**Tomas Bata University in Zlín**
**Faculty of Management and Economics**

Doctoral Thesis

# Effectiveness of investment incentives in the Czech Republic

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# LIST OF ABBREVIATIONS AND ACRONYMS

AFTA – ASEAN Free Trade Area

CNB – Czech National Bank

CR – Czech Republic

CSO – Czech Statistical Office

ETR – Estimated time of Return/Repair

EU – European Union

EUROSTAT – Statistical Office of the European Union¨

FDI – Foreign direct investment

GATT – General Agreement on Tariffs and Trade

GDP – Gross domestic product

IMF- International Monetary Fund

LP – Legal person

MLSA- Ministry of Labour and Social Affairs

MNE – Multinational enterprise

MNC – Multinational Corporation

MTI – Ministry of Trade and Industry

NAFTA- North America Free Trade Agreement

OECD – Organisation for Economic Co-operation and Development

UNCTAD – United Nations Conference on Trade and Development

WTO – World Trade Organisation

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# ABSTRACT

This dissertation is focused on the issue of investment incentives in the Czech Republic. The first part includes a study of the literature, especially on the issues of foreign direct investments and related investment incentives. The next part is dedicated to the evolution of investment incentives in the Czech Republic and its competitors, such as Slovakia, Poland and Hungary. The main part of the dissertation studies the effectiveness of the investment incentives by the chosen multinational companies working in the Czech Republic, especially from the income side of the state budget. In particular, yields and costs by the chosen companies during a five year period are compared. The study establishes the factors that are important for foreign investors in making investment decisions. The main part of the dissertation provides a current view of the situation of investment incentives and their influence on the state economy. This dissertation contributes to a verification of the methodological processes used to measure the effectiveness of investment incentives. The main part is a modification of the model developed by reputable scholars.

# ABSTRAKT

Dizertační práce je zaměřena na problematiku přímých zahraničních investic a investičních pobídek v České republice. První část práce zahrnuje literární rešerše zejména tematicky zpracované problematiky přímých zahraničních investic a s ní souvisejících investičních pobídek. Další část práce je věnována vývoji investičních pobídek v České republice a v konkurenčních zemích, ke kterým patří zejména Slovensko, Polsko a Maďarsko. Hlavní část práce je zaměřena na výzkum efektivnosti investičních pobídek u vybraných nadnárodních společností působících v České republice z pohledu příjmové stránky státního rozpočtu. Konkrétně jsou porovnávány výnosy a náklady u vybraných společností za pětileté období. Na výzkum navazuje zjišťování faktorů, které jsou důležité pro zahraniční investory pro rozhodování o umístění investic. Významnou součástí práce je nový pohled na situaci investičních pobídek a jejich vliv na hospodaření státu. Práce přispěla k verifikaci metodologických postupů používaných při měření efektivnosti investičních pobídek. Významnou součástí je i vlastní úprava modelu publikovaného renomovanými autory.

# INTRODUCTION

The world today is characterized by globalisation, which has led to the fast integration of the world economy. At present, when multinational corporations have a number of subsidiaries in various countries, more people than ever work abroad and more commodities are traded between countries, it is essential for governments to get involved in terms of taxes and competition over capital. Capital is mobile, and nearly every country is fighting for it. Most countries are acively inviting foreign investors to establish companies in their country and are expecting fruits from their labors, such as decreased unemployment and increasing levies.

The Czech Republic has a long industrial tradition, dating back to its inclusion in the Austro-Hungarian Empire. In the nineteenth century and in the beginning of the twentieth century it belonged among the fifteen most developed countries in the world. It kept this status until 1930. Even during the communist era Czechoslovakia remained an important manufacturing centre. The country's advantages include its central location, easy access to European markets with developed infrastructure, a good level of education, low inflation and low national debt.

However, the communist regime took its toll in the sense of a reorientation towards heavy industry. New technologies and the sector of services were underdeveloped at that time and the economy was oriented to the industrial demands of the Soviet Union. From the social aspect, it is necessary to mentioned that unemployment was nearly zero, mortgage rates were low, and living conditions were stable. However, the economy was isolated and unbalanced. In 1989, the central planned economy collapsed. 90% of the GDP came from the state sector. Around 95% of the assets were in the possession of the government, giving Czechoslovakia on of the highest percentage of state assets. (OECD, 2001)

After communism, Czechoslovakia broke up in 1992 and the economy of the Czech Republic underwent a dramatic transformation. A stabilisation programme was implemented with the help of the International Monetary Fund. At that time it was critical to face problems with monetary devaluation, price liberalisation and to establish liberalisation of international trade. It was necessary to establish a monetary policy and begin privatisation. This led to recession until 1993 and then economic expansion until 1996. Economic problems occurred that reflected the unstable foundation of the economy. This period was accompanied by extensive home demand; salaries were increased without industrial restructuralisation, increased production or competitiveness. Slow-paced industrial restructuralization was accompanied by easily accessible loans, a poorly regulated capital market and generally inadequate management. This situation led to export stagnation and finally the unsustainable development

of trade balances. The government responded to the changes by introducing stablisation packages in 1997 and by controlling the floating exchange rate.

Recession returned and it was necessary to establish monetary and fiscal policies to accelerate the restructuralisation of banking and corporate sectors. The recession continued into the first half of 1999, when the economy recovered. Exports and foreign direct investments (FDI) started increasing, and the Czech Republic became one of the highest recipients of FDI. Then came two privatisation waves of state companies. However, increasing unemployment became a problem again.

The CzechInvest agency was established by the Ministry of Industry and Trade, in 1992, and it contributed to the attractiveness of the Czech Republic. The highest rates of foreign direct investments came in the telecommunication and transport sectors. The automobile industry increased in importance as well, followed by the electrotechnical, oil and gas industries. Last year's foreign direct investments (CNB, 2012)[1] were directed into the business sector and the sector of financial services. These services are responsible for 50% of the whole influx since 1999.

How is the development of the foreign direct investment into the Czech Republic and the investment incentives? Is the financial support which is directed into the payment of investment incentives effective? Are the investment incentives still effective from the gouvernement point of view? This dissertation will deal with these topics.

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[1] Available from: http://www.cnb.cz/cs/statistika/platebni_bilance_stat/pzi/index.html

# 1 THE CURRENT STATUS OF THE ISSUE FROM THE POINT OF VIEW CZECH AND FOREIGN LITERATURE

This part of the dissertation thesis is focused on definition of basic terms related to the issue foreign direct investments and investment incentives. At the same time there has been done literal search on this topic.

## 1.1 Foreign Direct Investments

### 1.1.1 Definition of the term Foreign Direct Investments

Foreign Direct Investments (FDI) are internationally recognised as one of the most important catalysts of economic development as claimed OECD (1998).

FDI and their basic forms are defined by Foreign Exchange Law No 219/1995 Code in the Czech Republic. According to it FDI are understood as expenditure of finance or other property which is appreciable by money and other property values. Its purpose is the establishment, acquisition or extension of permanent economic relations of the investor; aka a citizen/group of citizens, acting as a legal entity in accordance with its/their enterprise abroad; or a foreigner/group of foreigners, acting as a legal entity in accordance with its/their domestic enterprise; particularly by one the following (forms):

1. the establishment or gaining of an exclusive part of a business including its extension,
2. an interest in a newly established or existing business, if the investor owns or gains at least 10% of shares in the fundamental capital of the company or at least 10% of voting rights or an other share of the business of the company exceeding 10%,
3. a financial credit for 5 or more years, provided by investor for business, investor participates on it according to the point 1 or 2 or the loan related to agreement about the part of the divided gain,
4. using of profit from a current direct investment into this investment (reinvestment of profit).

Czech National Bank (CNB, 2012)) defines the foreign direct investment, which specified OECD according to EUROSTAT and IMF. FDI is possible to dispaly by this following formula:

**Foreign investment = capital + reinvested gains + other capital**

Source: CNB[2]

- *Equity (basic capital)* implies stock of non-resident into basic equity. According to the percentage of the investor´s share on the equity or voting rights it can be distinguished as subsidiary company (more than 50% share), affiliated company (10% - 50% share), and branch (100% owned permanent representation or office of the direct investors, lands and states directly owned by non-resident, mobile equipment operating in the economy at least 1 year).

- *Reinvested profit* is share of the direct investor (to the ratio to the direct property participation) on the economic result not divided in the forms of shares.

- *Other capital* implies accepted and provided loans, including debts securities and supplier credits, between direct investors and their affiliated companies and other companies in the group. These credits relations are intercepted in intercompany´s receivables and liabilities.

The above mentioned methodology of FDI was accepted by CNB in 1998. Until 1997 FDI had been reported only into basic capital and since 1998 its part became reinvested profit and other capital.

### 1.1.2  Type of foreign investments

FDI are taken to the most important part of the foreign capital. According to the economic theory (Dunning, 2001; Hill, 2005; Srholec, 2004) investments can be dividend from the point of view aims and motives into:

1) **market-seeking** – they are concentrated on entrance and gaining of some share into the market and decreasing of cost on its provision. They are displacing home production or replacing import;

2) **efficiency-seeking** – they are trying to increase its current global competitiveness. The aim is optimalisation of production (decreasing of production costs). They are oriented on export;

3) **resource-seeking** – its aim is to assure access into the entrance to some natural source;

4) **asset-seeking** – the aim is gaining some specific assets (patent, brand name, etc.).

The same authors divide FDI from the point of view **volume of control**:

1) **associate** – company with minor foreign share. (Share from 10 until approximately 50% on its equity or voting rights;

2) **subsidiary** – company with foreign control. The main atribute is the control equity security.

FDI can be diveded according to the ways of **entrance into the host economy**:

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[2] Available from:
http://www.cnb.cz/miranda2/export/sites/www.cnb.cz/cs/statistika/platebni_bilance_stat/publikace_pb/pzi/PZI_2010_CZ.pdf

1) **greenfield** – investments into new assets;
2) **brownfield** – changing of the owner´s structure investments into restructuring (mostly of privatization FDI);
3) **mergers and acquisitions** – seizing of control currently existed assets.

Other dividing from the point of view specialisation of the **parent company**:
1) **vertical FDI –** specialisation of the product. Different phases of the products chain in each affiliates;
2) **horizontal FDI** – procedura specialisation. Similar phases of the products chain in each affiliates.

Tab. 1 – Taxonomy of FDI

| *Aspect of delimitation* | *Types of FDI* | *Main criterias* |
|---|---|---|
| **Volume of control** | Company with minor foreign share. (associate) | Share from 10 to approximately 50% on its equity or voting rights. |
| | Company under foreign control. (subsidiary) | Control equity security. |
| **Motive of entrance** | Market-seeking | The aim is growing share on the market and decreasing of costs to its supplying. |
| | | They are working up to home production or replacing import. |
| | Efficiency-seeking | The aim is optimalisation of production (decreasing of production cost). |
| | | Orientation on export. |
| | Asset-seeking | The aim is gaining of specific assets (patent, trade mark). |
| **Way of entrance** | Greenfield | Investment into new assets. |
| | Brownfield | Change of the proprietary structure and investment into restructuralisation (most of privatisation FDI). |
| | M&A *(mergers and acquisitions)* | Capturing of existing assets |
| **Specialisation of a mother company** | Vertical FDI | Products specialisation |
| | | Different phases of production chain in each subsidiaries. |
| | Horizontal FDI | Process specialisation |
| | | Similar phases of production chain in each subsidiaries. |

Source: Srholec (2004)[3]

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[3] Srholec (2004), p. 13

### 1.1.3 Forms of influx FDI

Durčáková and Mandel (2007) claim that FDI are the base of multinational corporations (MNC) as for example General Electric, General Motors, Toyota etc. MNC are considered companies, which activity (measured by rates of foreign assets or turnover has at least 30% shares.

Foreign activities are provided the following way:

a) *foreign subsidiary* – partial part in a MNC with limited decision competences. It carries the name of the parent company and its balance is the part of the total balance. Basic capital does not figure in the balance sheet in the part of passives as basic capital. Parent companies provide loans to their foreign subsidiaries;

b) *foreign subsidiary and associated company* is connected to a parent company only by some particular equity security (participation in the capital) and it is not its inner organisation part. Subsidiary company arises if the part of ownership is higher than 50%. Associated company is owned by 10%-50%. Associated company is seen as an individual legal entity with the full legal subjectivity. The name of associated company is different from the name of a parent company;

c) *licence (royalty)* – providing patented know-how. Minimal costs are significant advantages, however there is a risk in loss of a part of the market. In countries, where the international agreements are not respected it is better to sell the licence;

d) *joint-venture* is advantegous on the condition that it is realised with home company from the host country. Foreign company will receive among others part on the market and also many other political and psychological advantages, because subjects in host country can be usually identified better than with an unfamiliar company;

e) *franchising. Franchisa* is a licence (law), by this MNC (franchisor) allows selling its product and using the name of its company to a particular subject (so called franchisant) in a specific teritory. Franchisant is a tenant and is operating on its account. At the beginning the tenant buyes manufacturing facility, mostly by leasing. During the activity, franchisor cashes regular monthly franchising fees from tenant´s turnover. The advantage of this operation is decreasing risk for lessor (low investment involment) and for a tenant (using the famous product´s name on the market).

### 1.1.4 Factors motivating investors for realisation of direct investments

There is compliance in scientific literature regarding the main factors, that influence placement of foreign investments. According to OECD (2008), foreign investors consider important the following factors: the size of the market and the level or real income, specialisation of employees in the particular economy,

accesible infrastructure and other sources, that facilitate advantage of specialisation in production, market policy, political and macroeconomic stability in host economy. Eventhough some countries offer modern infrastructure, educated employees, there will be always some investors attracted by some particular economies to others. However mutual importace many factors depend on type of investment.

Tab. 2 - Factors influencing FDI

| Non-tax factors | market size |
| | access to raw materials (natural resources, energy supplies) |
| | availability and cost of skilled labour |
| | access to infrastructure |
| | transportation costs |
| | access to output markets (low export cost) |
| | political stability |
| | macro-economic stability |
| | financing costs |
| Tax factors | transparency, simplicity, stability and certainty in the application of the tax law and in tax administration |
| | tax rates |
| | tax incentives |

Source: OECD (2008)[4]

Placement of FDI is influenced by various incentives offered by governments that try to attract MNC. These incentives comprise fiscal (tax) as lowered corporate tax, financial incentives (grants, loans intented to MNC) and incentives as market preferences and monopoly rights. To the leading factors are leading market characteristics, cost of production and availabity of sources, which explain transversal variation in influx of FDI.

Transparency, simplicity, stability and accuracy in application of tax law including tax administration are prefered by investors to special tax incentives. As a main element is considered control of government´s finance, which helps to ensure stability in tax law and more security of tax processing as stability and less risks in economy.

