Ostrava - Mošnov	90 ha	-	fully equipped
Nošovice	**261 ha**	**0 ha**	**fully equipped**
Orlovská průmyslová a podnikatelská zóna	12,79 ha	12 ha	fully equipped
Ostrava - Hrabová	120 ha	17 ha	fully equipped
Ostrava - Mošnov	200 ha	45 + 32 ha	fully equipped
Paskov - bývalý skleníkový areál	30,3 ha	11 ha	fully equipped
ProLogis Park Ostrava	11 ha	-	-
Průmyslová zóna František - Horní Suchá	22 ha	4 ha	fully equipped
Průmyslový park Kopřivnice	75,8 ha	2,3 + 6,1 + 3,7 ha	fully equipped
Průmyslová zóna Třinec - Baliny	20 ha	0 ha	fully equipped
Průmyslový park Nový Jičín - Dolní předměstí	34,3 ha	4,7* + 9,5** ha	*fully equipped , **without networks
Rýmařov	8 ha	3,1 ha	fully equipped
Tulipan Park	2 ha	-	-
Venkovská průmyslová zóna Třanovice	29 ha	0 ha	fully equipped
Vědecko-technologický park Ostrava, a.s.	10 ha	2 ha	fully equipped

Source: MSK, 2014, own data processing

Above mentioned facts confirm current situation that supply of free industrial zones exceeds demand. One of the reasons is that in recent years the amount of planned zones was greater than required, considered as a natural need for a competitive environment

creation. It can be assumed that competition in the selection process of proposed development zones already fulfilled its purpose and in the upcoming years the number and size of unsuccessful zones will be reduced. Examples of such procedures already exist.

However, this does not apply to all cases; certain unused zones can still be used in the next period, for example consequently due to transport infrastructure completion. Reduction of the number and size of zones can be expected naturally from economic reasons, blocking of particular area without the chance of recovery is not desirable, it can be used better for other purposes.

Furthermore, it can be assumed also a reduction in the extent of zones with regard to more sophisticated forms of land use without large claims on the area (RIS 2014). As an example is majority of large or strategic zones that are available - there is a retreat from the original fundamental requirements on a strategic investor; system accepts a smaller division of zones, more prevails a free program to achieve industrial zones fulfillment.

Also urban aspect is not meaning-less, it requires greater restraint in areas defining for these zones in favor of maintaining a relatively natural suburban landscape. In the aftermath of this trend should thus the situation return to the many years ago proclaimed more intensive use of the already occupied areas and also to the relatively new phenomenon of spatial development of settlements, i.e. the revitalization of brownfields (RIS 2014).

4.3 Strategic Industrial Zone Hyundai Nošovice

Establishment of Strategic Industrial Zone Nošovice for Korean car manufacturing company Hyundai became the largest foreign investment project in Czech Republic and historically first investment of Hyundai in Europe. Company Hyundai Motor Manufacturing Czech (HMMC), based in the industrial zone Nošovice, was established in July 2006 and the contract between representatives of the Czech Republic, Moravian-Silesian Region, CzechInvest and Hyundai Motor Group was signed in Korea few months before. The Czech factory should assure together with other Hyundai’s factory in Turkey sufficient increase in sales on the European market. Currently, the industrial zone completely occupied.

Preparations of Strategic Industrial Zone Nošovice

Already in 1990's the area around municipality Nošovice in Moravia-Silesia region was known for its suitable potential for industrial zone establishment. Moreover, in 2000 was interested in this location (as well as in other potential location Kolín-Ovčáry) German car manufacturer BMW (Pělucha 2010, 2). This fact started preparations of the site for industrial zone establishment (land use plan changes proposals, etc.) but finally the investor decided to locate its manufactory in Leipzig, Germany. However the advantage of BMW interest were quality promotion materials and studies about Nošovice site, already prepare for other potential investors.

Around the year 2005, Korean investor Hyundai started to be interested in Nošovice area. Before the investor decided to locate its production in Czech Republic, it took into consideration in narrower selection also other Central-Eastern European countries like Slovakia, Poland and Hungary. Finally, Hyundai decided to establish its manufactory in Czech Republic; besides the favorable assumptions and localization factors as sufficient and cheap labor force supply, investment incentives provided by host state, good transportation connections and developing infrastructure, etc., from Czech Republic it is the shortest distance to Hyundai partner car manufactory KIA in Slovak city Žilina (see the map on figure 4 below), therefore both companies could share their components and save not only transportation cost. For Poland was also unfavorable that in recent years already other global car manufacturer General Motors located there its production and also there is quite complicated transport connection to Žilina. And even though Hyundai would decide to establish the plant in Slovakia, close to Žilina, it would never get such good conditions and high incentives as got KIA.

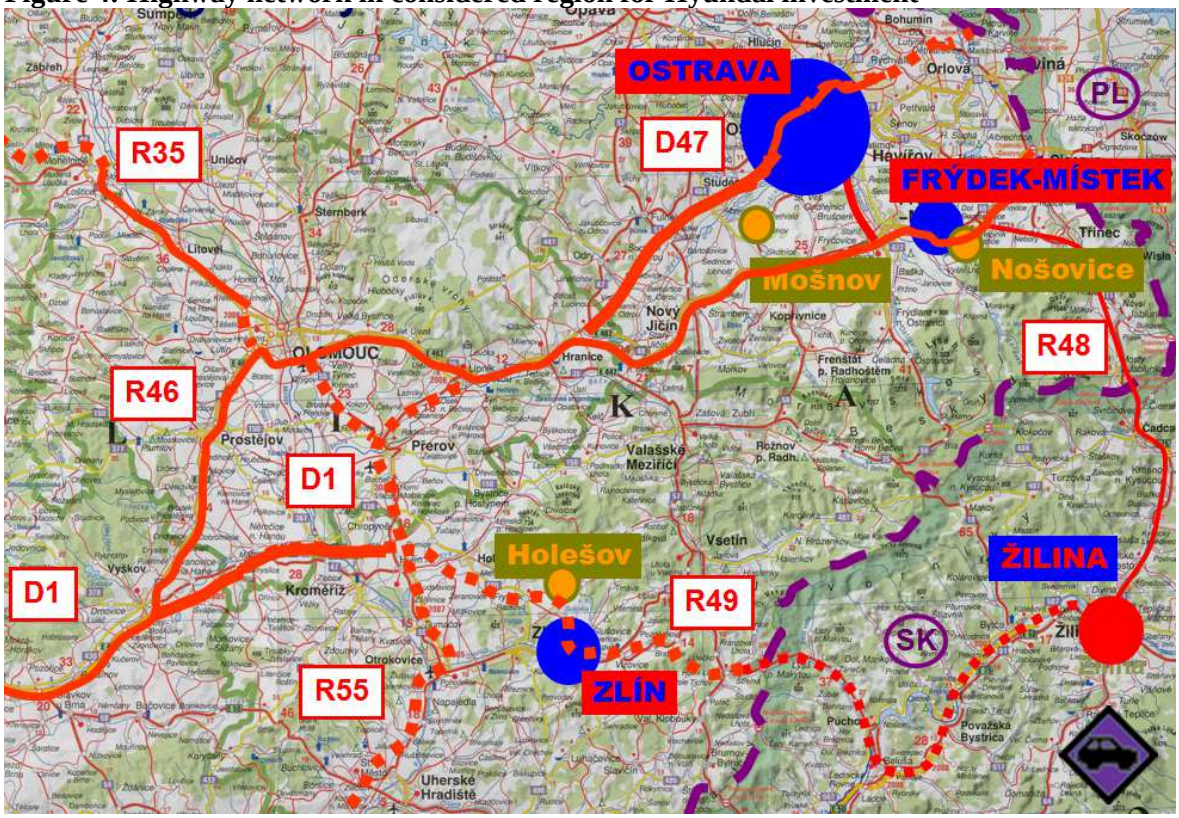
But in Czech Republic the investor had to decide between 3 potential sites, as you can see from the map below. All sites are located on the north-east of the Czech Republic, 2 sites in Moravia-Silesia region (Ostrava-Mošnov and Nošovice) and one in Zlín region (Holešov). The final choice of Nošovice site was reasoned by several facts:

- Nošovice site disposed of the most suitable shape of the site together with sufficient access to energy networks, technical infrastructure and good connections to transport infrastructure.
- Between Nošovice and Žilina is the shortest distance from other available sites (see the map below) and it is located directly next to a motorway R48 what assures comfortable access and costs saving – Mošnov is only 20 km further than Nošovice but when counting in a long term with 20 extra

kilometers times 200 trucks per day, in 20 years horizon it gives almost 60 million kilometers difference (MSK 2005, 2).

- Mošnov disposes of insufficient capacity of electric energy connection, also there are some brownfields on the site compared to Nošovice and Holešov which are greenfiels.
- Nošovice site has quality environment and lies in immediate proximity to landscape preserved area Beskydy, providing the best mountain scenery from all the 3 sites which was an important aspect for Korean investor.
- Holešov site does not provide such suitable shape of potential industrial zone, there were problems with source of potable water protection and also missing planned motorway R 49 to Žilina with uncertain future of its contruction[3]. Present communications of lower level go through mountains on the Slovak border what could be uncomfortable for trucks in the winter season.

Figure 4: Highway network in considered region for Hyundai investment



Source: Jan Hana, CzechInvest, 2013

[3] Construction of the planned motorway R 49 is not in realization till today.

When the Korean investor Hyundai confirmed its intention to establish the strategic industrial zone on Nošovice site, it raised quite intense opposition from several families and farmers from Nošovice municipality and several controversies and other problems occurred. It ended up with a significant impact on local community even before the physical construction of the zone itself. These problems will be more described as one of the impacts in following chapter 5.

Basic Information about Strategic Industrial Zone Nošovice

Industrial zone Hyundai Nošovice is located few kilometers on the east from city Frýdek-Místek (see the map below), capital of district Frýdek-Místek in Moravia-Silesia region. The industrial zone lies on area of 261 ha, but investor Hyundai Motor Manufacturing Czech (HMMC) uses only 200 ha, rest of the area is used by other main suppliers for HMMC. Along the SIZ go on the north important transport routes - a motorway R 48 (communication of first class) which provides connection to Poland and Slovakia, and a parallel railway track from Frýdek-Místek to Český Těšín.

Construction of the factory was realized in extremely short time period – it took only 19 months from the first pillar settlement in April 2007 till the start of series production. Testing operation in HMMC was put into operation in November 2008 and the ceremonial launch of serial production took place in April 2009 (HMMC 2014).

Figure 5: Location of SIZ Nošovice in Frýdek-Místek District

Source: mapy.cz, 2014, own corrections

From the very first beginning the investor put huge emphasis on the respect to environment and its protection. Koreans are famous for their positive attitude to environment and green strategies, therefore it was a unique case in Czech Republic that on the investor's request more than 1000 grown trees from the area of future industrial zone were saved and relocated from their initial position with assistance of several experts from Korea.

This first Hyundai manufacturing plant in Europe, is identified by specialist as one of the most advanced automobile manufactories in Europe due to its modern technologies. All models manufactured in HMMC were developed especially for the European market at Hyundai Technical Centre in Rüsselsheim, Germany, and the cars meet the high requirements of local customers for quality, safety and attractive design.

After the run of production in 2008, Hyundai planned within the first phase to create 2700 work places only within HMMC ant total volume of 200 000 cars produced per year. Running the next phase in September 2011 HMMC got to its full production capacity of 300 000 cars per year. The plan was fulfilled for the first time in 2012 (303 035 cars), and again confirmed in 2013 (303 460 cars). The same amount of 300 000 cars per year is the production plan for 2014 and the following years as well. In addition, HMMC does not produce only automobiles but with the run of this phase it complemented its manufacturing with gearboxes production of 600 000 units per year, where half of the production covers the needs of HMMC and also the sister car manufacturer Kia in Žilina, Slovakia. HMMC also supplies the gearboxes to Hyundai Motor Manufacturing Rus in St. Petersburg. Within this phase HMMC opened about 800 new jobs. After this second phase completion the whole SIZ Nošovice together with HMMC suppliers employs around 8 000 people (HMMC 2014).

Table 3: Basic information about HMMC Nošovice

Area	200 ha (whole SIZ Nošovice is 261ha)
Total Investment	1,12 billion EUR
Number of employees	3 300
Share of Czech Nationals	96%
Share of men/women	82 % / 18 %
Production capacity	**300.000 cars per year** (1 300 cars per day 60 cars per hour 1 car per minute)

Source: HMMC, 2014

When it goes to employment, from the very first beginning it still applies that HMMC Nošovice gives working opportunities prior to citizens of the Czech Republic, who represent 96% of all employees. Additionally, around 95% of the Czech workers are directly from Moravia-Silesia region and the rest is composed of mostly Slovak and Polish nationals, and a minimum of Korean employees (mostly higher and managerial positions in the companies within SIZ). This facts oppose to the first threats and assumptions from several studies that there will be employed around 30-50% of employees from neighbour countries. For other main subcontractors of Hyundai, which followed the main investor to the Moravia-Silesia region, work about 7 000 people, thus the "Project Hyundai" has created more than 10 000 places in the region and significantly contribute to reducing unemployment (HMMC 2014). More about the economic impacts on the region will be described in following chapter number 5.

Figure 6: Strategic Industrial Zone Nošovice – complex view

Source: HMMC, 2014

As was mentioned above, HMMC is not the only investor within SIZ Nošovice. Because the company is focused exclusively on automobile production and montage, for related components it uses several proven suppliers from Korea which represent for them

guaranteed quality based on long term cooperation. The only Czech company within the SIZ Nošovice is Hysco Czech.

Follows a complete list of the investors present within the SIZ Nošovice (MSK 2014):

- Hyundai Motor Manufacturing Czech, Ltd.
- Logistics Park Nošovice (C.S.Cargo), Inc.
- Mobis Automotive Czech, Ltd.
- HYSCO CZECH, Ltd.
- Hyundai Dymos Czech, Ltd.

In addition, HMMC uses also other proven mostly Korean suppliers which are located out of SIZ Nošovice but in sufficiently reachable distance in several industrial zones within Moravia-Silesia region (see the table 4 below). These investors produce other car components. Among the companies belong:

- Dong Hee Industrial
- Hanwha
- Matador – Dong Won
- Plakor
- Sejong
- Sung Woo Hitech

Both groups of above mentioned suppliers significantly contribute to regional employment but on the other hand it cost the state considerable investment. For more details see the table 4 below.

Table 4: Suppliers for HMMC - Korean Investors

Investor	Investment (mil. CZK)	Jobs Created	Location (Industrial Zone)
Dong Hee Industrial	830	230	Český Těšín
Dymos	850	250	Nošovice
Hanwha	900	174	Frýdek-Místek, Chlebovice
Hysco	500	67	Nošovice
Mobis	1500	800	Nošovice
Matador-Dong Won	500	200	Třinec - Baliny
Plakor	1770	500	Ostrava-Mošnov
Sejong	-	250	Karviná, Nové Pole
SungWoo Hitech	2500	2000	Ostrava - Hrabová

Source: Studie dopadů investice Hyundai, 2007, own data processing

5 Socio-economic Impact Assessment of SIZ Nošovice on Regional Development

This chapter is the second and most important part of the thesis' practical part. It deals with the main aim of the thesis – to analyse and further assess the main socio-economic impacts of industrial zones on regional development, concretely current socio-economic impacts of strategic industrial zone Nošovice establishment on its closest district within Moravia-Silesia region and related municipality Nošovice. Using methods of data analysis, description and synthesis will be answered the auxiliary questions from the thesis introduction which were set to achieve the thesis objectives:

1, What are the economic impacts on related area?

2, What are the social impacts and impacts on population?

3, What are other related impacts of the SIZ Nošovice?

4, Are there some recommendations for further positive development of the region?

Some of the questions were partly answered in previous chapter 4 when describing the SIZ Nošovice but this chapter uses based on author's research and available data several indicators which author considered as relevant to prove above described statements about industrial zones and SIZ Nošovice.

To find as much appropriate results as possible, there are used as reference areas statistical indicators about Moravia-Silesia Region and in case of data availability also about Frýdek-Místek district, which represents natural downflow region for SIZ Nošovice. In some cases there are used data about nearby municipalities Nošovice to support the results of analysis. The analysis uses as a benchmark data about Czech Republic or Moravia-Silesia region but in some cases the data about whole region are too general due to similar characteristics of the districts and high amount of newly created industrial zones within the region. Thus, the findings can be perceived as more general about the structurally affected regions where industrial zones should help to solve their problems.

The analysis uses time series from year 2000 or 2005 to 2013 to have a comparison from period before SIZ Nošovice establishment in 2006 and the period after its start of operation. The most important results should be visible around year 2007 and then after 2011, although the series production was run into operation in April 2009 and the full

capacity operation since November 2011, but there were some previous processes related to successful start of the operation, i.e. recruitment and requalification of labour force, etc.

As was mentioned above, district Frýdek Místek due to its area and other assumptions to be a natural downflow region for SIZ Nošovice. It is located on the far eastern part of the M-S region, on the border with Slovakia, thus it is the nearest district to Žilina what is important for Hyundai. With its population over 210 000 inhabitants it is the third most populous district in the region and fifth in the Czech Republic (ČSÚ 2014e). Moreover, in the immediate vicinity (2-3 km) of SIZ Nošovice lies the city Frýdek Místek with almost 60 000 inhabitants and other traditional industrial city Třinec with more than 37 000 inhabitants (ČSÚ 2014e). The district's economy and employment is very similar to the whole Moravia-Silesia region characteristic, thus its performance and potential is firmly tied to its previous historical economic development. It is agriculturally-industrially oriented. However, despite the restructuration process in the 1990's when several nearby mines were closed and unemployment rate increased, still Frýdek-Místek district kept the lowest unemployment rate in the region. Therefore the district could provide enough work-force for the new SIZ in Nošovice.

5.1 Economic impacts

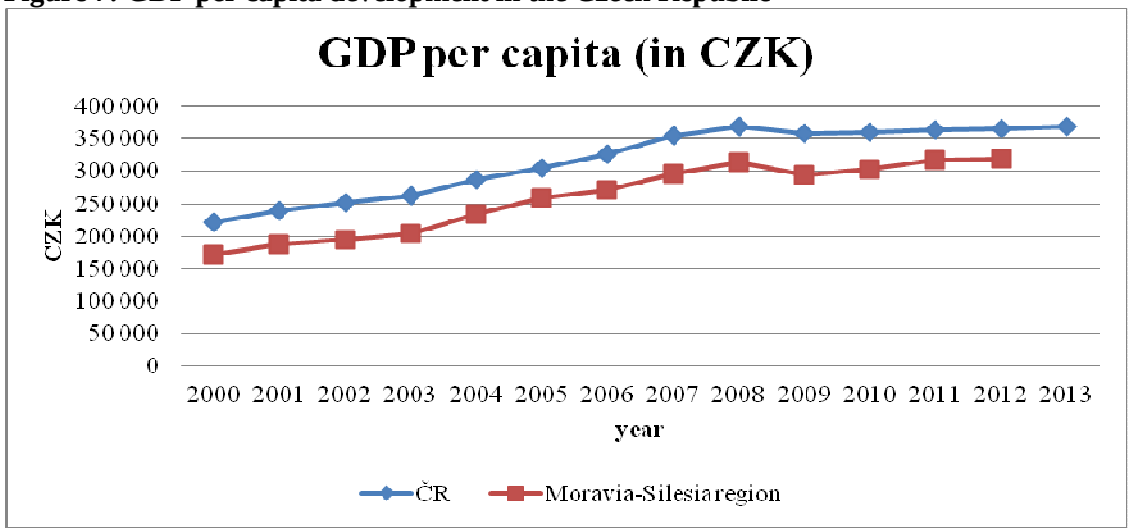
From economic point of view, establishment of industrial zone in structurally affected region with declining economy and high level of unemployed people is usually perceived as an assumption of positive change and boost of the economy which could improve these negative patterns. Especially in times of economic crisis, those investments should have a significant stabilization role when the companies in SIZ and its suppliers can absorb part of the workers who were fired from local traditional employers. Moreover, Moravia-Silesia region dispose of high amount of less educated people who create an endangered group on the labour market, however work in manufacturing industry does not require high level of education, so SIZ can easily employ part of them.