Foreign companies are motivated to establish its subsidiary or to buy foreign company instead of export of products into foreign countries. They are motivated by the following factors (Durčáková, Mandel, 2007):
1) ***using of cheaper production conditions,*** (it does not mean only wages, but also contributions on social security of employees that are in some countries

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[4] OECD (2008), p. 5

very high. However the problem can occur in a low qualification, especially using means of production and easier technological proceeding in comparison with a parent country);

2) ***removing costs related with foreign commerce*** – removing of transport costs and overcoming customs barriers;

3) ***using of advantageous tax conditions*** – (profit tax rates or advantageous calculation of tax base by more number of deductible items). Foreign subsidiaries can be considered as an integral part of multinational corporation in a parent country. This fact leads to the taxation of profit, that is taxed to one company all at once including the profit gained by foreign subsidiary. The better way is establishing a foreign subsidiary which profit can be taxed in the phase of transfering to the parent company;

4) ***decreasing of foreign exchange risk***;

5) ***diversification of inputs, outputs and profit*** forms two positive effects. Changes in demand are not absolutely positive corelated between particular countries in connection with business cycle. It enables stabilize level of MNC sales. Changes in prices are triggered by change in demand and have in one country approximately the same impact in the side of inputs as in the part of outputs. It makes possible to stabilise profit rate by particular foreign subsidiaries and thereof MNC as entirely;

6) ***following of business partners*** – especially by large banks, insurance companies, consulting and auditor´s companies. They are used by comparative advantages which arose from an idea, that MNC are interested in reducing circuit of people, who have acces to sensitive information about their financial transactions. It brings better knowledge of home environment.

### 1.1.5   Decision of MNCs about providing FDI

In the world there is a fight about attraction of FDI because it is believed that investments will create new working places and gradually it will lead to activation of whole economy. Seithi and collective (2002) was concerned with behaviour of foreign multinational companies which is decisive about placing of FDI. Strategical and institutional factors can be seen in Fig. 1, as authors defined them.

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┌─────────────────────────────────┐
│     MNC´S DECISION TO MIGRATE    │
│            ITS FDI               │
└─────────────────────────────────┘
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| ´PUSH´ FACTORS STRATEGIC FACTORS | ´PULL´ FACTORS INSTITUTIONAL FACTORS |
|---|---|
| ➢ Competitive Intensity from Rivals, both, Local Players as well as other MNEs. <br>➢ Finite Absorptive Capacity for FDI in Host Country. <br>➢ Reducing Profit Margins. <br>➢ Oligopolistic Rivalry. | ➢ Political and Economic Stability. <br>➢ Independent Judiciary – Rule of law. <br>➢ Sound Technological Base and Infrastructure. <br>➢ Technically Skilled Labour. <br>➢ Low Wages. <br>➢ Large and Lucrative Market. <br>➢ Policy Liberalization. |

*Fig. 1 Role of push and pull factors in explaining shift of FDI trends*
*Source: Seithi, Guisinger, Ford and Phelan (2002)*

### 1.1.6  Support of influx FDI and its effects in transitive economies

Especially transitive economies try to create institutional conditions for influx of FDI. The problem of these economies is not primarily financial imbalance between formation of savings and consumption of investments, but especially technical inability to produce modern means of production and also deficit in knowledge capital (old know-how).

There are many reasons for attracting FDI to home market, in transitive economies is considered as the most important financing as debt capital. Since importing of FDI, the relation of great foreign debt of a country is not worsen to great domestic product (GDP).  Increasing GDP is monitored by foreign investors. Moreover, comparison with a foreign loan is the risk from a failure business purpose transfered to a foreign investor. However repatriation of capital is by foreign investment less probable than an assurance of a duty to pay foreign loan.

Durčáková and Mandel (2007) designed the following steps by creating of institutional conditions for formation institutional conditions for supporting of influx FDI:

1. implementation of an institut of market rate, which respects law of supply and demand offering on the foreign  exchange market;
2. liberalisation of foreign exchange law (i. e. assuring convertibility for foreign exchange foreigners in the field of ordinary and capital operation);

3. signature of international agreements about protection of investments and prevention of double taxation;
4. system of financial support for influx of foreign investments.

### 1.1.7 Evolution of FDI

In transition economies there are possible to distinguish and form the following 4 „phases of direction" [5] FDI:

**First stage**: so called „*spontaneous*" – occupation of new arising markets. This stage is the most massive in the beginning of economic transformation and takes place mostly in the frame of privatisation of companies. This stage is possible to distinguish in the field of consumption (entering of companies that are able to assure actual not filled and expected demand) and production (entering into international known companies with possibilities of new selling markets in new markets).

In this stage investors do not expect investment incentives from government and there are also limited attractive investment opportunities.

**Second stage**: „*recruiting*" – it is characteristic by government´s effort and local authorities about utilisation of FDI more systematic way and restructuralisation of local economies. FDI are directed especially into production sector. Investment incentives are playing an important role in this stage.

**Third stage:** „*integration*" – plays the main role the sector of strategic services and the direct support of production. Development of services and cooperation is focused on stabilisation of existing companies and subcontractors. In the frame of this stage logistic centres are developing in backround of large conomic centres, that are widened to more complex so called integrated developed areals.

**Fourth stage:** „*interactive*" – is already going to saturation. Some of FDI are looking for more advantageous conditions in new "low cost countries" and the core of FDI is transferred into area of activities with high value added and qualitative of working force. In this direction are transformed activities of companies founded during the second and third stage.

### 1.1.8 FDI and spillovers

FDI are connected to so called spillovers effects. They are external effects and consequences of FDI. Since 1960, MacDougal was focused on generally benefcal effects of foreign investments. Common denominator of these researches was identification of various costs and incomes of FDI.

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[5] Available from:
http://www.kralovehradecky.cz/file/uzemni_planovani/studie_prum_zony/manual/manual.pdf

Foreign companies are founding its subsidiaries in abroad and they are expecting higher return of investment than in a home country. The source of higher return is expected from technological advantages. Görg and Greenaway (2004) distinguished four canals, that are source of advantages for particular company and they can enhance productivity in a host country. There are the following factors:

1.  **Imitation** is a classical mechanism of transfering for new products and processes. Das (1987); Wang and Blomström (1992) were concerned with transfer of technologies from developed into developing economies. They found out its opposite direction in mechanical engineering, because incidence depends on complexity of a production and processes. Simple manufacturing processes are easier to imitate than the complicated one. Similar principles are transferred into managerial and organisational innovation. Any improvement of local technology, derived from imitation, can result in spillover with subsequent influences on productivity increasing by local company.

2.  **Gaining of skills.** Influence of new technologies was proved in gaining of human capital. Even if local companies can pay out to their employees low salaries, whereas MNCs require still qualified labour force. Moreover these companies invest into retraining of their employees. Shift of these employees from MNC can generate improvement of productivity by two mechanisms and i. e. direct spillovers of unskilled workers and knowledge of workers who leave to work in other companies. (Haacker 1999; Djankov and Hoekmann 1999; Fosturi and coll. 2001; Görg and Strobl, 2002) confirmed that knowledge that employees bring with themselves to home companies are the most important canal for spillover effects.

3.  **Competition.** In case that incoming company does not have a monopoly status, it will compete with home companies. (Wang and Blomström, 1992; Glass and Saggi, 2002). Eventhough home companies do not want to imitate MNC, their technologies and manufacturing processes, presence of MNC force the current companies using of their technologies more effectively and increase of productivity. Competition increases rapidity of adaptation to new technologies.

4.  **Export.** Productivity of home companies can be increased by export. MNCs influence home companies which can learn from them. (Aitken and coll., 1997; Barrios and coll., 2003). Export requires distributional network, formation of appropriate infrastructure, regulatory arrangement and knowledge of foreign market. MNC endowed with these knowledge and therefore home companies can learn how to penetrate into foreign markets. There are many studies concerned with these issue (Clerides and al., 1998; Bernard and Jensen, 1999; Bernard and Wagner, 1997; Delgado and coll., 2002; Girma, 2002).

According to findings of these studies it is possible to summarize, that foreign companies handle with advantages, that are not related especially with productive methods used and the way of organising particular activities, products and services. If foreign company founds a subsidiary in a country, particular advantages and benefits will be spill over home economy and will effect on local companies.

Blomström and Kokko (2003) consider as the most and main positive effects of MNCs in the folloving points:

1. contribute to effectiveness although they widen offer;
2. bring new know-how and demonstrate new technologies and labour forces, which can be employed in these companies in future;
3. cancel monopols and stimulate competition and effectiveness, because they create more monopol industrial structure dependent on force and impacts of local companies;
4. transfer technology for devices and quality control, standardization of local supplier and distribution channels;
5. compel local companies to increase their managerial endeavour, adaptation of some marketing techniques, used by MNCs.

### 1.1.9   Researches about FDI worldwide

Katz (1969) found out, that influx of foreign capital into **Argentinian manufacturing industry** effected technology of local companies significantly in 50th years $20^{th}$ century. He claims that technological progress proved to be not only by MNC, but also in other sectors. Foreign subsidiaries pressed home companies to modernise with impact on minimum standard of quality and deliveries.

Caves (1974) was interested in the spillover effects and examined **Australian** economy, while Globerman (1979) **Canadian** and Blomström and Persson (1983) **Mexican** economy. These studies researched the existence of spillover effect by testing, if the presence of foreign MNC has any impact on labour productivity in local companies in the frame of production function. The result is claiming that the spillover effect is important on agregate level, however it was not researched how exactly is this spillover effect occuring.

Aitken and Harrison (1991) emphasised the positive results on the example of **Venezuelan** industry, that shown connection between positive spillover effects. However in this economy it was shown negative factors due to high tendency to import.

Moreover in **Indonesian** manufacturing industry, a research was accomplished by Sjöholm (1999).  He pointed on positive influence of MNCs, which increased productivity of local companies and in other industries as well. Positive results were achieved with connection of local companies with MNC.

Kugler (2001) dealt with sector´s extension of spillover effect from FDI and found the most important influence of MNC in **Colombian** manufacturing

industry. Influence of subsidiaries accross the industry was proved on local industry.

Kokko (1996) focused on researches done in **Uruguayan** manufacturing industry and found out, that the bad technological capacity on the company´s basis can be an obstacle for spillover effect. Similar findings from scientific researches published Görg and Strobl (2001) in application on **Irish** economy while Kathuria (2000) on **Indian**.

Indirect profit or spillover effect from FDI are not the automatic consequences of activities MNCs on Indian economy. Its positive influence takes part on its home companies investing into science and research.

## 1.2  Investment incentives

### 1.2.1   Definition of investment incentives

Thomas (2007) defines investment incentives as a support, influencing the placement of investments.

It is understood broad spectrum of supports providing by governments to companies or investors for stimulating activities of these subjects. However these incentives have to be in accordance with rules of business competition of the EU.

All countries in the whole world offer various types of investment incentives to attract foreign companies, owned by foreign capital, to investment into their country. Many economists perceive foreign investors as panacea to macroeconomic problems, especially on low economic growth and increasing unemployment. Liberalisation of business reach from GATT, WTO or regionally in the EU, NAFTA, AFTA and other regional agreements, lead to increasing integration and low importance of the size of market as the determinant of placement of investment (Blomström a Kokko,2003).

Thanks to this competition of particular countries was created so called „subsidy game". It means that the competition of providers of investment incentives in particular countries. This competition was a subject of detailed formal analysises (Haaparanta 1996; Motta a Norman 1996; Barros and Cabral 2000). Investment incentives have a significant influence on the system of international investments. Countries compete especially with their size, production cost, expected gains from influx of FDI and try to gain investment scheme.

### 1.2.2   Why governments offer investment incentives

Thomas (2000) refers that governments offer investment incentives from two reasons. Firstly investments are needed and the second reason is the fact that capital is mobile.

The need of investments requires negotiations with owners of capital about the conditions of investments. While the reality that capital is mobile can create competition pressure. The next factor has to be taken into consideration because investment can be placed to more than one country. Governments of these countries face to political pressure in the fight for FDI and want to increase employment and tax incomes. Attracting of FDI is a key factor to economic development and it is necessary to use investment incentives to it.

Thomas (2000) refers to the fact that investment incentives are subvence and share with capital three potential disadvantages which influence effectiveness, equality and the environment.

However subventions are considered by economists as **inefficient** from many reasons. Firstly, they increase production of a subventioned unit. Investment incentives increase capital intensity of the project and triggered substitution work of a capital. Secondly, they are critisied due to ineffectiveness because of the production is placed in areas, which are not effective for particular products or services. At the same time investment incentives are promoted because they increase activity with positive externalities as science and research or requalification. Moreover it is easier to provide investment incentives than correct shortages or flaws in the economy. As example the systematic construction of a qualitative infrastructure can be used or a reform at education getting more qualified employees.

Moreover it is essential to question of **justice** of investment incentives because they are paid to owner of capital, however average tax payers are contributing to them. If the companies receive grants or tax reduction this contribution has to be balance to something else.

Some of investment incentives have redistributional aims, for example regional politics aimed to increasing standard of living in poor parts of the country. On the other hands, the subventions that are primarily aimed to richer regions to support science and research, have negative distribution consequences.

To the some **environmental influences**, investment incentives artificially increase production of some particular goods; it can lead to increase of polluted atmosphere.

Simplicity of investment incentives consist of not acquiring actual expense of funds or financial amount that should be transferred to investor.

The next reason can be political, because it is easier to proved investment incentives than funds.

### 1.2.3 Positive influence of investment incentives

Already in 1956 Tiebout noticed, that particular local government compete with public goods and taxes. They caused mobility of households. Families began to move from suburbs or cities which were approaching to their preference mix. People showed their preferences thanks to their decision where

they would like to live. This pattern was transferred into behaviour of companies and investment incentives. Households represented companies and governments are using investment incentives and in some cases they compete in corporate rates. They offer tax rate for services which governments offer. This price is negative in the case of subventions. Tiebout´s theory served as the base for speculations about presence of competition. It includes definitely "race to the bottom" and it guarantees effectiveness. Companies moved to places that offer their preference combination of service and taxes.

Later, in 1989, Black and Hoyt developed this idea and come to the conclusion that competition about investments can be effective if governments provide public services on the level of marginal costs, more likely than average costs. This can be reached only in this case, that governments know exactly the relevant investment costs in all places. This model relates to effectiveness arises from using of investment incentives.

Bartik (1991) called attention to next case of economies where the highest need was to attract foreign capital as in areas with the highest unemployment and governments offer the highest incentives. However, Fischer and Peters (1998), attacked this assertion with many others example from the USA. They showed that poor places offer more investments than richer regions.

Redistribution of work places from regions with law unemployment into places with higer unemployment does not exist. The system of investment incentives is used both in good and bad times. If governments will offer investment incentives into prospering places, the less rich regions can not catch up with them. Rich regions will be always in better position than poor regions.

The opinion about influencing the influx of foreign investments is not unanimous even aminy economists. The essential problem stays if the foreign investors should be advantaged compared to home investors. In the Czech Republic gradually prevailed the opinion over the support of FDI. It is not enough to offer only low salaries, however it is necessary to offer qualitative work force, political and economic stability of a country.

LeRoy (2005) confirmed that there are a lot of cases when investments were realized and the project was effective without any incentive.

Dreyhaupt (2006) did an analysis, confirming that investment incentives help to increase effectiveness. Advantages are seen in the spillover effect and in effectiveness rate of investment returnability that is higher than the personal rate of return of investment.

Krugman´s (1994) strategic business theory was focused on international air industry as Boeing vs. Airbus. He realised the extraordinariess of this industry and its strategic business theory. It is not oriented on gaining the global effectiveness but it is oriented to available advantages for some countries.

### 1.2.4 Negative opinions on investment incentives

Economists are critical to investment incentives. They claim the most important arguments are following:

**1. Limited budget to financing others governments programmes**

Consumption of financial means on grants or projects is one of the consequence of the set system of investment incentives. It will lead to burden of future tax incomes. Consequently there is a concern about it, if the government will have enough financial means on further activities as education or infrastructure (LeRoy, 2005).

**2. Irracionality of investment incentives**

Some of economists regard investment incentives as irrational (Thomas, 2000). From this point of view if the governments expect that investment will be realized somewhere in their country. They pointed example of Japanese and German automobile factories in the USA in 1980 (Thomas, 2000). These investments were realised as strategies that should have cut protectionist's pressures. MNC can deal with particular governments, to gain advantageous position and investment incentives which would not have gained.

**3. Prisoner's dilemma**

According to Guisinger (1985) prisoner's dilemma analyses incentives as conflict between individual's incentives of local governments and what is collectively the best for government as the whole. On the market of foreign investments came into existence „prisoner's dilemma" between countries. If one increase the offer of investment incentives on the base of competitive country. None of the countries will be in better situation. No changed incentives would have produced the same amount on the market as earlier. However in this situation both countries will be worse because the income will be transfered to companies. Only if investment incentives stimulate the increase of total offer of investments to compensate loss of income, then investment incentives can result in increase of home country welfare.

Thomas (1997, 2000) highlights that increasing mobility of capital leads to increasing number of places which are able to compete about particular project. According to the analysis of collective action, resulting into conclusion that it will be difficult to gain cooperation of competitors. (Oslon 1965; Gardin 1982). The more amount of governments that are included to the proces is increasing cooperation among them and even pushing agreements wih superior government (for example directives of the EU).

**4.Lost profits**

According to Thomas (2000), loss in tax incomes from investments incentives come from the three following sources. Firstly, lost profit cashed from undertaken activities. Secondly, lost profit from projects, that would

have been realised in the case that investor have not received any investment incentives. Thirdly, loss of incomes from investors and activities, that are not correctly required as incentives (so called misuse of tax payer) or shift taxable income of companies to that companies, which will be qualified for positive tax treatment (tax planning).

**5. Cost of allocation sources**

Thomas (2000) follows that these costs arise when tax incentives create distorsion on investment choices among sectors or activities, instead of repairs caused by market failures.

**6. Cost of enforced and compliance**

Thomas (2000) adds that these costs increase complexity of a tax system and system of fiscal incentives (in the sence of qualification requirements and requirements on reporting). Shortage of equity is perceived as a problem. Subsequently they decrease endeavour of compliance and increase costs on compliance observance.

**7. Lack of transparency**

Thomas (2000) concludes that in case that principle of gaining tax incentives is based on more than selection procedure, subjective and qualifying conditions, instead of automatic and objective requirements. It can cause behaviour leading to misusing a process of awarding support. Especially in the developing economies, it is important to abandon the system of selection incentives and focus on providing investment incentives based on stiff rules. National and international rules that will ensure or strengthen environmental and work standards will create stability, predictability, transparency for creating politics and investors.

### 1.2.5   Types of investment incentives

OECD (2003) provided Checklist for Foreign Direct Investment incentives and detailed summary about types of investment incentives. OECD (2003) divided investment incentives from the point of view financing into 3 categories – fiscal, financial and regulatory.

**Fiscal investment incentives** are cosidered as the most common stimulus used in economies. Mostly in countries, that are not members of OECD, and they have limited funds accessible to financial incentives. If they are used in OECD countries, mostly there are strictly established rules, because changes in taxes require legislative procedure. Fiscal investment incentives are provided in complex packet, representative list of individual fiscal incentives constraining the following incentives according OECD (2003):

*1. Decreasing income tax of corporate legal entities*: mostly they are used to alleviate the load of corporate taxes and to attract foreign investors. They include especially:

- **Decreasing of tax from corporate income legal entities**. Whereas general decreasing of taxes from income legal entities relates to enabling and improvement environment for investments. Some jurisdiction pointed these arrangements to incomes from specific sources or to income gained of non-resident of investment itself.

- **Tax holiday.** Tax holiday can use new founded companies, after them is not required paying the corporate tax rate for particular limited time.

- **Special tax-priviledged zones.** Creating so called „ring-fenced" places with low rate of corporate taxation pointed on fiscal incentives in cases when companies owned by foreign capital use advantegous imputs and activity in these zones.


*2. Incentives for capital creating*

Biding policy to lower taxation of corporate investments is used in many jurisdictions as the way of collective attraction to foreign companies and providing incentives to investments. To these incentives belonged the following:

- **Special investment support**. Accelerated depreciations belonged to this cathegory for evaluating of belonged to capital costs. They are composed of accelerated depreciations or increased deductions.
- **Investment tax credit.** These credits are gained as a percentage of valued expenses and their purpose is to compensate paid taxes.
- **Invested profits.** Some jurisdiction offer decreasing or tax credit against the profit reinvested in host economy.


*3.Lowered obstacles in border activity*

Companies are attracted into places where the fiscal system is weighted by minimal costs on transborder transfer of funds, goods, servies and work labour. Some of the incentives are offered as following:

- **Witholding tax.** Some countries offer to business entities, in foreign ownership, lower tax rate of witholding tax on the amount sent off into their home countries.
- **Taxation of foreign trade.** Lowered import of taxed and customs (in some cases export taxes) are sometimes used as direct foreign incentives, forexample if the export zones are not accessible to home companies.
- **Taxation of employees.** Lowered tax from incomes or social insurance for immigrants and employees is set from the reasons to make the country more attractive for foreigners.

### 4. Other tax reduction

Decreasing of tax rates influence the business sector used as attraction of foreign companies. Some jurisdictions use lower selling tax and decreasing VAT as incentives. Other countries offer to foreign owners tax reductions. In some countries, especially not members of OECD, are used tax incentives and the possibility of selection and paying the lump-sum in tax area with the aim to enhance the economic stability in the home economy. OECD (2003) divided them:

- **Subvention pointed to building of infrastructure.** This incentive belongs to the preferred ways how to increase the attractivity of area provided by physical infrastructure (roads, railroad, and harbour) or roads, that will require requirements of investors.
- **Subvention for retraining of employees.** In case new investments for particular economy, investors face lack of qualified work force and government provide these subventions.
  If investors found subsidiary of a company, they would choose the most suitable place. Cost related with relocation arouse and the host economies offer the following incentives:
- **Relocating and expatriacy support.** Some of the countries offer grants, that help by added capital to businesses and pay concrete relocation costs. In some cases they can contribute to countries in individual cost removing or relocation of family members, alternatively employees.
- **Administrative assistance.** In some countries there are agencies which aim is helping to foreign investors with the service and arrangements.
- **Provisional contribution to salaries.** Initial phase can be supported to provisional coverage of payment to a part of wages costs.

OECD (2003) claim that the following incentives are justifiable in case that correct market failure and overcome transactional costs. Governments of particular economies suppose that the presence of foreign companies will contribute to externalities thanks to policy of aimed incentives. Many of them are critised for not solving a market failure. Political circumstances press to host governments to realise contributions of foreign companies and their activities, therefore foreign companies try to support them the following incentives according to OECD (2003):

- **Credits to investors.** Authorities provide advantages loans or subventions to foreign investors due to specific purpose on investment project. Alternatively they help to investors by credit guarantees.
- **Estates.** In this cases government offers land or buildings to foreign investors for better price that is lower than market prices. In this case costs of opportunities are ignored.
- **Presence on costs.** Government support investors by payment of costs to founding of a company. To these costs belong especially marketing and costs

for development and operational costs. Participation on costs can be direct or it is done non-direct to suppliers of goods or services to investors.

The last types of incentives are regulatory investment incentives. These incentives attract to foreign companies by lowering national regulatory rules and directives. The aim is to simplify environmental, social and work market related with requirements on investors. These incentives are awarded with aimed strategies and are dealt as a part of improvised strategies to attract individual projects. It is important to mention that these projects are seen very rarely. They are more apart of OECD countries.

### 1.2.6 Advantages nad disadvantages of particular types of investment incentives

Many economists compare investment incentives and their advantages and disadvantages. The following survey OECD (2001), United Nations (2000), Fletcher (2002) will be dedicated to comparing particular types of investment incentives and their various influences.

Tab. 3 - Pros and cons of main tax incentives

| Tax measure | Advantages | Disadvantages |
|---|---|---|
| Tax holidays | Reduction on tax liabilities. Relative low compliance cost. Simple administrative. | Discriminates between old and new investment. |
| | | Deny certain tax deductions (depreciation costs and interest expense) over the tax holiday period or definitely, tending to offset at least in part any stimulace effect. |
| | | Amount of relief depends on starting period of holiday and treatment of losses. |
| | | Tax-planning opportunities: shifting capital to new business if incentive targeted to new establishments, routing interests and other deductible payments (interests of loans, corporate interest income in divident income), transfer pricing. |
| Reduction on CIT rate for certain sectors | Attractive for mobile investors (reduces the rate of tax of profits) | Discriminates against other businesses. |
| | Dynamic effect on stimulating economy | Zero or negligible tax rate could result in tax heaven status. |

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| | | |
|---|---|---|
| | *Simple to administrate* | Revenue government can be offset by reduced home country foreign tax credits. |
| | | Reduces the PNV of capital allowances. |
| | | Increases the after-cost of debt finance. |
| | | Tax-planning opportunities. |
| **Exemption of CIT for export companies** | *Incentives for business that operate internationally.* | Discriminates against non-export businesses. |
| | *Encourages domestic companied in host country to look outward for new markets.* | Against EU and WTO rules. |
| **Accelerated capital (investment) allowances Buildings** | *Deductions on the first year of operation that lower the effective price of acquiring capital. Helps with liquidity constraints.* | Revenue government (the higher the tax rate the higher the allowance). Could result in excessive investment (unutilised buildings). |
| **Plant and machinery** | *Facilitates investment in new equipment and machinery. Facilitates development of industrial parks.* | Where deductions must be claimed in the year earned, the treatment of losses is critically important. Deductions provide benefits only if they can be carried forward to offset future tax liabilities. |
| **Investment tax credits** | *Large impact on ETR at lower revenue cost* | Discriminates bys old and new investment. |
| | *Can be targeted to certain types of investment with highest positive spillovers.* | Larger impact with short-lived assets because can offset a larger % of tax revenues on a given stream of earnings. |
| | *Helps with liquidity constraints.* | Greater administrative burden. |
| | | Discriminates against investments with delayed returns if loss carry-forward provisions are inadequate. |
| **Location based incentives** | *Encourages the rejuvenation and development of certain areas socially, culturally, industrially and aestetically* | Revenue forgone |
| **Reduced taxes on dividends and interests paid abroad** | | Tax-shifting |
| | | The lower the dividend tax the lower the incentive to reinvest profits. |

| Preferential treatment of long-term capital gains | *Encourages investors to return funds for a long period.* | |
|---|---|---|
| **Deductions for qualifying expense** **(training expense, R&D, export marketing expense)** | *Transfer of technology if considered with other measures.* | |
| **Exemptions from indirect taxes (VAT, import tarrifs)** | *Allows taxpayers to avoid contract with tax administration (important if it is complex and corrupt).* | Little benefit from VAT exemptions if tax on input is creditable. |
| **Export processing zones** | *Allows taxpayers to avoid contact with tax administration (important if it is complex and corrupt).* | Distors local decisions. Typically substantial leakage of untaxed goods into domestic market, eroding tax base. |

Source: OECD (2008)[6], United Nations (2000), Fletcher (2002)


### 1.2.7  Effectiveness and efficiency of investment incentives

Investment incentives are world wide offered. Governments of individual countries have to consider their costs and the potential benefits. Further, they have to consider the following factors:

1. higher incomes from the prospective increased investments,
2. social benefits - work and positive externalities,
3. cost on investment incentives and investments, which would have been realised without investment incentives,
4. indirect costs of incentives (administrative and evasion costs).

In case of tax incentives, investment incentives are beneficial if:

| Investment has strong response on the incentives and incomes in the final results are growing | + | Social benefits from increased investments | > | Loss of incomes from investments which would have been realised even without investment incentives | + | Indirect cost of incentives |
|---|---|---|---|---|---|---|
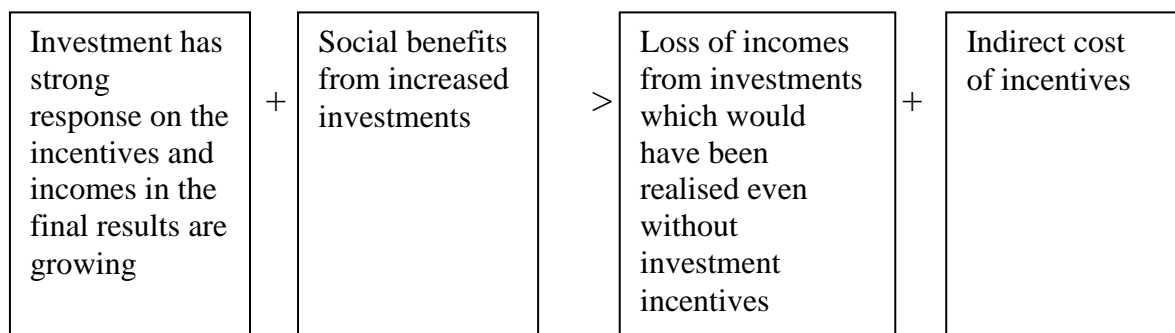
*Fig.  2 When investment incentives are beneficial*
*Source: James (2009)*

[6] OECD (2008), p. 9-10

Efficiency (a ratio) concerns the maximum profit on the minimum investment, whereas effectiveness does not take the amount of investment into account but only the results.