5.1.1 Impact on Gross Domestic Product

According to theory and some evidence, strategic investments of such scale as HMMC and the whole SIZ Nošovice have positive effects not only on the GDP and country's economy but especially on the regional economy where is the annual increase in GDP per capita more significant. The case of SIZ Nošovice demonstrates figure 7 where

you can see general increasing trend over recent years both in GDP per capita of the Czech Republic and both in case of Moravia-Silesia region. GDP per capita in M-S region noticed the highest annual increase between years 2006 and 2007 when it reached 9,3%. In both national and regional level the GDP per capita achieved its maximum in 2008, followed by a decrease between years 2008 and 2009 caused by economic crisis but since 2009 the trend is again increasing. To sum up, case of SIZ Nošovice confirms positive effect on the national and regional economy in terms of GDP.

Figure 7: GDP per capita development in the Czech Republic



Source: ČSÚ, 2014a

5.1.2 Impact on employment and average wage

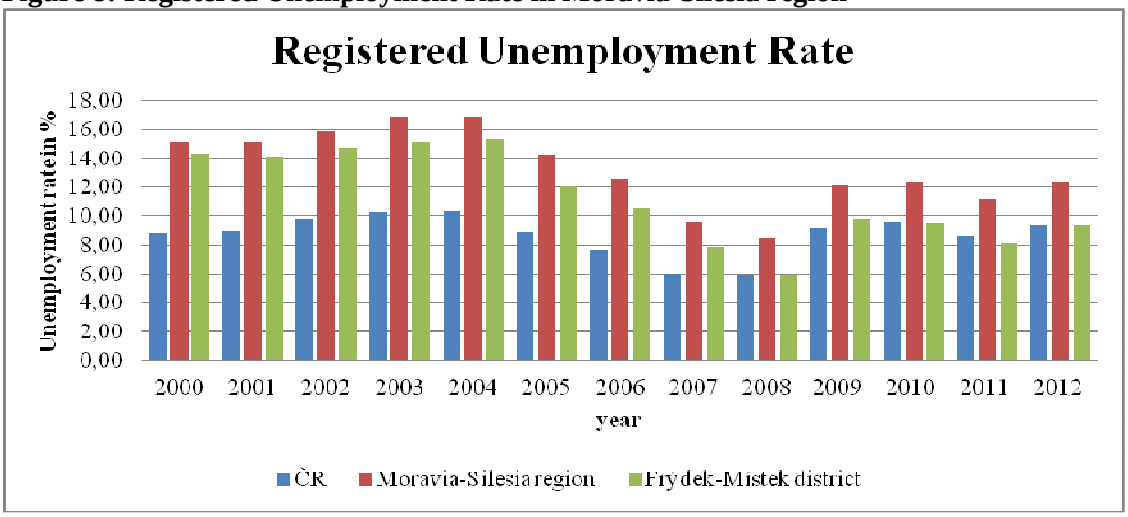
As was already mentioned, an important assumption of industrial zone in disadvantaged region is that it creates desirable jobs and therefore decreases unemployment rate and in some cases it should be also positively reflected in average wage increase.

Investment Hyundai Nošovice brought so far to the district directly and indirectly around 8 000 free places (HMMC itself 3 300 and suppliers around 4 700) after run of its full capacity production in 2011. Thus, Hyundai confirmed a position of stable employer who met all its commitments in case of promised jobs created even in times of economic crisis. Moreover, in HMMC is 96 % of employees Czech nationals and from them 95% directly from Moravia-Silesia region, therefore the impact on regional employment seems very positive. Moreover, according to study by Zahradník and Jedlička (2006) the realization of SIZ Nošovice led to creation of more than 12 000 other indirect and induced

jobs which reflects the jobs created by SIZ Nošovice suppliers which in general increases the demand of goods and services in the region and that creates new jobs.

Moravia-Silesia region in long term suffers from high **unemployment rate** over the national average and one of the highest unemployment rates among regions. Therefore the positive impact of SIZ Nošovice establishment in 2006 is reflected in significantly decreasing unemployment rate not only in the national average, but again more significantly in the regional statistics as shows figure 8. The largest annual decrease was between years 2006 and 2007 when on regional level it was by 2,97% and in Frýdek-Místek district by 2,64% (for more information see appendix 5). The lowest unemployment rate was in 2008 when it reached 8,49% in M-S region and 5,9% in F-M district. Unfortunately it was followed by increase in the next years due to economic crisis. However since 2011 we can observe a decrease in unemployment, probably due to above mentioned increase in working capacities within SIZ Nošovice. Therefore the impact of SIZ Nošovice on unemployment rate can be assessed as very positive.

Figure 8: Registered Unemployment Rate in Moravia-Silesia region

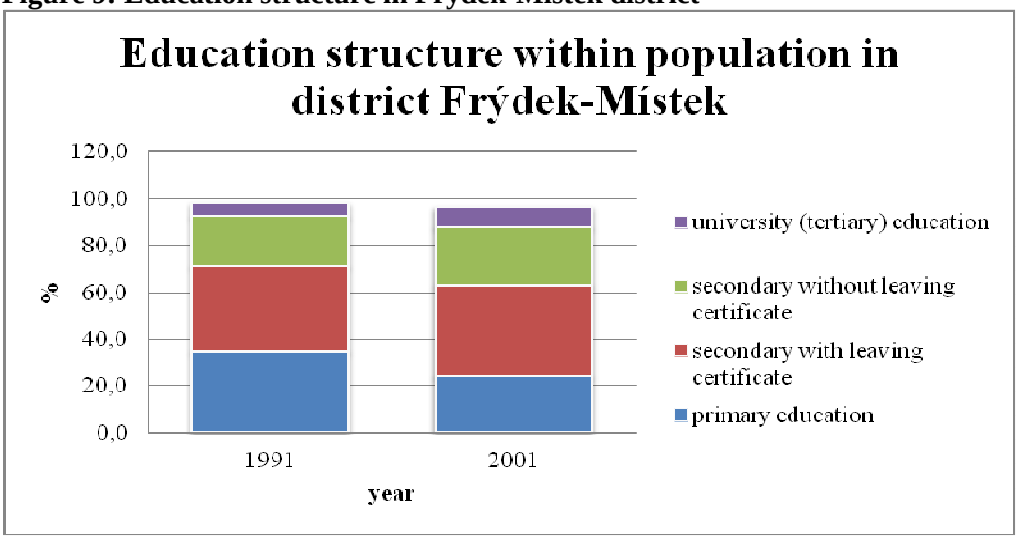


Source: ČSÚ, 2014c

According to amount of labour force (around 105 000 persons) in Frýdek-Místek district, SIZ Nošovice plays an important role in employment. Placement of the employees is even easier due to industrial tradition in the region with corresponding relatively low education structure of the population (see the figure 9 below), and low requirements on education and qualification from investor[4].

[4] The employer requires only certificate of secondary education to prove that employee is elementary educated and further educable, adequate health status and clean criminal record.

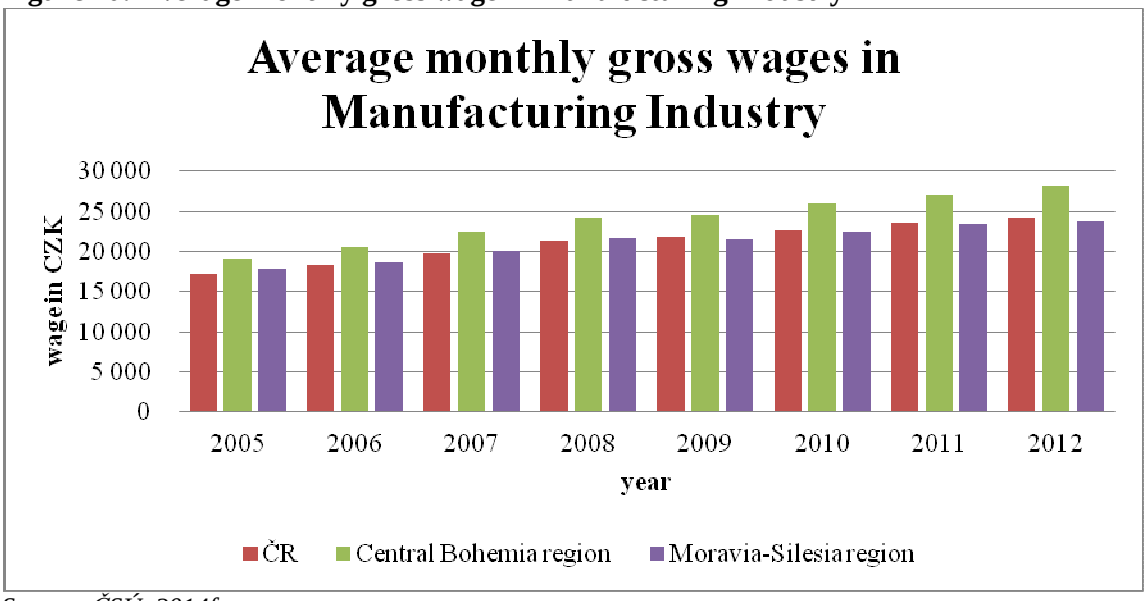
Figure 9: Education structure in Frýdek-Místek district



Source: ČSÚ, 2014c, own data processing

Quite low level of education within the district is reflected also in the amount of **average monthly gross wage**. Because almost 95% of the professions are for manual workers, therefore the wages are below the regional average. This fact supports the explanation from HMMC that the factory is only an assembly plant. The low wages are one of the main problems to keep the employers working. Due to physically demanding character of the work together with tradition in the region the employees are not used to accept such low wages but together with the high unemployment rate people probably prefer to have a job. As we can see from figure 10, average monthly gross wages in manufacturing industry in Moravia-Silesia region are below the national average and even lower than wages in Central-Bohemia region despite their increasing trend over time. Central Bohemia region is placed here as a comparison because there are located 2 similar industrial zone concentrated on car manufacturing (ŠKODA in Mladá Boleslav and TPCA in Kolín-Ovčáry) which are the main competition of HMMC on the Czech market. In According to general information, the average monthly wage in HMMC was 20 - 21 000 CZK which is even below the general average monthly wage in the Czech Republic. On the contrary, average wage in TPCA moves around 25 - 26 000 CZK and in ŠKODA approximately 28 000 CZK. But at the beginning, HMMC promised to employees that the wages will be competitive with the other car manufacturers in CR (Pělucha 2010).