To display the efficiency, Cheshire and Gordon (1998) found out that the results of competition among local governments can have combinations of effects which fit into the following 2-x-2 matrix. Based on this model Rodriguez-Pose a Glauco Arbix (2001) suggested an innovative model for understanding the impact of investment incentives. It is based on the effect of subsidized investment on local and global efficiency. This model was used in Brazilian auto industry.



|  | | **Global Level** | |
|---|---|---|---|
|  | | *Inefficient* | *Efficient* |
|  | *Efficient* | Zero Sum | Growth Enhancing |
| **Local Level** | *Inefficient* | Pure Waste | |
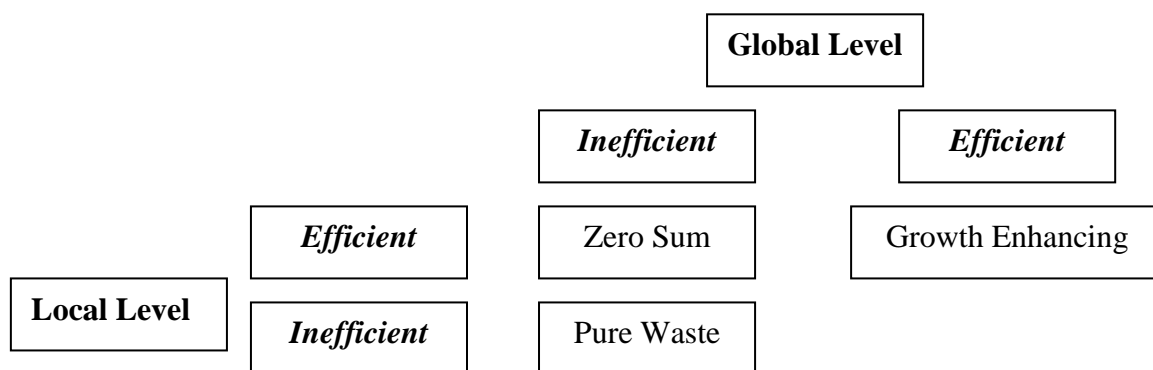
*Fig.  3 The Local vs. Global Efficiency Matrix*
*Source: Cheshire and Gordon (1998)*

According to Fig. 3, if the competitive policy is locally and globally efficient then it enhances the growth. Increased economic welfare at the local level is not balanced by negative externalities in other parts of the country. However, if the improvements in efficiency at the local level cause losses somewhere in the country, they are considered zero-sum. The danger in competitive policies such as incentives could be in expensiveness of offset of local gains and it could also induce negative impacts in other parts of the country. Then the result could be pure waste of resources or in other words they are so-called fiscal wars.

The fourth quadrant stayed empty. It is so called the winners curse. This paradox can occur when a local jurisdiction overbids for an investment (they are locally inefficient) and it also happens to the location where the facility will operate most efficiently (they are globally efficient). Shifting an existing facility from a low-unemployment area to a high-unemployment area can be used as an example.

Christiansen, Oman and Charlton (2003) focused on the benefits of incentives against their costs and they claim that in some of the recipient states the efficiency gains outweighed the incentive costs. They analyzed the case in Brazil and they realized that the relocation of some automotive productions from Sao Paul to poorer areas of the country increased national efficiency.

## 1.3 Viewpoints on FDI and investment incentives

### 1.3.1 Viewpoints on FDI and investment incentives wolrdwide

According to the OECD report (2002) the attitude towards inward FDI has changed considerably over the last couple of decades, as most countries have liberalised their policies to attract all kinds of investment from MNCs. On the expectation that MNCs will raise employment, exports, or tax revenue or that some of the knowledge brought by the foreign companies may spill over to the host country private sector, many governments have also introduced various forms of investment incentives, to encourage foreign owned companies to invest in their jurisdiction.

The most powerful arguments in favor of such incentives are based on the prospects for knowledge spillovers. Since technology to some extent is a public good, foreign investment can result in benefits for host countries even if the MNCs carry out their foreign operations in wholly-owned affiliates.

Hymer (1960) started research about modern theory of foreign direct investment. The point of departure for his analysis was the observation that indigenous firms have advantages over foreign enterprises in the domestic market, because of their better knowledge of the local environment. In order to compete with local firms, foreign enterprises must therefore have some advantages that compensate them for the disadvantage of operating in a foreign environment. Furthermore, some market imperfection must also impede the local firms´ access to the foreign enterprises´ advantages. Thus, the theory of perfect competition is not likely to apply in cases where FDI and multinational corporations are present.

Kindleberger (1969) has presented the taxonomy of the monopolistic conditions which induce direct investment, based on departures from perfect competition in goods and factor markets, internal and external economies of scale and government regulations.

Caves (1971) distinguished between horizontal and vertical FDI and emphasized the importance of product differentiation in the first case. In his view, the crucial monopolistic advantages behind horizontal FDI are the ability to differentiate products, including advertising, and the concomitant skills developed to serve markets. Other advantages, such as technological know-how derived from investment in research and development, are expected to be strongly correlated with differentiation capabilities, since the bulk of these investments are directed to the development of new products and the improvement of existing ones. Thus, the product differentiation capabilities emphasized by Caves can be seen as both comprising technological intensity and advanced marketing.

McManus (1937) emphasized the role of transaction costs in the development of foreign operations. He developed a theory of the multinational enterprise

which was taken by the internalization theory by Coase (1937). In McManus´analysis recognized the existence of important interdependencies between activities conducted in different countries and the need to co-ordinate the activities of the interdependent parties.

Buckley and Casson (1976) were the first to give an explicit presentation of the so-called internalization theory. The point of departure of this theory is that different business activities are linked by flows of intermediate products, embracing not only ordinary semi-processed materials, but also knowledge and information in the form of technological know-how and skills embodied in goods and human capital.

Dunning (1980) contributed to the theory of the multinational corporation. He was arguing that no single theory could explain the existence of foreign direct investment; he proposed an eclectic approach in order to reconcile the different approaches and hypotheses discussed above.

Theory suggests that in order to compete successfully in a foreign market a firm must possess some ownership-specific assets in knowledge, technology, organization, managerial and marketing skills. Then can yield in foreign markets, including subsidiary production, joint ventures, licensing, franchising, management contracts, marketing contracts, and turnkey contracts.

## 1.3.2   What determines the locational decisions of the multinationals

There is a strong consensus in the literature about why multinationals invest in specific location (Dunning, 1993, Globerman and Shapiro, 1999, and Shapiro and Globerman, 2001). MNCs are mainly attracted by strong economic fundamentals in the host economies. The most important ones are market size and real income levels, skills levels in the host economy, the availability of infrastructure and other resource that facilitates efficient specialization of production, trade policies, and political and macroeconomic stability.

The location of FDI may also be influenced by various incentives offered by governments to attract multinationals. These incentives take a variety of forms.

There is no reliable statistics of the size of these incentives, a detailed study by UNCTAD (1996) suggests that incentive activities have increased considerably since mid-1980s.

According to the empirical research Blomström (2000) notes that international investment incentives play only a limited role in determining the international pattern of foreign direct investmet. Market characteristics, relative production costs and resource availability explain most of the cross-country variation in FDI inflows. It is clear that international investment incentives might play a role for MNC´s decisions on the margin. If a firm has two more or less similar location alternatives for its investment, incentives can tilt the investment decision. This is particularly the case for financial incentives like grants and other types of subsidies, since they reduce the initial costs of the investment and lower the risk of the FDI project. The question is whether the

host country´s costs for providing the incentives – in terms of grants, subsidies, and other expenses – are justified. However investment incentives likely to yield benefits that are at least as large as the costs.

### 1.3.3   FDI and spillovers effects

The earliest discussions of spillovers in the literature on FDI date back to the 1960s. MacDougal (1960) was the first author who systematically include spillovers or (external effects) among the possible consequences of FDI and analysed the general welfare effects of foreign investment.

Corden (1967) looked at the effects of FDI on optimum tariff policy and Caves (1971) examined the industrial pattern and welfare effects of FDI.

Almost all of the statistical analyses of spillovers have focused on intra-industry effects, but there are a few exceptions. Katz (1969) noted that the inflow of foreign capital into the Argentine manufacturing sector in the 1950s had a significant impact on the technologies used by local firms.

To add discussion Aitken and Harrison (1991) brought ideas about inter-industry effect in Venezuelan manufacturing, and argue that forward linkages generally brought positive spillover effects, but that backward linkages appeared to be less beneficial because of the foreign firm´s high import propensities (although there were differences between industrial sectors).

Sjöholm (1999) identifies a geographical dimension of positive inter-industry spillovers in Indonesian manufacturing. His results suggest that the presence of foreign multinational companies may raise the productivity of locally owned firms in other industries, presumably through various linkages, but only if they are located in close proximity of the foreign multinationals.

Kugler (2001) who did the most comprehensive study of the sectoral diffusion of spillovers from FDI, finds that the greatest impact of MNCs in Colombian manufacturing is across rather than within the subsidiaries own industries. However, the subsequent discussion will rarely touch upon this kind of inter-industry links, but rather focus on intra-industry effects. To the extent that FDI affects other industries than that where the foreign investor operates, it is obvious that there is a risk that effects – negative as well as positive- are under-estimated.

Blomström (2000) provided detailed case studies discussing various aspects of FDI in different countries and industries, and these studies often contain valuable "circumstantial evidence" of spillovers.

One of many instruments of economic policy and used for support and growing of competitiveness, in particular member states of the EU, are investment incentives. Empirical works (as for example Šimovic, 2009; Bondonio, Greenbaum, 2007) shown, that investment incentives can significantly influence competitiveness of a country or region, and its qualitative dimension as support of development of a company, based on knowledge and education. To its measurable factors belong the development, influence on the

surroundings, support of the society based on knowledge. However the investment incentives are discussed for its measurability.

The position of the investment incentives have been changed during the last 20 years. Many countries have liberalized its politics to attract investment which will prompt decrease of unemployment or economic grow. The further motivation is the spillover effect by technologies or knowledge into host countries. Thereof the governments of particular countries try to anchor them to ther Act of amendments investment incentives. However investment incentives can have the negative effects as the reflux of foreign capital from the developing countries into developed economies.

Therefore there is a question, when the investment incentives justifiable and the circumstances for application to the economies have to be investigated.

In OECD (2002) states that investment incentives are justified at the same time, if the foreign company owns in the comparison with the home country any specific intangible property, from which can by spillovers effects draw the advantages the home companies. However the value of foreign capital can not because of the limited financial means of investors get more, than it would have been for host country optimal. In this case there should exist any compensation for home investor in form of investment incentives. Because of potential realised foreign investment brings higher utility for the whole society than its private utility.

The first relevant authors concerning with the problematic of investment incentives (for example Hymer, 1960) shown on the reality that the home countries have in comparison with foreign companies a signifiant advantage in the form of knowledge of home surroundings and the whole market. To compete home companies, it is necessary to compensate the unfamiliarity compensate.

Caves (1971) distinguish horizontal and vertical foreign investments. By the horizontal points on the existency of product diferenciation including the advertisement as the instrument bringing a significant monopolistic advantage. The same importance attach to technological know-how triggered from investment into research and development. It is necessary together with advanced marketing by the product differentiation.

To theory causative investment in foreign country contributed the internalisation theory (for example Coase, 1937; McManus, 1972), emphasising the role of transanction costs which significantly influence the amount of the investment alocated into the host countries as the eventual access or not success of MNCs abroad.

To these findings built on Buckley, Casson (1976) by demarcation of internal and external market and activities of international corporations in them.

If there are costs of MNCs investing into host countries higher than the profits resulting from these activities, it can be applied investment incentives, which will allowed the host companies to equal home companies. Internalisation´s theory consider the company as subjects, which try to ensure some amount

of revenue flowing from its assets in the case of market imperfections. The attention should be turn over characteristic of market, its weaken sides and limitation, organisation structure of companies, which reflects imperfections of the market.

Dunning (1980) took a stand to the theory of international corporation an eclectic attitude. According to him non of the presented theories can explain the existency of FDI so far. Therefore he summarises all of the current theories. He claims that FDI are results of "gaining advantages" from the ownership, internationalisation and localisation. On the base of the above mentioned opinions, it is possible to claim that to become a competitive in a country, the investor has to have some specific knowledge, competences in the field of manufacturing advancement and in managerial and marketing skills, technologies and appropriate organisational structure.

Foreign investments bring spillover effects in the form of transfer of technologies and knowledge. However it can not be connected automatically. Its existency depends on the ability and motivation of host countries to absorbe foreign human capital. Spillover effects studied MacDougall (1960), Corden (1967) and Caves (1971), who identified various types of costs and yields flowing from allocation of FDI. As shows for example Katz (1969), Sjöholm (1999), Kugler (2001), Chuang and Lin (1999), Driffield (2001) and others, spillovers effects can differ in various economies and industries. Blomström and al. (1994) in his complex cross-analysis carried out on 101 economies found out that spillovers effects are typical for developed countries with the middle incomes and on the other hand the poorest countries are eluded. Balasubramanyam (1998) came to the similar conclusion and proved that only the most developed economies are able to gain from FDI some advantages for its country.

Deng, Falvey and Blake (2012) researched spillover effect in China. They proposed the abolishing of different tax system which lead to the weakening FDI spillover in a short period. This reform increase the productivity on the threshold level for foreign companies. Home companies coping with the competition, increase the productivity and are able to absorp the productivity of spillovers.

Morisset and Pirnia (1999) warn about the effectiveness of incentives from the attracting the investor´s point of views. The potencional income side distract the attention from the costs side. According to them eventhough if the tax incentives are effective, they increase the investment flows. They suppose that these costs with outweigh profits. This schema became actual because it increased the tax competitiveness in the whole world. Not only in the rich industrial countries, but in the new establishing and formatting markets, where the governments face to hard budget restrictions. Investment incentives are connected with the potential loss of incomes for local governments. The argument is the fact, that foreign companies would have invested in a country even if a case that non of the investment incentives had not been offered. In this

case so called "free rider" (investors) will have profit, while the government loss. Therefore there is a fear that the government will loss its incomes.

Often is the tax policy researched in the connection with the economic grow. Alfaro (2003) concerned the economies for the last 20 years and found out that by the FDI is evoluting press on growing. However in primary sector have FDI negative tendency on growing, while investments in manufacturing industry have the positive influence. In case in sector of services will go to a not clear effect.

Kotlán and collective (2011) analysed influence of particular types of taxes. In the frame of corporate taxes, which are considered as significant investment incentives. According to some theories have investment influence on economic grow, because by the accumulation of capital increase the potentional product of a country. This fact proved many empirical studies for example Anderson (2008), Hunt (2007), Madsen (2002), Gylfason, Zoega (2006).

The next strongest argument for existency of investment incentives is the fact, that they are offered by the most developed and developing economies. Structure, forms and scope of them are convergent. As the price rates of effective taxation of companies´s profits. In this case can help game theory than the economy. Opinions on investment incentives relates with the theory of substance of investment incentives and are similar to advertisement[7].