Figure 10: Average monthly gross wage in Manufacturing Industry



Source: ČSÚ, 2014f

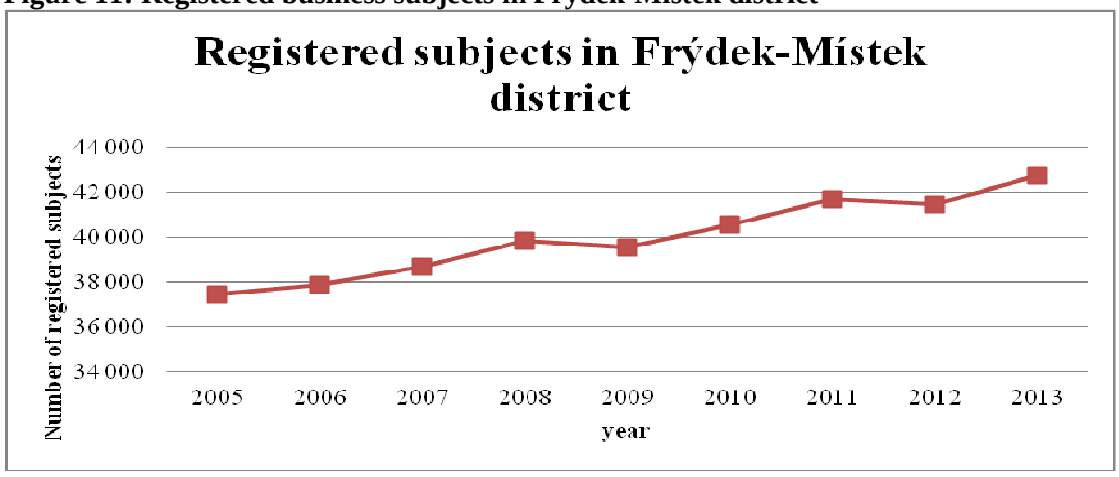
5.1.3 Impact on regional business activities

Presence of such huge project as SIZ Nošovice and its network of suppliers naturally should increase local and regional demand for goods and services to handle all new created capacities. This is reflected in increased economic activity and amount of registered subjects within the region and district. This positive trend reflects figure 11.

Even though HMMC overcome the economic crisis positively and with additional open work places and also the statistics show a general positive trend in business activities, the local firms out of SIZ Nošovice does not profit from HMMC that much. There were planned in Nošovice municipality several development projects providing banks, restaurants and other services for potential HMMC employees. In the end this plans were not realized due to a construction of natural wall between the SIZ and municipality Nošovice on request of the municipality. It creates a natural and physical barrier for business development opportunities because therefore the employees after work do not have a need to overcome this barrier and use the services of other nearby cities on the way home. The municipality Nošovice is satisfied with this result.

Therefore we can state that the impact of SIZ Nošovice on business activity development is surely positive in regional scale but not that much in local due to voluntarily prevention of those activities from nearby municipality.

Figure 11: Registered business subjects in Frýdek-Místek district

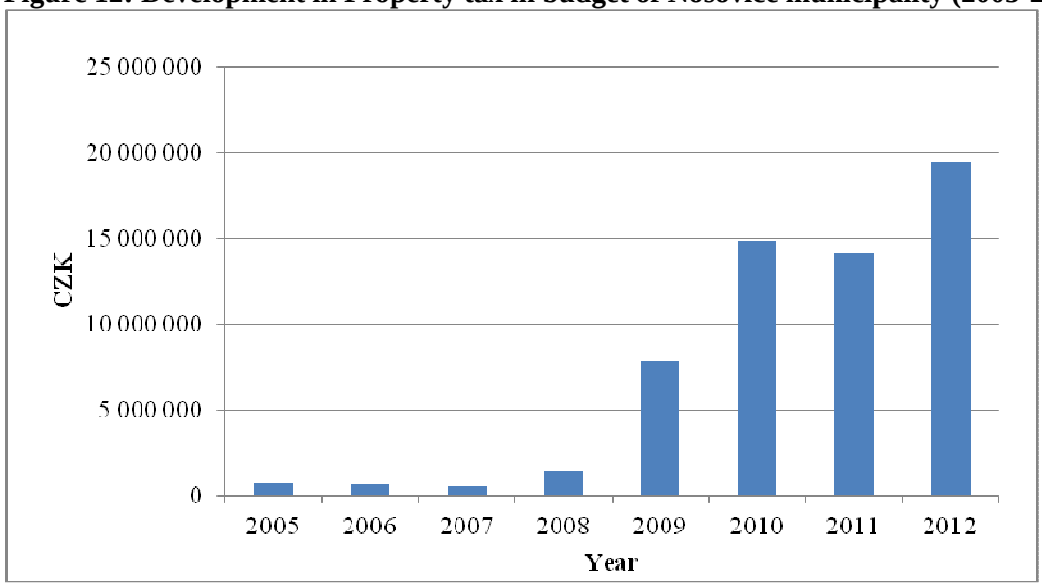


Source: ČSÚ, 2014c

5.1.4 Impact on tax revenues of municipalities

Other positive economic impact represents probably the only significant profit for the closest municipality Nošovice which in general behaves more distant from all activities related to the close strategic industrial zone. Because the zone lies on the area of municipality, the HMMC and other investors within SIZ have to pay to it Property tax which was since the establishment of SIZ increased by the municipality 3 times from its initial amount (see figure 12 and table 5 below). These revenues represent a stable income to municipality's budget and therefore it can contribute to development of the municipality. Consequently the municipality cancelled a fee for municipal waste for Nošovice residents what is paid from these Property tax revenues.

Figure 12: Development in Property tax in budget of Nošovice municipality (2005-2012)



Source: Rozpočet obce, 2014, own data processing

Table 5: Nošovice - Percentage share of Property tax on budget's total revenues

year	2005	2006	2007	2008	2009	2010	2011	2012
% share of Property tax on budget's total revenues	8	3	3	7	19	57	52	63

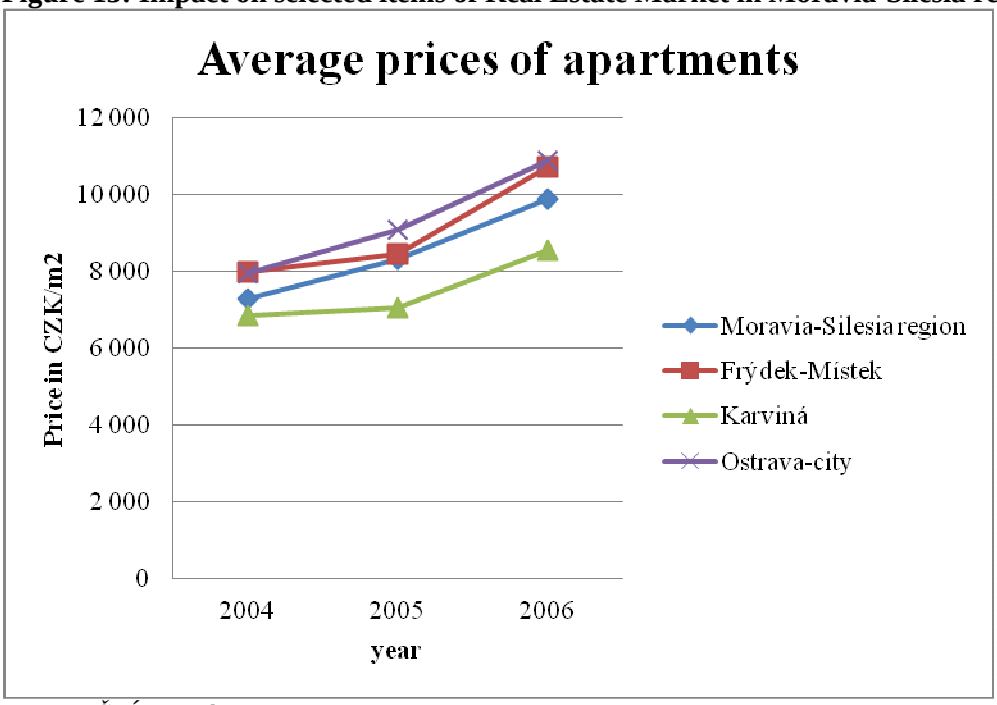
Source: Rozpočet obce, 2014, own data processing

5.1.5 Other related economic impacts

There are undoubtedly several other aspects resulting from the establishment of SIZ Nošovice and presence of such strategic investor in the region but due to scope of this thesis there will be briefly described last two - the impact on Real Estate market and improving social status (welfare).

Presence of important investor naturally increases the interest of business subjects and consequently it is usually reflected in prices of land and other real estate components. Similarly it functioned also in Moravia-Silesia region and Frýdek-Místek district where was noticed a significant annual increase in prices of apartments between the year 2004 and 2005 probably due to confirmation of investment interest from Hyundai in 2005 (see figure 13). Second effect of SIZ establishment could be assumed improved social status and welfare of population (due to increasing GDP) which can be reflected also in increasing amount of passenger cars in the region (see appendix 6).

Figure 13: Impact on selected items of Real Estate Market in Moravia-Silesia region



Source: ČSÚ, 2014h

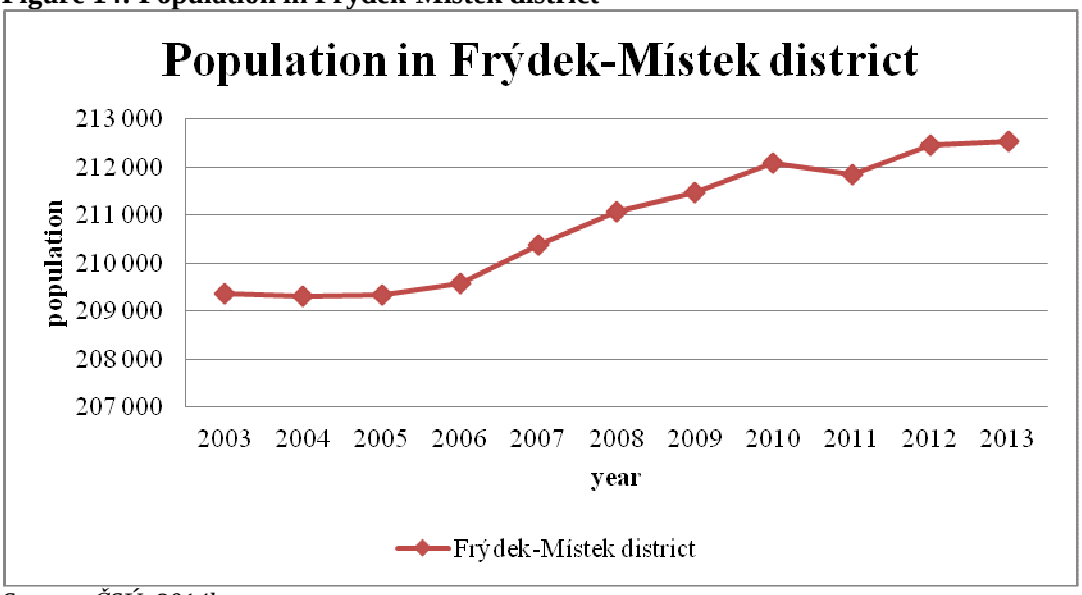
5.2 Social Impacts

Second group of impacts caused by establishment and presence of SIZ Nošovice is related to population in the region and social effects and changes in behaviour resulting from this project.

5.2.1 Impact on population

As was mentioned in the previous chapters, Moravia-Silesia region suffers from **population decrease and outflow** of young educated workforce from the region. This negative trend confirms the situation resulting from the regional statistics where the population in M-S region on one hand increased between years 2007 and 2008 but on the other is continuously decreasing since 2008 probably due to economic crisis (see appendix 7). However, Frýdek-Místek district notices general positive increasing trend in population since 2004 with significant acceleration since 2007 which was caused by the SIZ Nošovice establishment as depicts figure 14.

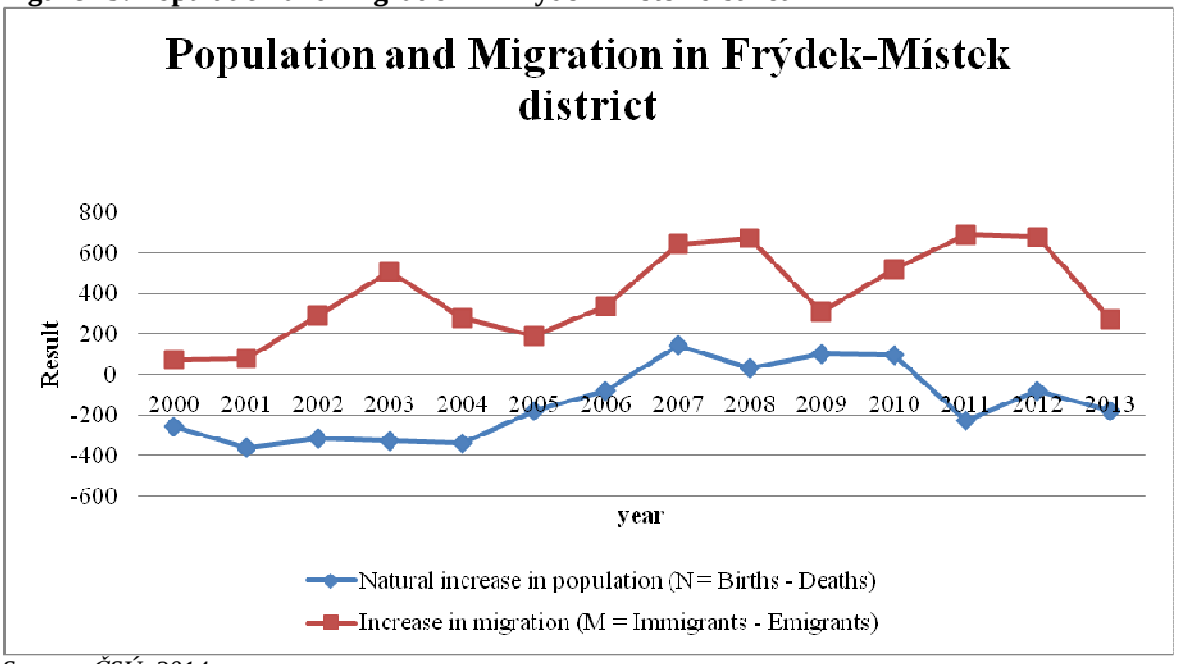
Figure 14: Population in Frýdek-Místek district



Source: ČSÚ, 2014b

The positive population trend in Frýdek-Místek district is visible also on the levels of **natural increase in population** since 2005, however the statistics of **migration increase** (amount of immigrants minus amount of emigrants) in the district fluctuate a lot (see figure 15). Therefore it is not clear whether the SIZ Nošovice has a significant positive impact on these indicators, especially migration, or not.

Figure 15: Population and Migration in Frýdek-Místek district



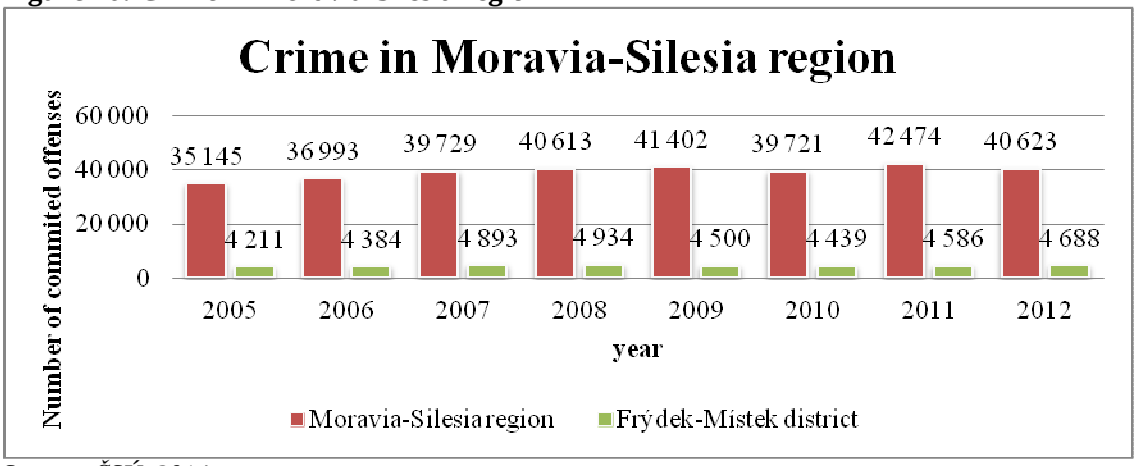
Source: ČSÚ, 2014c

5.2.2 Impact on criminality

According to evidence and theoretical part of the theses, establishments of huge strategic industrial zones usually brought negative impacts on the safety and criminality in the touched areas, mostly caused by foreign immigrants coming to the new areas for work or other purposes.

These concerns occurred also among the Nošovice inhabitants and population in nearby district. Also competitive car manufactories TPCA and Škoda in Central Bohemia region and M-S region was consulting with them their experience. However in case of SIZ Nošovice this negative pattern did not occur. It is caused by the fact that most of the employees are Czech nationals and also people from Moravia-Silesia region, therefore the danger of potential foreign inhabitants was eliminated. HMMC even did not need to build any lodging house for the workers because they come every day from their nearby homes. Other reason is that M-S region disposes of enough nearby big cities which provide sufficient amount of local workers compared to Central Bohemia region where are smaller cities and also majority of the population migrates to work in nearby capital Prague, therefore there were missing local capacities. To sum up, we can state that establishment of SIZ Nošovice did not have a negative impact on region in terms of crime which is supported by very moderate trend of commited offenses in figure 16.

Figure 16: Crime in Moravia-Silesia region



Source: ČSÚ, 2014g

5.2.3 Impact on civil society and social life in Nošovice municipality

Before the physical construction of SIZ Nošovice, there occurred several problems related to land acquiring from private subjects on the place of potential industrial zone which could endanger the real investment of strategic investor Hyundai in Nošovice, and which have had a significant impact on the social ties and community life within Nošovice municipality and which last till today. Thus they are worth to mention.

At the beginning is important to say that around the year 2005 the potential establishment of SIZ Nošovice for Hyundai became the largest foreign investment project in Czech Republic and historically first investment of Hyundai in Europe. Therefore it naturally created a duress situation from representatives of state and region on the local inhabitants in touched area in order to make this strategic investor's investment happen.

The controversial story begins in the year 2005 when was necessary to make a change in the land-use plan for potential industrial zone which should be built on the area about 270 ha where were that time a fertile fields with historically specific favourable conditions for cabbage planting and the municipality was famous for its sour cabbage production. The change of the land-use plan was discussed several times in public with the municipality inhabitants but on these meetings participated only very few of them who were interested. In the end there were only 2-3 objections from public but they were fast resolved. Therefore the approval of land-use change happened quite fast without significant refuse from municipality inhabitants. They started to be against after this decision when it was too late to change.