## 1.4 Researches concerning investment incentives in the Czech Republic

The current research done by Deloitte (2006) in the Czech Republic contains The Final report of evaluation of investments drawing incentives and the evaluation of the effectiveness of CzechInvest agency Ministry of Industry and Trade ordered an analysis to find out the situation and prospective of investment

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[7] Using of the advertisement increase the total costs and the price of the goods in the end. If there had not been any advertisement, all products wathich before news, would had been cheaper. The problem is, that if one of the producers particular goods will not use any form of advertisement, while the all competitors so, its chance on the market will be very small. Existency of selective investment incentives distors tax neutrality between many fields of enterprises in home market, on the other hand it straighten distortion in taxation in the international measure. Investment incentives symbolize an international problem, and therefore they are the subject of regulation from the side of World Trade Organisation. Nevertheless in this field the short-sighted interests of particular countries are winning, as it is by liberalisation of trade with agriculture products and removing subventions related with them. In both cases there is a suboptimal solution so called prisoner´s dilemma. It has to be solved always if the government of a country tries to outflank over their neighbours or thinks that it understand the economy better.

Patria. ©2010. Investiční pobídky, spása, hřích, nebo nutné zlo? [online], [viewed 2012-10-12] Available from: http://www.patria.cz/zpravodajstvi/786348/investicni-pobidky-spasa-hrich-nebo-nutne-zlo.html?culture=cs-CZ

incentives. According to this report[8] are investment incentives effective. Evaluation of economic contribution from investment incentives including methodology of economic model prepared Deloitte company together with experts from CERGE-EI, University of Economics in Prague and Czech Statistical Office. This study analyses all investments from 1998 to 2008 which received decision about the receiving of investment incentives.

However Schwarz et col. (2007) carry out the Analysis of investment incentives in the Czech Republic. He discuss the 8 myths about investment incentives. From the Executive Summary are obvious the following points:

1) Investment incentives are directed to the regions with the highest GDP per inhabitant. (The capital city, Prague and the Central Bohemia region), thereby the difference between the most developed and the underdeveloped regions were not diminished but increased.

2) Investment incentives have not removed the differences in the unemployment rate, because the investment incentives were directed more likely to the regions with the lower unemployment rates. Moreover, the new work places with the investment incentives are poaching employees from other companies of the same sector or from other sectors, which does not decrease the unemployment rate.

3) The cost for creating a working place with investment incentives was approximately 1.6 mil CZK, but in the case of Barum Continental in Otrokovice, it reached 15 mil. CZK, which significantly exceeded the costs for creating new work places without investment incentives.

4) Unemployment has not been changed by investment incentives, because the new work places provide opportunities for domestic employees of the same sector or other sectors but also for foreign workers.

5) The importance of the spillover effect in relation to investment incentives is overestimated because they do not consider the real total costs of the investment incentives. The "spillover" does not concern only outputs but also costs, including fiscal costs, without which the investment incentives would not be practical.

6) Even though investment incentives create an impression that they decrease the tax burden in an economy, the opposite is true. Investment incentives are based on fiscal cost and help to keep high level of budgetary cost and amount of taxation. Therefore they complicate the way for decreasing of tax burden. Incentives provided to advantageous companies support the government in maintaining the current tax burden, not providing tax relief.

7) Consultants showing the beneficial influence of investment incentives do not calculate all the costs related to investment incentives. By the calculation of all costs, which include all tax yields (not realized) but

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[8] Available from: http://www.czechinvest.org/investicni-pobidky-vydelaly-230-miliard-ukazala-jedinecna-studie-deloitte

sacrificied in favour of the direct support of the incentives, there is unambiguous summary, that the fiscal yields do not surpass the total fiscal costs.

8) Investment incentives are deforming the market. They support the large, especially foreign companies, which receive market advantages at the expense of small and middle-sized companies, which are netto tax payers. This deforms the economic structure in favour of large companies, which often grow to a size "too big to fail" which leads to special attention and support from the government.

The research provided by Schwarz is very critical to the Deloitte (2006) findings especially because of the direction of investment incentives to regions with the highest GDP. He claims that the unemployment rates has not been decreased because of investment incentives were directed to the regions with the lower rate of unemployment rates. It was pointed out that the new working place created by investment incentives pull the employees over from other existing companies. Deloite findings claim that investment incentives are effective however Schwarz (2007) is criticising them.

Šachrová (2006) focused on 14 companies in her dissertation and claim that investment incentives are effective.

Schwarz, Bartoň, Bolcha, Heřmanský, Mach (2007) expressed the idea that in the region of the central Europe, there is very strong tax competitiveness and countries are competing among each other by general tax rates and the rates and subventions and by investment incentives. They criticized the system of current investment incentives in the Czech Republic and the results of Deloitte analysis. This research group doubted about positive influence of spillover effect.

According to NERV (2011), the Ministry of Industry and Trade of the Czech Republic is still counting with investment incentives in future.

# 2  SELECTED PROCESSING METHODS

## 2.1  Scientific methods as means of cognition

The basic of the dissertation is considered apart the selecting of the goal and the procedure of processing but also choice of methods, by them will be fullfiled the aim. The following chapter will be focused on the methodological approach necessary for realization of the main research objective as well as partial goals and answering research questions.

The general definition the method is as follows according to Molnar[9]:

*"A method is a way to achieve a theoretical and a practical aim (e.g. teaching methods, a production method, an experimental method, an innovation method, etc.) It is a way, a procedure of how to achieve true cognition with the aid of certain principles."*

Within the theoretical-methodological approach to the solution of the assigned issue, the procedure applied will include methods commonly used in papers focusing on the issue of economics. In order to successfully realize the main and supportive goals of a dissertation work, it is crucial to use appropriate processing methods. Methods of scientific work are usually complementary to one another. The instruments of scientific investigation also include the scientific language of expression and testing procedures related to mathematical-statistical research methods.

Within this dissertation work, the following qualitative and quantitative methods were used:

1.  **Extensive literature research** focused on tax competition, especially FDI and effect of investment incentives on the economy.

    Critical research of information sources was based on professional international publications, professional studies, case studies, articles from specialist journals which are included in the Thomson Reuters Web of Science database, ERIH and SCOPUS database, conference proceedings registered by the Thomson Reuters Conference Proceedings Citation Index, annual reports of companies and consolidated statements.

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[9]  MOLNÁR, Z. 2005. *Úvod do základů vědecké práce* [online], [viewed 2011-05-11]. Available from: http://www.fem.uniag.sk/cvicenia/ksov/fandel/09_PhD_Metodika_a_metodologia_vedeck ej_prace/Zaklady_vedecke_prace.pdf

2. **Survey with questionnaire usage**

In order to obtain specific information regarding the investment incentives, the survey with the use of tools such as telephone interview or email (as a first contact) and questionnaire were conducted. The surveys were directed to financial managers of companies which received investment incentives.

3. **Structured interviews with financial managers**

Questionnaire surveys were supported through structural interviews with financial managers of chosen companies.

Based on financial reports were calculated costs of the government (investment incentives) and contribution of international companies (any form of taxes, employment, etc).

In addition to that, further research methods were used within the process of solving the dissertation work to fullfill the goal of the dissertation. The main line can be seen in the following scheme.
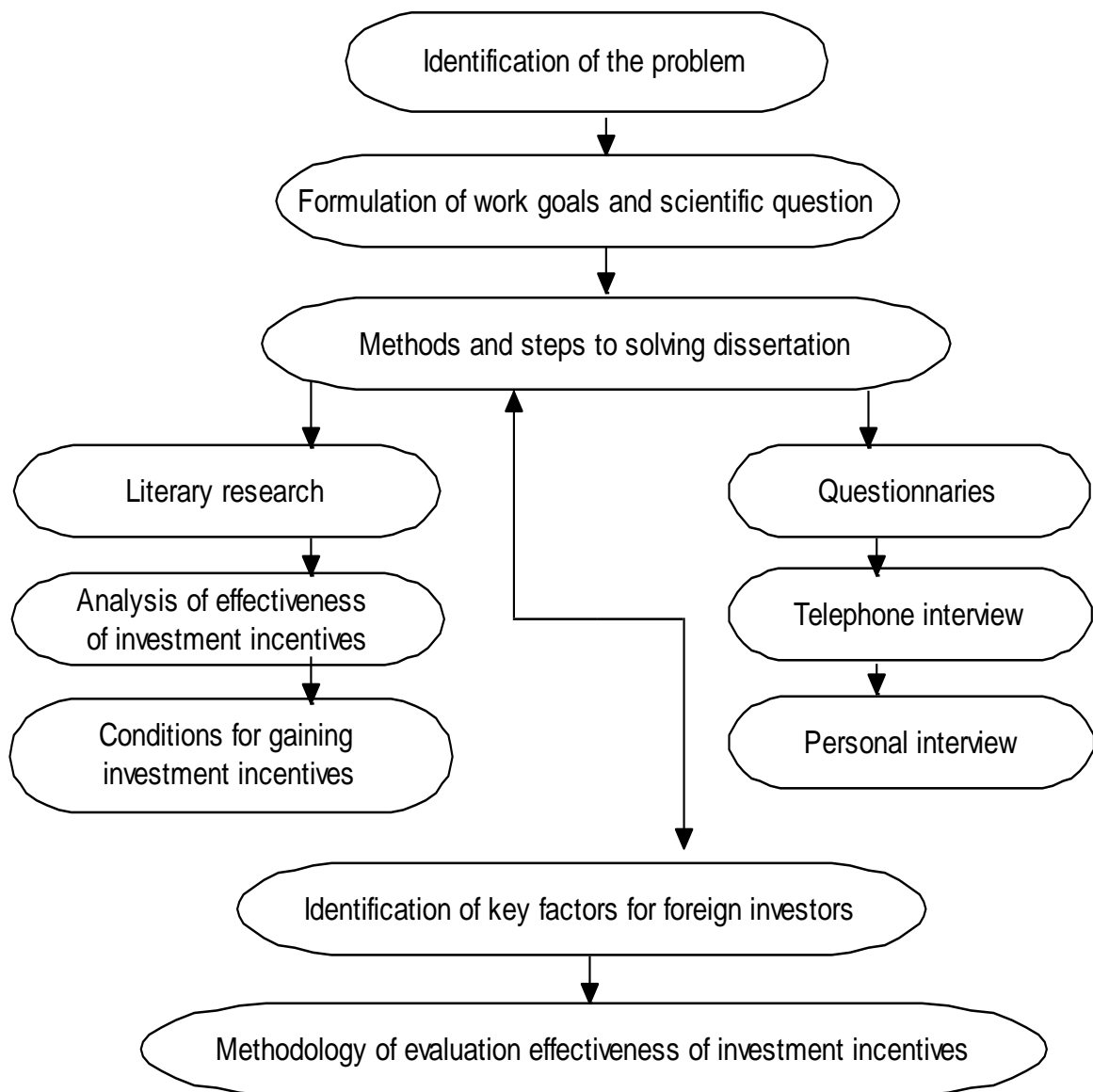
*Fig. 4 Proceeding of the dissertation*
*Source: Author´s compilation*

Initial period of processing dissertation can be characterized with extensive literature research and particular issue. The integral part was search and study of specialized literature, especially international but also Czech research works and collection, evaluation and classification of information about issue, consultation with economists. Gained knowledge were used to establishing or specification questions to issue and formulation of aims of the work. To the objective and critical evaluation of gained facts and knowledge about their written processing was approached to solving set problems.

Dissertation work was also prepared and solved in the frame of the project Effectiveness of Investment Incentives Internal Grant Agency at Faculty of Management and Economics Tomas Bata University in Zlin (IGA/FaME/2012/014).

## 2.2 Goals of the dissertation and research questions

The main goal of the dissertation is to determine the effectiveness of investment incentives in the Czech Republic. Effectiveness is considered from the point of view of the government providing investment incentives as an instrument of state support. To help find the solution, the following research was conducted:

1. An analysis of macroeconomic indicators in the Czech Republic in relation with FDI.

2. Search factors, which are key in the decision about entrance of foreign companies to the Czech Republic for measuring the effectiveness of investment incentives.

3. The application of currently available models, the improving and modification of the current methodology.

4. A verification of the current models so as to determine the effectiveness of the provided investment incentives, in particular for companies in the Czech Republic, and to find out the influences of investment incentives on the income side of the public budget.

To come up with solutions to these problems, the following research questions were established:

*Research question 1:* Will the current system of investment incentives strengthen the competitiveness of the Czech Republic?

To answer this question, macroeconomic analysis is required to determine if there are improved indicators in the Czech Republic concerning unemployment, growth of domestic products and increased profits from taxes.

*Research question 2:* Are investment incentives effective from the point of view of inputs and outputs from the side of the government by the chosen companies that received investment incentives?

Thirty foreign companies which received investment incentives in the Czech Republic were chosen for this study. A list of companies which received investment incentives is published on the website of Czechinvest. However it does not reflect the reality, because many companies applied for investment incentives, fulfilled the criteria, but finally decided not to draw financial support. It is not possible to study all of the companies which received investment incentives in the Czech Republic, so a representative sample was taken.

For this study it was necessary to examine the annual reports of particular companies, general ledgers, balance sheets, and profit and loss statements for the last five years since gaining the investment incentives.

## 2.3 Methods

Scientific cognition is formed in empirical and theoretical recognition. In both fields were used processes which can be marked as classical scientific processes or methods. By using these methods were received results.

### 2.3.1 Empirical recognition

By the empirical method, empirical data are obtained and used as the original entities for the theoretical field and, at the same time, as a source of confirmation, verification or denial of theories or hypotheses. The basic methods used in the dissertation thesis were be the following:

1. *Observing* is an intended, purposeful, planned and oriented perception of the investigated issue. It was used for companies who accepted some of the forms of support of investment incentives. Observing was also used by interview with the financial managers of particular companies.

2. *Measuring* is an operation resulting in an allocation of special mathematical characteristics in such a way that enables a single-valued mathematical description of each situation which includes the measured property and, at the same time, the arrangement of all its occurrences into a specific mathematical order. It was worked with the mathematical models of fiscal effectiveness of investment incentives. By using this model it was gained the coefficient of fiscal effectiveness. This coefficient was used as an instrument for classification and interpretation of gained results. Each result of individual measuring can be expressed as a fact about effectiveness.

3. *Classification* is an operation the result of which is an allocation of special "quasi-mathematical" characteristics in such a way that enables a definite formalized description and the arrangement into a certain scale or into a system of classification. By using these methods it can be e.g. found out whether something is effective or not. Classification is an arrangement of data in tables, graphs, aimed to produce a more illustrative description of the investigated issue. Classification is a transition to the "sorting", which belongs to theoretical methods.

4. *Interpretation* is an explanation of the results expected to be achieved. It was used especially in the results of the mathematical formulas and comparison of these results.