The change occurred when in 2005 Hyundai came with serious intention to invest in Nošovice and not in other considered areas. Therefore state representatives and Moravia-

Silesia region did not want to miss such opportunity which would not have to be repeated and started to prepare everything for a smooth run of the establishment process. Crucial part was to acquire the land around Nošovice municipality from local owners. To support the smooth run of the process, state and region released special financial means for compensation of the local people who would have to move from the locality. Therefore they offered a special price of 150 CZK/m2 for plots whereas land of similar type is valued for 30 - 70 CZK/m2 and in case of agricultural land depending on quality from 3-10 CZK/m2. Additionally, each family who would have to move would receive 100 000 CZK as a compensation for inconvenience with the establishment. Therefore for most of the owners who did not have a particular relation to the area (98%) it was a lucrative offer. But the main problem was with remaining 2% composed of farmers and agricultural cooperative Nošovice who did not want to sold their land due to historical circumstances (they had to face communist collectivization in the 1950'), social ties to the land and other reasons related to their agricultural production.

The situation escalated to the point that state and M-S region pressed on the remaining owners who did not wanted to sell even though it was presented that no one will be forced in those decisions. It is a question whether this pressure was ruled on purpose or appeared naturally but in the end it created an inconvenient peer pressure and threats and blaming within the community. Persisting farmers involved in the process also Ecologic legal service[5] (a non-governmental organisation) which helped them to resist and maybe partly radicalize the whole dispute and added more environmental aspects. In the end after several months of waiting, in December 2005 there was an ultimatum from M-S region that if they would not acquire the rest of the land, they would cancel the whole investment and Hyundai would localize somewhere else. This result even more radicalized the situation and disputes among the locals who blamed others from potential loss etc. Finally, few days before the ultimate date several anonymous letters occurred where the remaining farmers were threatened with death. Therefore under social pressure and fear they gave up and agreed on the land sale.

It can seem as a successful end for the region and investor but this land-acquisition process had a crucial impact on relations within the community where several disputes and injustice lasts till today. The mayor of Nošovice Miroslav Křivánek confirmed that today is the situation among local people better, the time helped to forget, but in some cases it

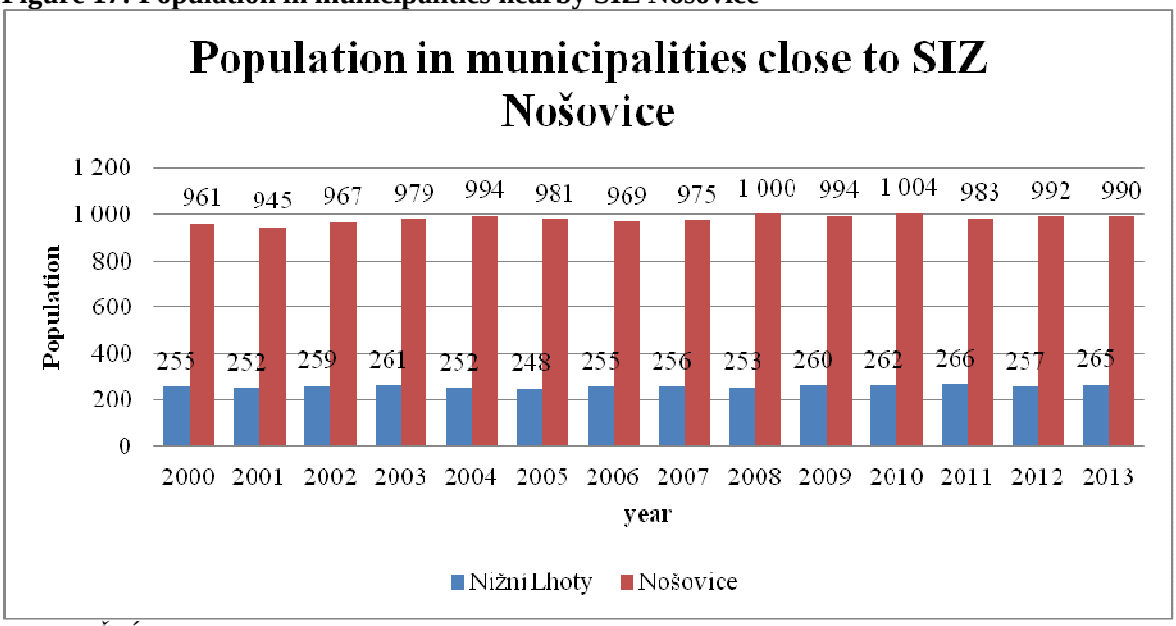
[5] More about this NGO at: http://www.eps.cz/resime/pripad/nosovice-pribeh-automobilky-na-zelene-louce.

would never be the same again. Despite the HMMC gave to the municipality 140 000 to organize a festival in the municipality, to support and regenerate the social ties, it was not fully successful. He also adds that this case was strongly supported by media and even there was shot a controversial documentary about Hyundai and Nošovice which describes the case and basically claims against the whole project and behaviour of the state representatives to the local people. This medial campaign in general showed the case in very radical way.

Therefore he justifies the decision that most of the inhabitants who had to sell their plots or move out from Nošovice does not feel offended and are satisfied with their new situation. Most of the initial plots and houses were old and therefore to the locals were offered in many cases better plots in nearby municipalities where they are happy today. In general the establishment did not have significant effects on the population in nearby communities (see figure 17).

We can state that in the end the situation became peaceful in the community but the circumstances which accompanied the land acquisition process for industrial zone establishment had a long-term impact on communal life in related area which could have been solved in more friendly way.

Figure 17: Population in municipalities nearby SIZ Nošovice



Source: ČSÚ, 2014c

5.2.4 Impact on local and regional communal activities

Besides the above mentioned impact on social ties within the Nošovice municipality, there is worth to mention a consequent establishment of Hyundai foundation, signed by HMMC, representatives of Moravia Silesia region and other local Non-governmental organisations. The foundation is a part of Hyundai Corporate Social Responsibility policy because the HMMC presents itself as a responsible employer who supports the local and regional development around its manufacturing area. So far HMMC allocated in this fund approximately 25 million CZK. It supports mostly projects of small scale in around Frýdek-Místek and Nový Jičín, especially related to the environment protection and transparency and well-functioning of public administration (HMMC 2014).

Moreover, HMMC donated to each of three nearby municipalities, namely Nošovice, Nižní Lhoty and Dobrá, one car Hyundai which are used as company cars, other cars were donated to some educational institutions. In addition, within the project "good neighbour", 13 related municipalities can apply for funding of local development projects (sport areas, playgrounds for children, etc.) up to 50 000 CZK per year. HMMC organizes also events and social activities such as Korean days, Hyundai Family days for the employees and their families and general public within the industrial zone and other projects related to health and safe traffic.

Due to large scale of SIZ Nošovice and to assure safety environment, HMMC built next to the zone a brand new Integrated safety centre including a non-stop service of firemen, police and ambulance which can be used not only for SIZ but also for actions in the nearby district when necessary. HMMC built this station on its costs.

Therefore it seems that HMMC contributes to a peaceful social and communal life in the region but according to mayor of Nošovice municipality, the support from HMMC could be more significant and friendly, despite it faces as a "good neighbour".

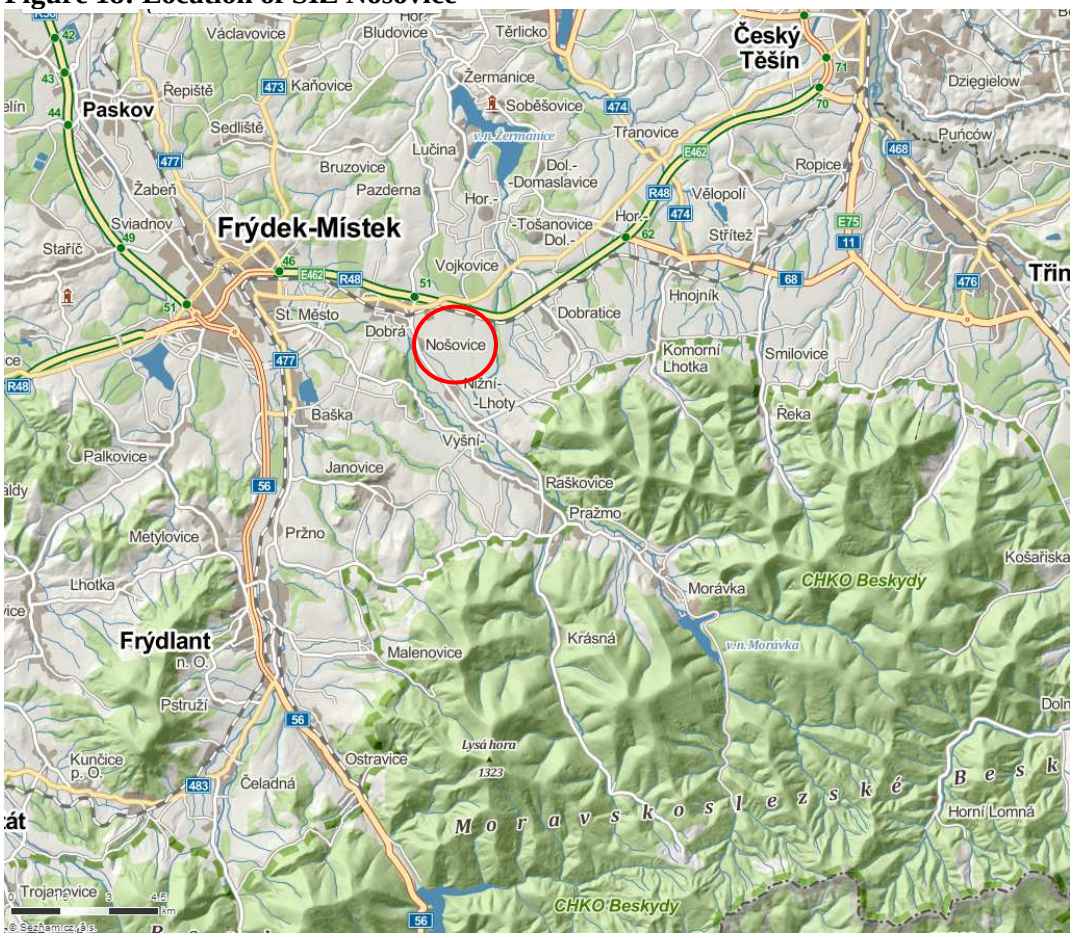
5.3 Other impacts

Industrial zones create many positive and negative impacts which were mentioned in the theoretical part but due to the scope and main aim of the thesis there are covered only selected ones in relationship to Strategic industrial zone Nošovice.