### 2.3.2 Theoretical cognition

By applying processes in the theoretical field, theories are created, which are developed; consequences are derived from them which are used for explaining the past reality and aimed at explaining the possible evolution of the future

reality. "Practical" consequences are also derived from them considering the possibilities of human action. There were used the following methods:

1. *Inference* is logical procedure which we use to deduce a sentence from other sentences is generally named "deduction" or "inference". This method is applied in the whole dissertation. The theory of cognition involves two basic types or inferences, and that the inductive and the deductive reasoning.

2. *Induction* is mostly characterized as the type of deduction involving generalized conclusions drawn from knowledge about details. It is considered to be the basic constitutive element or a manner of theoretical cognition; i.e. we only experience unique events and, therefore, only through induction we are able to draw any other conclusions than those really experienced or shared by showing unique events of our life. In a narrower interpretation, the induction is considered the cognition based on empirical facts, and/or standing for a transition from empirics to theory. Induction process was used for chapters about analysis of fiscal effectiveness of investment incentives, influx of FDI, and in the conclusion formulation based of comparation particular types of investment incentives abroad.

3. *Deduction* is traditionally compared to the induction, because the deduction is a process opposite to the induction method. It is a process of reasoning which leaves the general principle for a special or unique cause. The ability of deductive judgment is considered a definitional characteristics; it is able to transfer the truth from the premise to the conclusion. The deduction is based on previous induction. Complex processes of reasoning always form the chain of deduction in which both types of conclusions are closely tangled and complementing each other. This method is implemented in parts related with the issue of domestic and foreign literature concerning evolution of opinions related with FDI.

4. *Description* is a basic method which enables to exactly describe issues, phenomena and the reality. It is a necessary prerequisite for scientific research, because it enables to exactly define and to characterize the investigated issue. It is above all necessary to specify the basic line for the author and also for the readers and to make them understand the examined phenomenon, and that through its definition and involvement in the structure of a wide scale of information on the given issue. Description was applied in the programme of investment incentives and support in the Czech Republic, Slovakia, Hungary and Poland. This method was penetrated in the whole dissertation.

5. *Classification* is another important instrument for the scientific work. Without, it would be impossible to orient oneself in the huge amount

of information, knowledge, experience and technical solutions. It is the intellectual division of subjects and phenomena into groups and subgroups depending on their mutual accordance and on their differences. The classification enables to concentrate on the preferred interests and liberates a reader from browsing and checking all the information available. Classification was used in the analysis of current offer of investment incentives in the Czech republic, Slovakia, Hungary and Poland. This method was implemented in analysis of FDI because of classification into groups from regional, industrial, etc.

6. *Abstraction and classification*. In the first place the abstraction comprises a reduction of the reality only to some of its aspects, elements, properties and connections. The basis of this method is the way of thinking during which we – in our imagination - omit many obvious but not so important individual and accidental features or properties of a subject and only concentrate on the most important part. Abstraction has an universal character within creative activities, as each step of reasoning is connected with this process or with the use of its result. These methods were used in the macroeconomic analysis. Many factors were omitted and the point was focused on the most important macroeconomic indicators, especially unemployment and GDP. These methods are used by displaying the reality especially by tabs and maps showing limited number of characteristic of researched issue.

7. *Analysis* implies the intellectual and methodical segmentation of the examined subject into the individual parts, aspects, levels, layers, links, "points of view" together with the application of contexts specific for each of these segmentations, and application of procedures which enable to articulate a "new" partial characteristic of the given part. Together with this segmentation and articulation, this analysis deals with the relations between the specified parts. This method was used very frequently. Firstly in the theoretical part by the description and comparison of the legal frame for providing public support in the regions in the Czech Republic. Research related to the opinions of FDI and investment incentives brought analysis of individual scientific opinions on this issue. Using of this method is evident in chapters related with the research about influx of FDI in to the Czech Republic and following comparison with the state of issue in the middle Europe. Lastly, it was implemented the evalution of fiscal effectiveness of investment incentives.

8. In contrast to the analysis, the *synthesis* is the intellectual incorporation of parts of subjects or phenomena; it is the intellectual incorporation of its characteristics, properties or features, and that between the individual parts and also in relation to the whole. The analysis and the synthesis are, although mutually contradictory, inseparably interconnected at the same

time. Implementing of synthesis joined various knowledge about investments and investment incentives. Followingly, they were used to the solution and proposal of quality improvement of business surrouding in the Czech Republic.

9. *Comparison* as one of the most widely used methods of scientific cognition enables to specify the consistency of and the differences between subjects, phenomena and facts. The use of this method will be evident during the whole process of elaboration of the dissertation thesis. It was used in the issue about legislative frame of the public support on the domestic and Visegrad level. Then it was used in the research of many scientific materials and opinion of important specialists on problemacy of FDI especially in the competition. Comparison was used in the analysis of FDI and investment incentives. Due to questionnaires and its conclusions were gained results and compared by particular formulas.

10. *Message and communication*

The author presented her articles in conferences and published in journal. The feedback of participant from conferences led to the thinking and modification of some thesis and influenced the dissertation.

All of the above-mentioned processing methods will be substantiated, and their mutual synergic effect was used.

### 2.3.3 Statistical methods

Results of the dissertation were tested by statistical methods especially by Wilcoxnon's test and Pearson's product-moment correlation.

# 3  THE MAIN RESULTS OF THE DISSERTATION

## 3.1  FDI in the Czech Republic

### 3.1.1   The inflow of FDI in the Czech Republic

In the world economy there is tough competition over capital, particularly over forms of FDI. The Czech Republic has been one of the most successful post-communist countries in terms of the volume of FDI it attracted in the last two decades. A program of investment incentives established in 1998 supported this inflow. The total inflow of FDI was 99,032 billion USD between 1993 and 2012, with significant increases in 2002 and 2005.
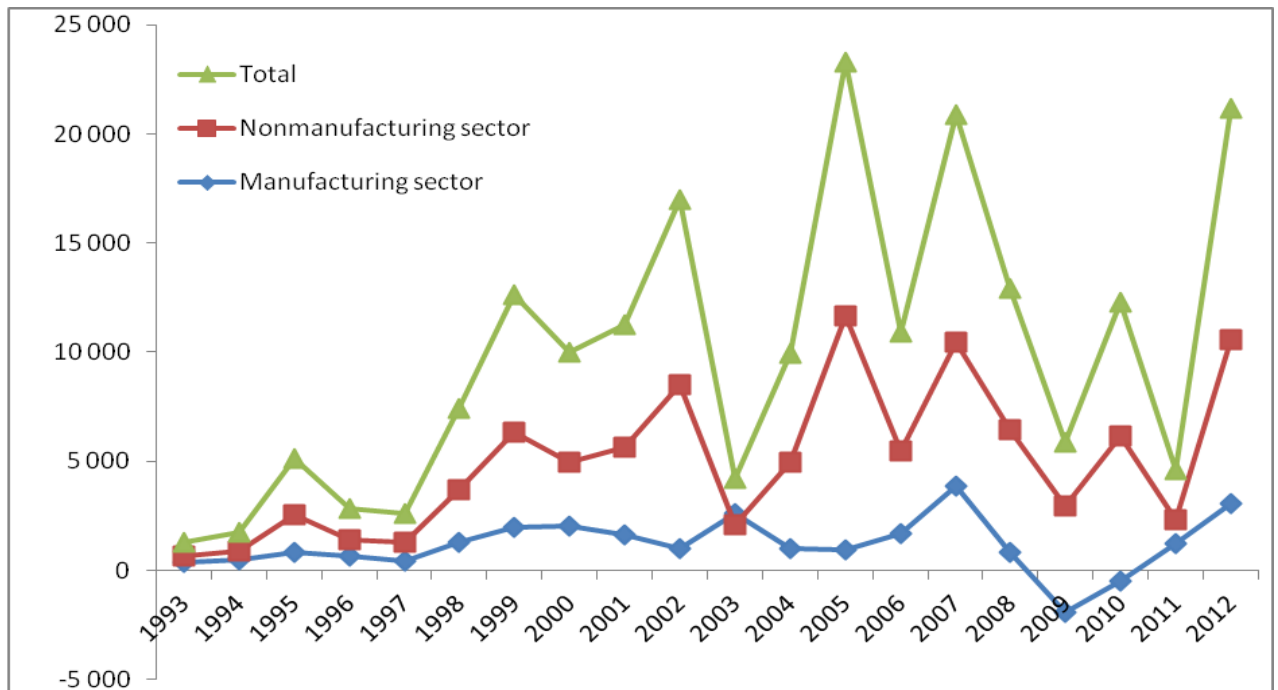
*Fig. 5 Inward FDI in mil. USD by industry (1993-2012)*
*Source: Data provided by the CNB[10], [Author´s calculation]*

The rate of FDI in the Czech Republic has slightly increased since 1993. The greatest increase started in 1998. In 1999, the value doubled, and the biggest inflows occurred in 2002 and 2005. Since 2005, FDI has declined. In 2008 came another peak, albeit not as high as in 2005. For more detailed information, see Fig. 5.

The reason for increased investments in 2002 was the privatisation of Transgas company. The total volume of FDI represents investments into 3,700 companies. It includes all of the foreign investors in the Czech Republic. Nearly half of the total volume is attributed to the 70 largest companies. The biggest investors are still the Netherlands and Germany. More than 56% of the investment capital comes from these countries, while more than 86% of the total volume of FDI is from the EU. The dominant sectors are still banking, insurance, transport, telecommunications and the business sector. All of these amounted to 53% of FDI. Following the manufacturing industry, petrol processing and the production of chemicals and other products (about 36%) were prevalent[11].

The biggest investments in 2005 were the selling of government bonds to Český Telecom and Unipetrol. A considerable part of the influx of foreign

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[10] Available from:
http://www.cnb.cz/miranda2/export/sites/www.cnb.cz/cs/statistika/platebni_bilance_stat/publikace_pb/pzi/PZI_2011_CZ.pdf
[11] Ibid.

capital came from the establishment of companies with foreign capital participation. Investments were made in real estate and the service industry, followed by transport and telecommunications. About 54% of the service industry serves the manufacturing industry[12]. The geographic size of the territory remained the same, but in 2005 Spain, the USA, Belgium and Great Britain became more significant investors.

In 2008, investments[13] moved into the energy sector, and dominant investors came from Luxembourg and France. Outside of the EU, investments came from the USA and Japan.

In 2010, the volume of investments was directed largely towards real estate and auto production. The service sector amounted for about 55% of the total invested capital and the manufacturing industry was 29.9%. Although the number of investments from the EU decreased, the structure of investors remained the same, the leaders being the Netherlands, Germany, Austria and Luxembourg, France and Switzerland[14].

At the beginning of the inflow of FDI in 1993, the non-manufacturing sector prevailed over manufacturing, but in 1994 the situation changed and the nonmanufacturing sector became predominant over the manufacturing sector. Within the manufacturing sector, the most popular area is machinery and equipment with 34%. The second most important area, basic refined petroleum and chemicals, comprises 16%, while basic metals and metal products make up 15% of the total, and food and tobacco and non-metallic products account for around 9%. Areas amounting to less than 10% include wood, paper and publishing, textiles, clothing apparel and leather, while recycling and others amount to little.

In the non-manufacturing sector, most of the investments come in the form of financial intermediation at 31%, followed by real estate and business activities with 23%. The category trade, hotels and restaurants makes up 17%, as does the category transport, storage and communications. Areas amounting to less then 10% are electricity, gas and water supply. Construction and other social and personal services account for about 2%. Agriculture, hunting and forestry, health and social work make up less than 1% of the total. Investments in education are minimal. More details are displayed in Fig. 6 and Fig. 7.

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[12] Available from:
http://www.cnb.cz/miranda2/export/sites/www.cnb.cz/cs/statistika/platebni_bilance_stat/publikace_pb/pzi/PZI_2011_CZ.pdf
[13] Available from:
http://www.cnb.cz/miranda2/export/sites/www.cnb.cz/cs/statistika/platebni_bilance_stat/publikace_pb/pzi/PZI_2010_CZ.pdf
[14] Available from:
http://www.cnb.cz/miranda2/export/sites/www.cnb.cz/cs/statistika/platebni_bilance_stat/publikace_pb/pzi/PZI_2012_CZ.pdf
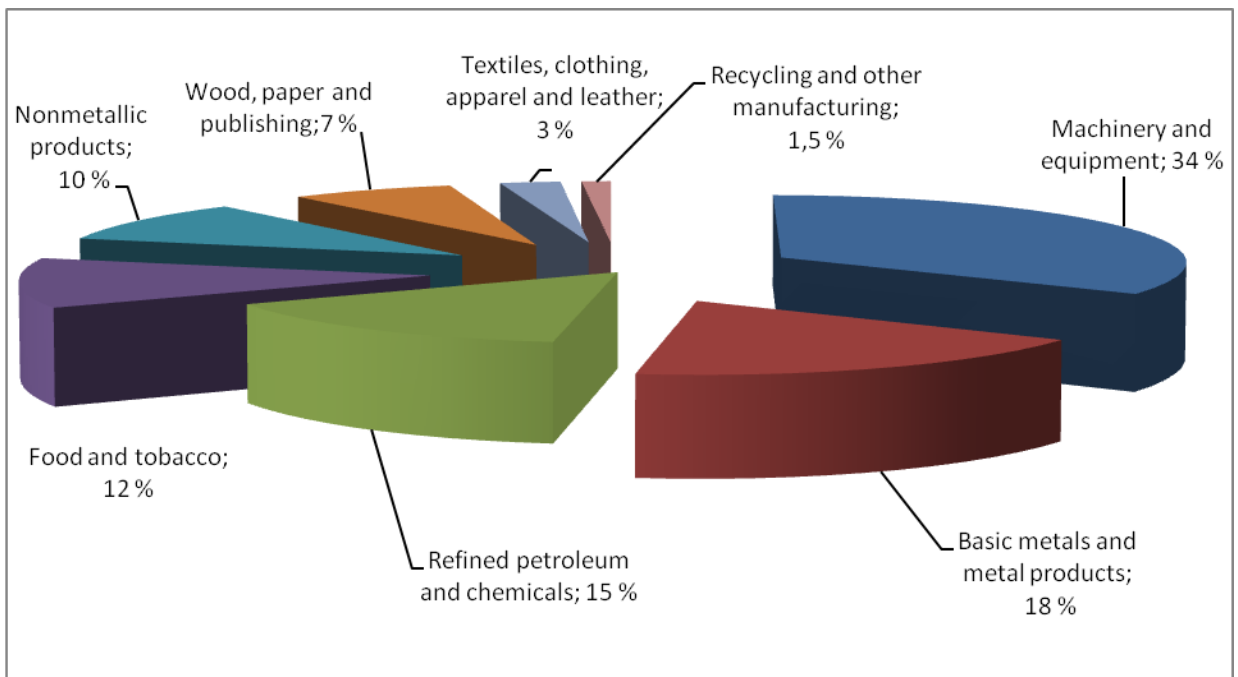
*Fig. 6 Inflow of FDI to the Czech Republic (1993-2012) according to sector*
*Source: Data provided by the CNB, [Author´s calculation]*
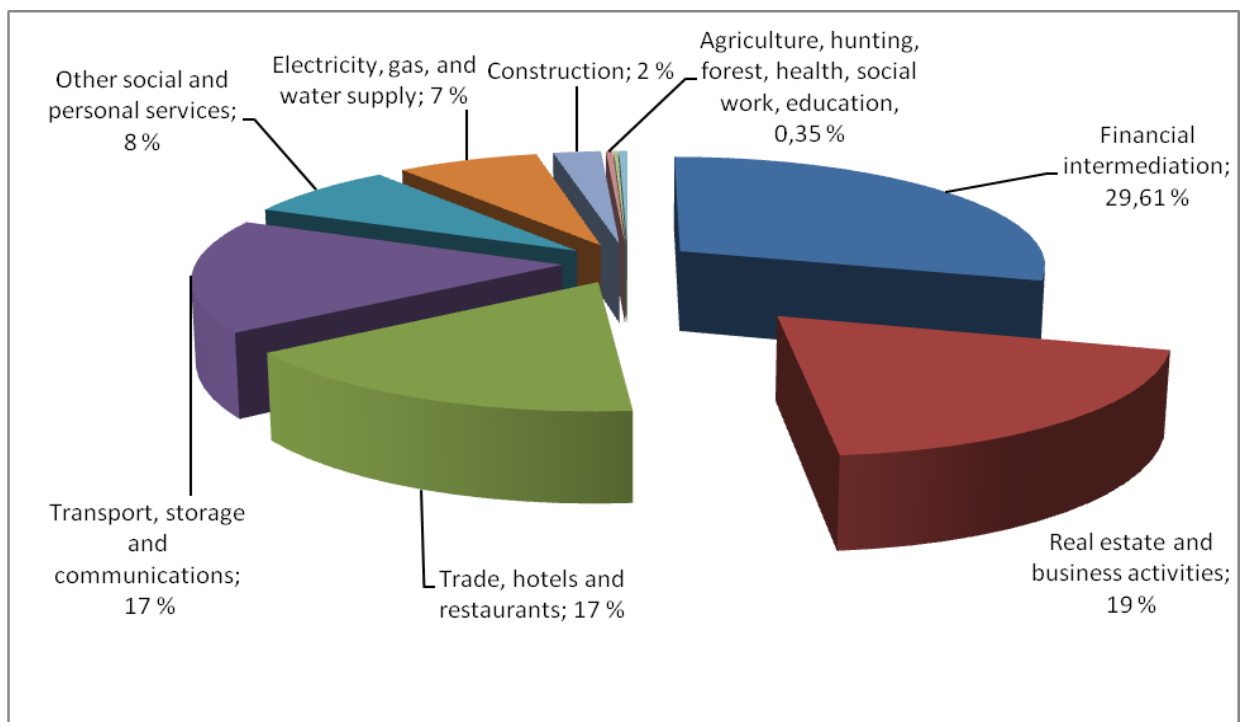


*Fig. 7 Inflow of FDI to the Czech Republic (1993-2012) according to sector*
*Source: Data provided by the Czech National Bank, [Author´s calculation]*

Principal investors in the Czech Republic are from other countries than the EU, such as Russia, the Ukraine, Kazakhstan and South Korea. The same

amount of FDI came from Germany (22%). The second highest investment volume came from the Netherlands and Austria (14%). Around 6% originated from investors in France, Switzerland and the United States. Less then 5% of FDI came from Belgium, Sweden, Denmark, Japan and Italy. The least FDI came from Canada.
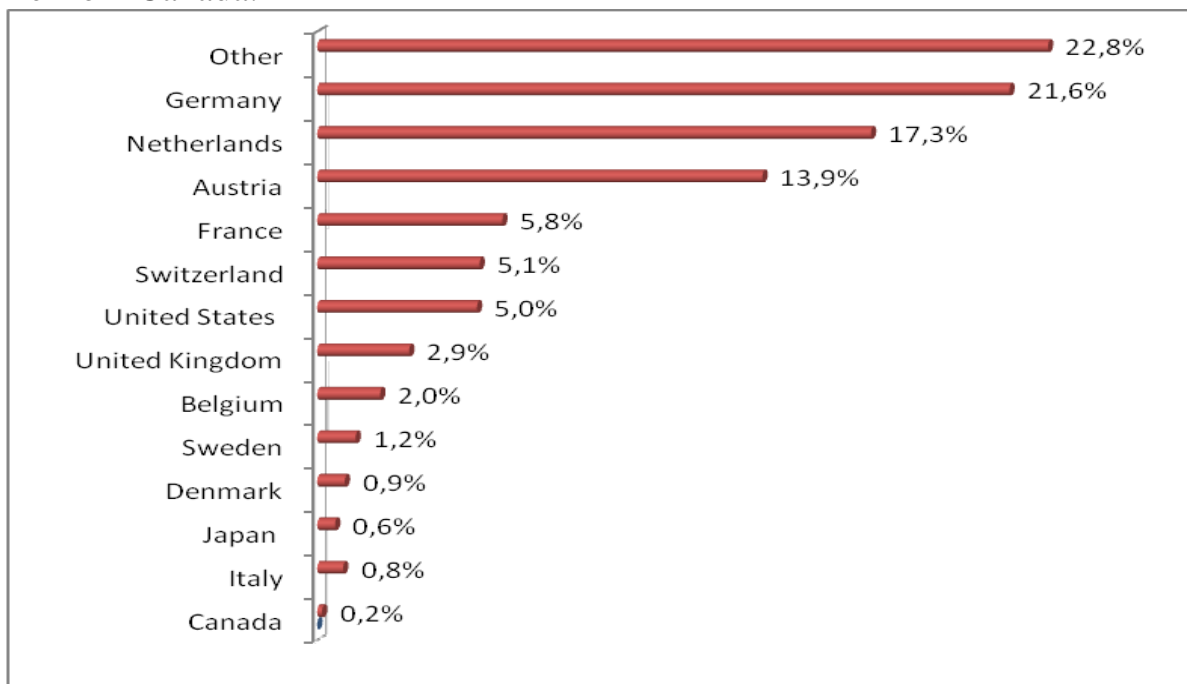


*Fig.  8 Investors of FDI in the Czech Republic (1993-2012)*
*Source: Data provided by the Czech National Bank, [Author´s calculation]*

### 3.1.2  Analysis of influx of FDI in the Czech Republic and the main macroeconomic indicators

An influx of FDI testifies to the overall economic health of the host economy and the sustainability of its fundamentals. It is an external economic confidence indicator in the domestic business environment. The reasons for localisation of FDI vary and often change over time. In the case of the Czech Republic, the following motives for entering the economy are often given: a qualified workforce, stable economic and political environments, an advantageous geographical location, the possibility to penetrate the host and the European market at the same time, and finally investment incentives offered.

Indisputable advantages of FDI are the benefits of non-credit financing of investment activities, the increased creation of work places, increased exports, and increased work productivity (home companies, thanks to so-called spillover effects, benefit from a transfer of technologies and managerial processes).

On the other hand, there are some risks related to FDI. They are seen in the formation of dual economies[15] and increased deficits of balance profits (caused by the repatriation of profits) in the current account balance of payments. In the market, unemployment can increase as a consequence of the restructuralisation of the economy. This analysis deals with selected impacts of FDI on the Czech economy. The goal is to determine evolving trends of domestic and foreign companies in the Czech economy, the impact of FDI on GDP, unemployment and other economic indicators.

Thanks to globalisation there is a fight for capital which is mobile and FDI. The Czech Republic had to face new problems related to its transition to a market economy in 1989. A distinctive influx of FDI was considered a significant business policy success. The government of the Czech Republic introduced a system of investment incentives that to a considerable extent played an important role in attracting foreign investors.

Between 1993 to 2012, approximately 100 mil. USD (99,033 mil. USD) was directly invested by foreign countries. It is obvious according to Tab. 4 that since 1993 there has been an increase of FDI. The most important milestones were 1999 (6,324 mil. USD), 2002 (8,483 mil. USD), 2005 (11,658 mil. USD) and 2007 (10,436 mil. USD). Decreases occurred in 2007 and 2008, followed by a recovery in 2009.

Economists and the Czech Statistical Office agree that an influx of FDI into the Czech Republic produced a recovery in the Czech economy. Evaluating effects on macroeconomic indicators of productivity is complicated and requires deeper analysis and the use of statistic methods. Being so extensive, such an evaluation would be worthy of its own study. However, because  it is one of the most important characteristic of FDI, Czech economic indicators must be dealt with here.

Tab.  4– Influx of FDI into Czech Republic in years 1993-2012 (in mil. USD)

| Year | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 |
|---|---|---|---|---|---|---|---|
| FDI in USD | 654 | 869 | 2,562 | 1,428 | 1,300 | 3,718 | 6,324 |
| Cumulate FDI | 654 | 1,523 | 4,085 | 5,513 | 6,813 | 10,531 | 16,855 |
| Year | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
| FDI in USD | 4,986 | 5,641 | 8,483 | 2,101 | 4,974 | 11,658 | 5,459 |
| Cumulate FDI | 21,841 | 27,482 | 35,965 | 38,066 | 43,041 | 54,699 | 60,158 |
| Year | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | |
| FDI in USD | 10,436 | 6,465 | 2,928 | 6,137 | 2,319 | 10,590 | |
| Cumulate FDI | 70,595 | 77,060 | 79,987 | 86,124 | 88,443 | 99,033 | |

Source: CNB (2012), [Author´s calculation]

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[15] A dual economy occurs when home companies lag behind, especially in production, work productivity, and other indicators, in comparison with companies under foreign control.

Since 2002, capital from Europe has determined Europe's strength (Fig. 4), especially extensive investments from Germany (the exception being the period 1998-2000). Obviously, in the years following the Czech Republic's entrance into the EU, capital came from non-European sources. Clearly EU membership made the Czech Republic more attractive to conservative investors worried about taking undue risk.[16]

Tab. 5 - Selected economic indicators in the Czech Republic 1995-2012

| Indicator | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 |
|---|---|---|---|---|---|---|
| GDP (mld. CZK in current prices) | 1 533,70 | 1 761,60 | 1 884,90 | 2 061,60 | 2 149,00 | 2 269,70 |
| FDI (mld. CZK in current prices) | 68 | 39 | 41 | 120 | 219 | 192 |
| Year to year change of GDP (%) | x | 4,5 | -0,9 | -0,2 | 1,7 | 4,2 |
| Part of FDI on GDP (%) | 4,4 | 2,2 | 2,2 | 5,8 | 10,2 | 8,5 |
| Unemployment rate (%) | 4 | 3,9 | 4,8 | 6,5 | 8,7 | 8,8 |
| Growth/decline of unemployment (%) | -0,3 | -0,1 | 0,9 | 1,7 | 2,2 | 0,1 |
| Indicator | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
| GDP (mld. CZK in current prices) | 2 448,60 | 2 567,50 | 2 688,10 | 2 929,20 | 3 116,10 | 3 352,60 |
| FDI (mld. CZK in current prices) | 215 | 278 | 59 | 128 | 279 | 123 |
| Year to year change of GDP (%) | 3,1 | 2,1 | 3,8 | 4,7 | 6,8 | 7 |
| Part of FDI on GDP (%) | 8,8 | 10,8 | 2,2 | 4,4 | 9 | 3,7 |
| Unemployment rate (%) | 8,1 | 7,3 | 7,8 | 8,3 | 7,9 | 7,1 |
| Growth/decline of unemployment (%) | -0,7 | 0,8 | 0,5 | 0,5 | -0,4 | -0,8 |
| Indicator | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
| GDP (mld. CZK in current prices) | 3 662,60 | 3 848,40 | 3 759,00 | 3 799,50 | 3 841,40 | 3 843,50 |
| FDI (mld. CZK in current prices) | 212 | 110 | 56 | 117 | 96 | 207 |
| Year to year change of GDP (%) | 5,7 | 3,1 | -4,5 | 2,5 | 1,9 | -1,3 |
| Part of FDI on GDP (%) | 5,8 | 2,9 | 1,5 | 3,1 | 2,5 | 5,4 |
| Unemployment rate (%) | 5,3 | 4,4 | 6,7 | 7,3 | 6,7 | 8,6 |
| Growth/decline of unemployment (%) | -1,8 | -0,9 | 2,3 | 0,6 | -0,6 | 1,9 |

Source: CNB (2012), CSO (2012), [Author´s calculation]

An important analysis indicator of FDI is the ratio of FDI to GDP of a country. This macroeconomic indicator identifies the percentage by which FDI contributes to the creation of the total product of a country.

Starting in 1998, there was considerable growth of FDI. Between 1999 and 2002, FDI increased, and at the same time the percentage ratio of FDI to GDP was the highest. In 2003, FDI dropped, as did the ratio to GDP. The next year, FDI increased twofold and in 2005 returned to its 2002 levels.

According to the Czech Statistical Office,[17] all neighboring eastern block countries show an increasing tendency in FDI. Poland earns the highest position in the indicator FDI as a % of GDP. The Czech Republic is in second place. In an international comparison the Czech Republic took leading positions. Moreover, among the new EU member countries, higher rates of FDI on GDP were seen in Estonia (87%) and Bulgaria (90% in 2007 and 2010). On the

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[16] Available from http://www.czso.cz/csu/2011edicniplan.nsf/publ/1158-11-n_2011
[17] Ibid.

contrary, lower rates occurred in Latvia (45% in 2009 and 2010) and Slovenia (30%).

Extended supply of FDI means an ever-increasing representation of foreign companies in the structures of the Czech economy. The transnational index[18] is an ppropriate indicator that demonstrates the penetration rate of FDI into the host economy or its importance for a particular economy. This indicator is used in UNCTAD. Values of these index show that the position of FDI in Czech economics is significant. It increased in 2007 about 27%. Among the new EU members, Estonia (about 47%), Slovakia (35%), Hungary (33%), Poland (22%) and Slovenia (18%) gained the highest values.

Even though the main influx of FDI got to the Czech Republic later than to Poland or Hungary, by the beginning of the millennium the Czech Republic was one of the highest in the world in FDI, which had become a significant stimulus of the domestic economy.[19]



*Fig. 9 Influx of FDI and ratio of FDI to GDP in the Czech Republic 1995-2012*
*Source: CNB, [Author´s calculation]*

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[18] Transnational index is calculated as the average of the following ratios: influx of FDI in percentages of the creation of gross fixed capital for the period of 3 previous years, supply of FDI as a percentage of GDP, value added of subsidiaries of foreign companies in percentages of GDP in a particular year and the employment in foreign companies in percentages of total employment.