5.3.1 Environmental impacts

In relation to such industrial complexes there always arose many questions related to environmental impacts, pollution of environment, how to prevent it and protect. In case of Nošovice it was the same, especially when the industrial zone is located directly few kilometres from Landscape preserved area Beskydy and other nature reserves as you can see from figure 18.

Figure 18: Location of SIZ Nošovice



Source: Mapy.cz, 2014

It is important to emphasize that from the beginning the attitude of Korean investor to environment was very friendly, Koreans are famous for their attitude to environmenta protection and preservation. It was also one of the reasons why they chose Nošovice – because it lays directly next to the mountains what provides unique scenery. On the other hand the construction of SIZ interrupts the natural landscape scenery of Beskydy. The zone is therefore visible from far distances.

However in the process of construction was increased temporary dustiness which was solved by sprinkling of the ait but this did not have a significant impact on environment. On the other hand it was a unique situation in the Czech environment that during the construction period there were saved more than 1 000 grown trees which were twice replaced by a special and difficult technique on Korean investor's request and costs. In total it was saved 1 065 trees.

The investor also expressed interest on preservation and replacement of the fertile land from fields of Nošovice which was taken and replaced to nearby localities where can be again used for agriculture.

There were also fears about the quality of air and noise limits but due to the fact that HMMC is one of the most modern automatic productions, having all the safety and ecologically friendly certifications, therefore it fulfil necessary requirements and norms. By that the HMMC confirmed its environment responsibility. Thus, there does not occur any smoking chimneys which would pollute the air. The manufactory is not noisy but in any case there is a 7 meters high noise protection wall which should capture all possible noise and also serves as a natural barrier to separate the nearby municipality Nošovice from the zone. It was built on resident's request and therefore there is no direct access from SIZ to Nošovice and the municipality isolated itself on purpose from any further development. Employees from SIZ have separate way around the zone which has a direct connection to the highway R 48.

Therefore we can state that SIZ Nošovice does not generate significant negative environmental impacts and seems as a proactive and responsible company in terms of environment protection which cooperates with local NGO's on related projects.

5.3.2 Impacts on transport infrastructure

Transport infrastructure is one of the factors of desired economic development, especially in declining or structurally disadvantaged regions which are usually not well accessible. That was also the case of Moravia-Silesia region. Intention to establish there

strategic industrial zone undoubtedly contributed to acceleration of some parts of transport infrastructure, especially construction and connections of motorway D47 to Ostrava and R 48 connectin Frýdek-Místek and Nošovice with Žilina in Slovakia, to which obtained SIZ Nošovice an allowance to build a direct connection from the zone. There was constructed a railway siding which directly connects the area of SIZ with general frequented railroad. There are also plans to revitalize near international airport in Ostrava-Mošnov to assure also a development in aviation transport. Other plan is to improve the capacity and function in the near water channel with port in Ostrava for shipping.

In general, besides the initial negative impact on transport as increased traffic on some local communications before the construction of motorways, we can say that SIZ Nošovice positively contributed to transport infrastructure development within the region.

5.4 Proposals for further development

Based on the above mentioned impacts and findings from my research for my thesis, I would like to mention some ideas and proposals for further positive development in the region related to industrial zones. There are several areas:

Innovations, Research and Development

Moravia-Silesia region suffers from relatively high amount of low educated population and lack of technically educated young professionals which can be caused also by the lack of Research and development centres. The situation is improving in recent years but still the results are not visible. It is interesting that HMMC never had a commitment to contribute to R and D development in the region or innovations in the region related to its huge investment in Nošovice. The reason is that they have massively invested in R and D centres in Korea, therefore all processes happen there. In recent years it cooperates with the technical university in Ostrava but only in terms of syllabus or coursed changes. And the initiative came not from HMMC but the university. Therefore there should be a more tight cooperation between the investors and education institutions to adjust the education on better future use in practice and to meet the demand with supply on the labour market.

Tourism

Tourism is usually used as a tool for regional development in declining, structurally affected or other disadvantaged regions. Therefore in case Moravia-Silesia according to its increased number of investors who contributes to economic development of the region, it is desirable to utilize region's full natural and cultural potential in tourism to attract even more investors to use regional services and attractions to support local business development. The region offers many opportunities for recreation, tourism, cultural heritage and therapeutic programs. In summer the region offers wide network of trails for hiking and cycling; in the winter, mountain ranges Hruby Jeseník and Beskydy dispose of skiing resorts and cross-country skiing trails. The situation is improving but still there are gaps in the hospitality services.

Change in legislation related to industrial zones

Due to increasing number of completely unused or partly occupied newly created industrial areas in the Czech Republic, there should be accepted some restrictions, limits or conditions under which could be the new Greenfields built. This is not the case of SIZ Nošovice but in general, it is a current problem especially when there are many unused Brownfields as well. Therefore the government should in the legislation process inspire for example in Great Britain, where in case that the investor decides to establish the zone in particular location, if there is a brownfield nearby, it is not possible to construct a new Greenfield and the brownfield is offered for revitalization.

Conclusion

Massive construction and further activities of industrial zones in Czech Republic significantly contributed in recent years to economic performance of both national and regional economics. In Czech Republic, the new industrial zones are usually located in the declining or structurally affected regions from the transformation of economy in the 1990's which suffer from negative socio-economic patterns as low economic performance, high unemployment rate and outflow of population. This is also the case of Moravia-Silesia region and Strategic industrial zone Nošovice which was established in 2006 for a strategic Korean investor and car manufacturer Hyundai which significantly contributed to the improvement of regional and national economic performance. SIZ Hyundai Nošovice is one of the most successful industrial zones of foreign investor in the Czech Republic, due to its investor's global importance and unique choice of location in Czech Republic as a first Hyundai car manufactory in the central Europe which should assure increasing sales of cars on the European market. . So far it was the largest project from Czech state for foreign investor in volume of investment incentives received. But industrial zones generate many positive and also negative impacts and its success is not always assured from the beginning as it usually is in case of strategic investor such is Hyundai. In recent years occurred many industrial areas in the Czech Republic to assure the competitive environment but nowadays they have problems with occupancy and free space.

The general aim of the thesis was to analyse and further assess the main socio-economic impacts of industrial zones on regional development, concretely current socio-economic impacts of strategic industrial zone Nošovice on its closest area. We can say that according to the research SIZ Nošovice with its performance and regional impact belongs to one of the most successful industrial zones in the Czech Republic which is not always the rule.

In the theoretical part were described basic terms and concepts related to industrial zones such as Greenfield and brownfield and briefly summarized their advantages and disadvantages. Further were in more detailed discussed the potential positive and negative impacts or risks on the region resulting from industrial zones establishment based on the foreign literature and scholar studies review. There were identified the main controversial points over the caused impacts. Further was explained the importance of state support in the Czech Republic in case of industrial zone establishment for the investor and which

benefits could be provided, including the explanation of investment incentives. It is also important to mention how is the Czech legal framework and system of investment incentives tied with the European Union framework and which programmes deal with the industrial zones topic. Also there is described the importance of Foreign direct investment.

The practical part first introduced main characteristics of Moravia-Silesia region and consequently described the situation of other industrial zones within the region where showed up the fact that there is a huge amount of industrial zones due to region's tradition in industry and manufacturing. However there are few very successful ones such as SIZ Nošovice which is fully occupied and also there are several which are not occupied but also some which even had to extend their area due to investors interest. Therefore Moravia-Silesia region seems as a favourable area for industrial zone establishment providing sufficient labour force from the region. Further it concentrates in the Strategic industrial zone Nošovice and defined that the main localization factor for the investor was among others the proximity to its daughter car manufactory KIA in Slovak Žilina with which it can share some components.

Then in the second part were answered the auxiliary questions to assess the main socio-economic impacts of SIZ Nošovice on the related district and region which were set in the introduction. In case of economic impacts statistical data confirmed the increasing trend of Gross Domestic Product per capita and significant reduction of unemployment rate since the HMMC establishment and further run of operation. The only relatively negative impact could be observed in the amount of average gross monthly wage in the manufacturing industry in Moravia-Silesia region which is lower in comparison with other competitive car manufactories in the Czech Republic. Moreover the average wage in Moravia Silesia region is below the national average. The statistics also proved increased business activity in the region which is related to numerous network of HMMC suppliers. But for example the municipality voluntarily refused the potential business development resulting from HMMC presence and isolates itself from the SIZ. Other mentioned economic impacts expressed only positive trends and impacts on the region.

. Following social impacts of SIZ Nošovice presence reflected increasing population in reference Frýdek-Místek district, however in regional statistics the impact was not significant. Also the statistics did not confirmed theoretical assumption that presence of industrial zone increases criminality in the region, because there were not problems with new inhabitants due to fact that SIZ Nošovice uses as labour force in almost 100% the Czech nationals, mostly from the Moravia-Silesia region. That goes hand in hand

with the decreased unemployment and positive economic impacts. Moreover, HMMC represents itself as a responsible Employer and good neighbour in the region who cares about its development, therefore it participates and organizes several events and activities for better communal life. However in relationship to land acquisition for the SIZ Nošovice occurred several disputes among local people and representatives of the state which resulted in huge peer pressure and anonymous threatening with death to local farmers who did not want to sell their land. Therefore the social ties and relations within the community were broken and the SIZ Nošovice had a long-term negative impact on the social life in Nošovice. Besides this issue, social impacts of SIZ Nošovice seem to be positive.

In the end there are described main environmental impacts which are mainly very positive due to Korean investors emphasized importance of environment protection and preservation. That is confirmed by highly ecologic operation of the manufactory and alsi preservation of the nearby area such was replacement of more than 1000 grown trees from their initial stand instead of cutting them. In the end there is assessed the impact on transport infrastructure whose development was accelerated in all its components due to Hyundai's investment.

To sum up all the assessed impacts, SIZ Nošovice reflects after 7 years of its operation mainly positive impacts in all areas, especially for the closest district Frýdek Místek and also on national level in increased exports.

In the end of the practical part are mentioned several proposals for further regional development in areas which were not mentioned but author sees there an undeveloped potential for further regional development. The areas are missing investments and cooperation between the investors and educational institutions in Research and Development, further there is not fully developed potential of Moravia-Silesia region in Tourism which could assure further business development in the region by provided services. And the last is the development of legislative framework which touches industrial zones, especially how to find balance in regulation of new zones created to prevent current problems with unused capacity of Greenfield and excessive capacities of brownfields.

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Appendix 1: Administrative breakdown of the Moravia-Silesia region

Source: ČSÚ

Appendix 2: Administrative breakdown of Frýdek-Místek district (from 1.1.2008)

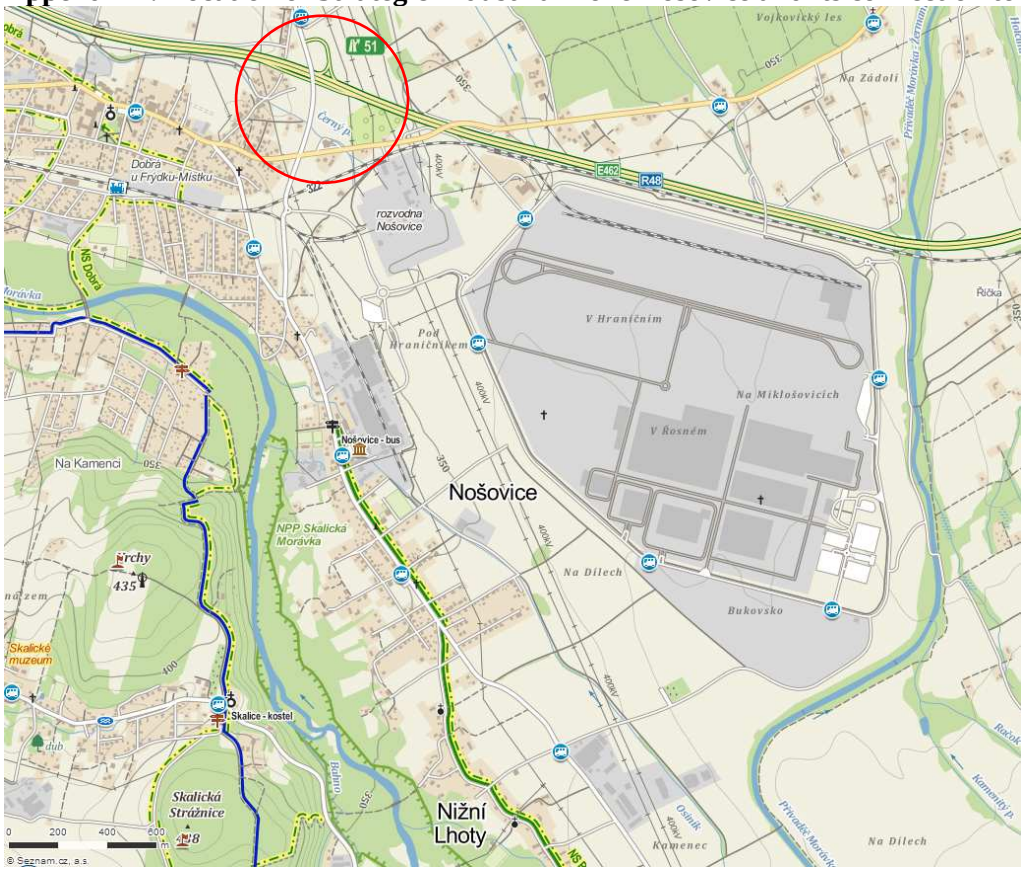
Source: ČSÚ

Appendix 3: Incentives granted to suppliers of SIZ Nošovice in Frýdek-Místek District

Company	Sector	Applicant´s country of origin	Invest. mil. EUR	Invest. mil. CZK	Newly created jobs	State aid (%)	Application - year	Decision - year
Hyundai Motor Manufacturing Czech s.r.o.	manufacture of transport equipment	Korea	1 185,36	34 428,90	3 514	15	2006	2008
Dymos Czech Republic s.r.o.	manufacture of transport equipment	Korea	29,16	846,83	422	15	2006	2008
HYSCO CZECH s.r.o.	manufacture of transport equipment	Korea	19,52	566,89	70	15	2006	2008
Mobis Automotive Czech s.r.o.	manufacture of transport equipment	Korea	51,41	1 493,31	840	15	2006	2008
Hanwha L&C Czech, s.r.o.	manufacture of transport equipment	Korea	15,52	409,02	99	40	2008	2009
Hanwha L&C Czech, s.r.o.	rubber and plastic industry	Czech Rep.	5,44	149,57	50	30,0	2014	2014

Source: ČSÚ

Appendix 4: Location of Strategic Industrial Zone Nošovice and its connection to motorway



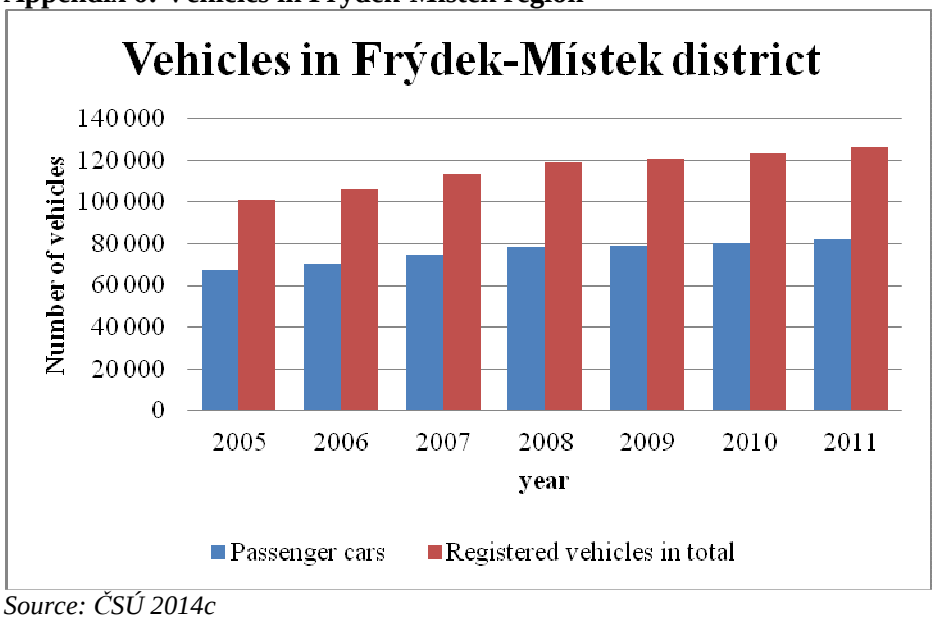
Source: Mapy.cz, own corrections

Appendix 5:Registered unemployment rate in Czech Republic

	2005	2006	2007	2008	2009	2010	2011	2012
Czech Republic	8,88	7,67	5,98	5,96	9,24	9,57	8,62	9,36
annual increase %		**-1,21**	**-1,68**	**-0,02**	**3,28**	**0,32**	**-0,95**	**0,74**
Moravia-Silesia region	14,23	12,58	9,62	8,49	12,14	12,36	11,18	12,34
annual increase %		**-1,65**	**-2,97**	**-1,13**	**3,66**	**0,21**	**-1,17**	**1,16**
Frýdek-Místek district	12,06	10,51	7,87	5,90	9,80	9,51	8,12	9,34
annual increase %		**-1,55**	**-2,64**	**-1,97**	**3,89**	**-0,29**	**-1,38**	**1,22**

Source: ČSÚ, 2014c, own data processing

Appendix 6: Vehicles in Frýdek-Místek region



Source: ČSÚ 2014c

Appendix 7: Population in Moravia-Silesia region

Population in Moravia-Silesia region					
Year	**Moravia-Silesia region**	**Frýdek-Místek district**	**Municipality**		
			Dobrá	**Nošovice**	**Nižní Lhoty**
2003	1 255 910	209 377	2 965	979	261
2004	1 253 257	209 316	2 941	994	252
2005	1 250 769	209 326	2 975	981	248
2006	1 249 290	209 585	2 974	969	255
2007	1 249 897	210 369	3 007	975	256
2008	1 250 255	211 070	3 027	1 000	253
2009	1 247 373	211 482	3 039	994	260
2010	1 243 220	212 100	3 054	1 004	262
2011	1 230 613	211 853	3 047	983	266
2012	1 226 602	212 448	3 074	992	257
2013	1 221 832	212 537	3 108	990	265

Source: ČSÚ, 2014b

Appendix 8: Population and Migration Increase

	Natural increase in population			Increase in migration		
year	ČR	Moravia-Silesia region	Frýdek-Místek district	ČR	Moravia-Silesia region	Frýdek-Místek district
2000	-18 091	-1 591	-255	6 539	-1 801	72
2001	-17 040	-1 694	-360	-8 551	-2 086	76
2002	-15 457	-1 668	-314	12 290	-1 584	292
2003	-17 603	-1 830	-326	25 789	-511	505
2004	-9 513	-1 222	-339	18 635	-1 431	278
2005	-5 727	-814	-179	36 229	-1 674	189
2006	1 390	-276	-79	34 720	-1 203	338
2007	9 996	705	145	83 945	-98	639
2008	14 622	428	32	71 790	-70	669
2009	10 927	-7	103	28 344	-2 875	309
2010	10 309	-194	97	15 648	-3 959	521
2011	1 825	-1 577	-225	16 889	-2 515	686
2012	387	-1 361	-81	10 293	-2 650	676
2013	-2 409	-1 681	-181	-1 297	-3 089	270

Source: ČSÚ, 2014c