[19] Available from http://www.czso.cz/csu/2011edicniplan.nsf/publ/1158-11-n_2011

Extended supply of FDI means an ever-increasing representation of foreign companies in the structures of the Czech economy. The transnational index[20] is an appropriate indicator that demonstrates the penetration rate of FDI into the host economy or its importance for a particular economy. This indicator is used in UNCTAD. Values of these index show that the position of FDI in Czech economics is significant. It increased in 2007 about 27%. Among the new EU members, Estonia (about 47%), Slovakia (35%), Hungary (33%), Poland (22%) and Slovenia (18%) gained the highest values.

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*Fig.  10 FDI, net inflows (% of GDP) in the CR, Hungary, Poland and Slovakia*
*Source: The World Bank[22], [Author′s calculation]*

### 3.1.3   Influx of FDI and its influence on the unemployment

Proponents of investment incentives claim that foreign investment will decrease unemployment in the host economy. According to the study of MTI (2006), investment incentives decrease the unemployment rate. However Schwarz (2007) disagrees.

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[21] Available from http://www.czso.cz/csu/2011edicniplan.nsf/publ/1158-11-n_2011
[22] Available from
http://data.worldbank.org/indicator/BX.KLT.DINV.WD.GD.ZS/countries/1W?display=default

An influx of FDI into the domestic economy will influence the local economy with some time lag. According to Fig. 11, the influx of FDI resulted in decreased unemployment in some time periods, e.g., Increased FDI between 1999 and 2001 resulted in a significant decrease in unemployment in 2002. A deep global economic recession occurred in 2008, resulting in a decrease in FDI and an increase in unemployment. Fig. 12 shows a correlation analysis of these two indicators, unemployment and FDI.
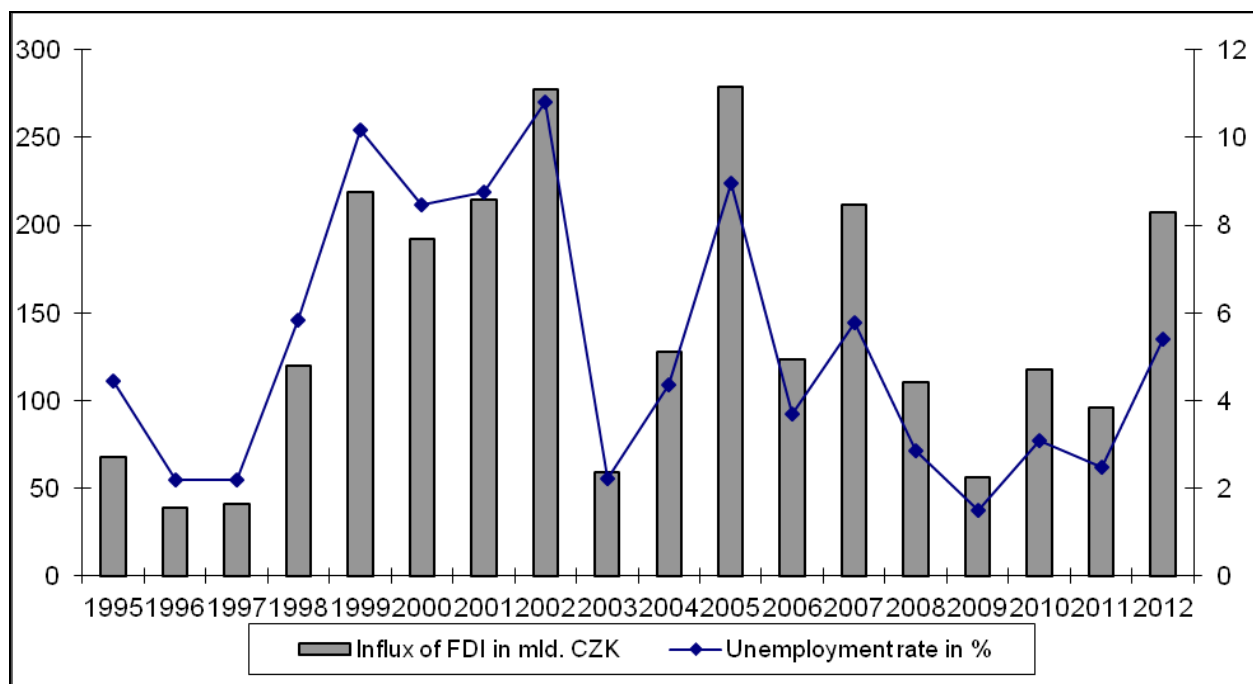


*Fig. 11 Influx of FDI and unemployment (1995-2012)*
*Source: CNB and CSO, [Author′s calculation]*

Regression functions working with some time lags make for a better analysis. FDI and unemployment rates were calculated as moving averages by using correlation and estimation and shifting unemployment data one year forward.
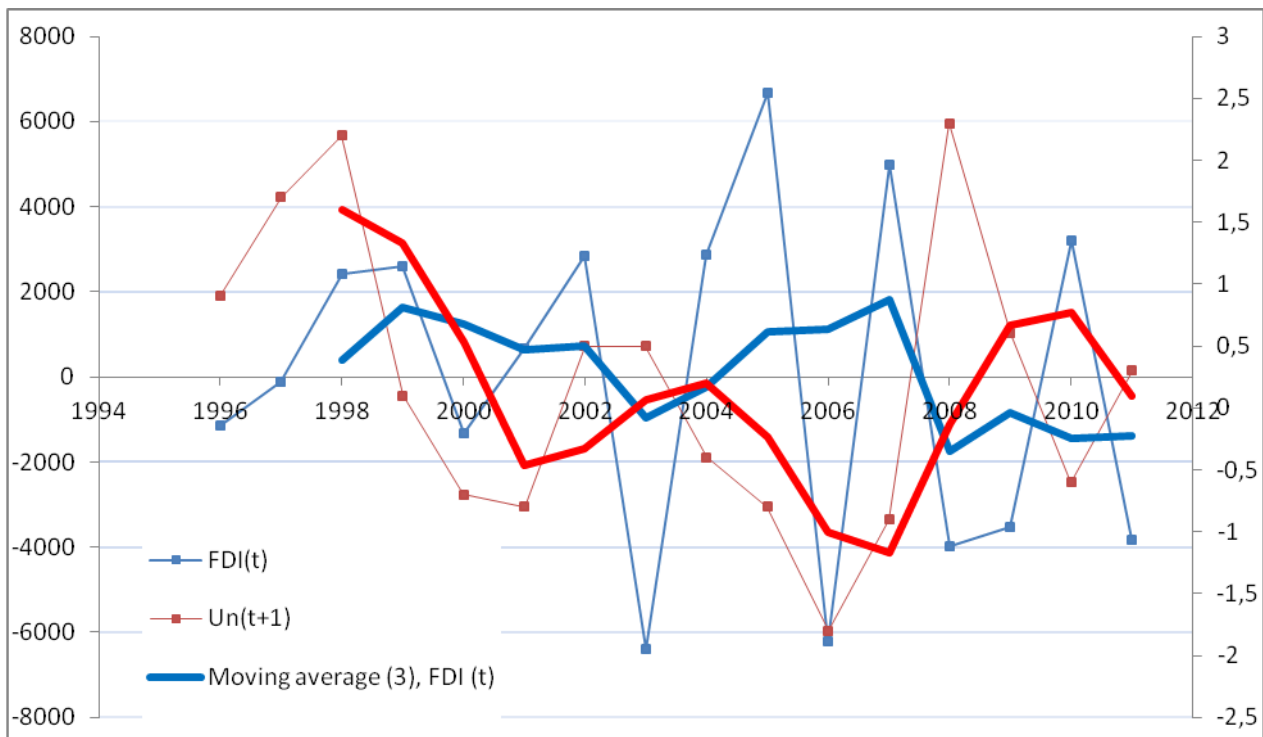
*Fig. 12 Influx of FDI and unemployment by regression function (1995-2012)*
*Source: CNB and CSO, [Author´s calculation]*

Through the analysis of residuals (its correlation) H0 was not rejected, as there was not proof of relation between variables. Residuals were established as the difference between the real values and by:

1) Regression function (estimation by ordinary least squares).
2) Estimation provided by moving averages.

Fig. 12 shows a weak trend. Residuals were used to cleanse the original time series by trend (structural) influence.

The hypothesis of no relation proved false. Instead, there is a middle strength, direct relation between variables. This means that the influx of FDI influenced the unemployment rate.

### 3.1.4   Corporate tax rate

The second important factor influencing FDI is high corporate taxes.
Since the establishment of the EU, on the economic field one of the aims was to harmonise taxes. This aim was partly fulfilled in indirect taxes, but in the area of direct taxes it proved to be more complicated. There are two views of tax harmonisation. Firstly, it should harmonise corporate taxes and erase investment incentives. The second view claims that tax competition should be more convenient because low corporate tax rates will attract foreign investors to a country. However, there is a problem in the amount of taxes. Lower tax incomes will not cover the government´s spending. Decreasing taxes is most often considered a double-edged sword.
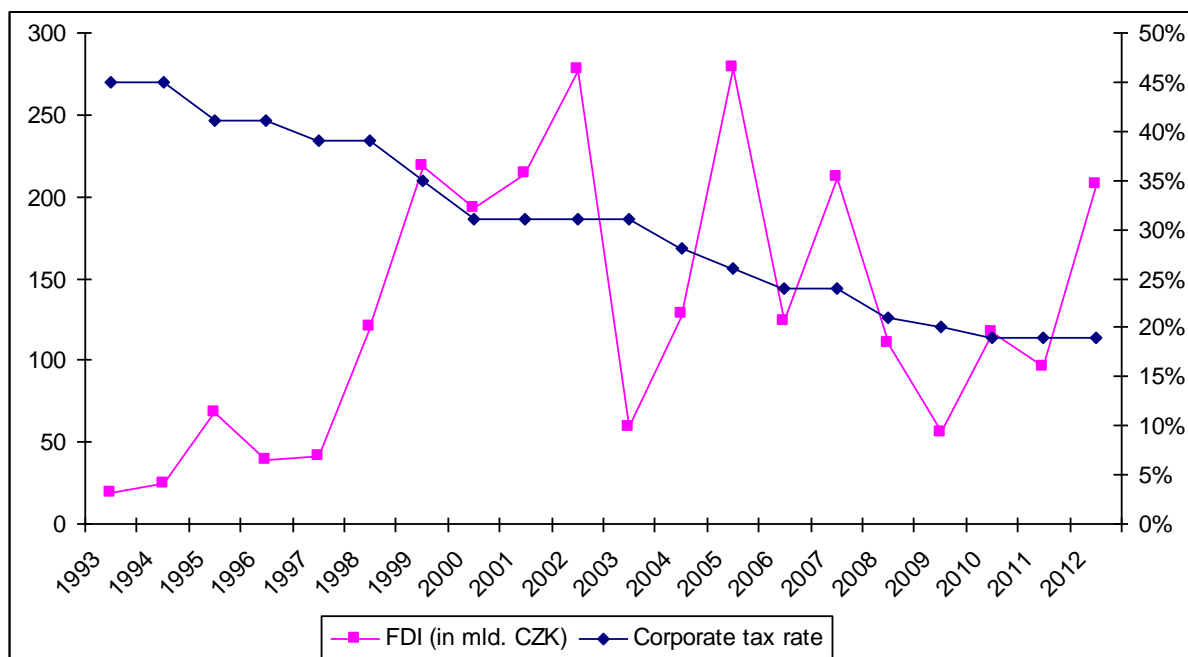
*Fig. 13 Evolution of corporate tax rate and FDI (1993-2012)*
*Source: CNB and CSO, [Author´s calculation]*

According to Fig. 13, the corporate tax rate since 1993 has gradually decreased from 45% to 19%. The influx was the highest in 1999, 2001, 2002, 2006 and 2012, when FDI exceeded 200 billion CZK. This trend in the evolution of corporate tax was decreasing; however the influx of FDI is evoluted diverted.

## 3.2 Evolution of the condition for providing investment incentives in the Czech Republic

Until 1998 the Czech Republic had no completed policy for the support of FDI, nor established system of investment incentives. In the beginning it was not placed stress on investment support of foreign investors. Some elements of support were directed to help by transformation of Škoda Auto Mladá Boleslav. Later it was positive point of view to the system of investment support. This situation arose from the economic situation in that time and currency turbulences in 1997. At that time, the Czech Republic had to leave the system of fixed exchange currency and pass to so call directed market currency course (dirty floating). Therefore legislative frame for investment incentives was defined by resolution of Tošovský "clerical"government by the way of the pilot project into manufacturing industry No. 298 from the year 1998. At that time there was a draw of investment incentives for investors in the Czech Republic. The system of the support was in the beginning prepared by experts from the Ministry of industry and business in accordance with the rules of the EU in the

filed of public support. It was established the basic and equal conditions for home and foreign investors. One of the basic requirements for the receiving of the incentives was the requirement to provide investment in the amount of 25 mil. CZK.

According to the Government decree from 1998 pased the Act No. 72/2000 February, 24, 2000 concerning investment incentives and its consecutive update as amended by Act 452/2001 effective from January, 30, 2001. This Act was gradually two times novelised (with the validity of novels from January, 30, 2002 and since May, 1, 2004). The following Acts No. 320/2002, Act No. 19/2004 related with the entrance to the European Union and its aim was to precede eventual international arguments, which should solve the European Commission. The next Act No. 436/2003, Act No. 62/2005 and Act No. 443/2005, Act No. 159/2007 with the date of effect from July, 2, 2007. The Czech Republic became the first country in the middle and eastern Europe, where was the system of investment incentives given by the law.

CzechInvest became the organisation of realisation for the implementation of system of investment incentives. It founded the Ministry of Industry and Trade.

Act No. 72/2000 concerning investment incentives is linked with many further Acts, especially: § 35a and 35b Act No. 586/1992 concerning Taxes from incomes in as amended by act No. 72/2000, § 17 para 3 Act No. 229/1991 concerning adaptation of owners'relation to land and other agriculture property as amended by Act No. 183/1993, § 2 para 3 Act No. 344/1992 concerning land register in the Czech Republic (cadastral Act) as amended by acts in later regulations. The following § 11 Act No. 151/1997 concerning evaluation of property and amendment of some particular Acts (Act about evaluation of property) and § 111 Act No. 435/2004 concerning employment.

Investment incentives are one of the form public support and they are governed by government regulation No. 310/2004. According to it Ministry of industry and trade with the cooperation and Office for the Protection of the Competition determine the allowable rate of public support from the value of the investment's costs suitable for providing of public support and related to the investment's project of the client. Public support provided by the form of investment incentives is fully compatibile with the relevant rules of the European Union. **Without the exception of from the interdiction of the public support it is not possible in the frame of the Act concerning investment incentives, these support awarded.**

This act was fully accepted by the European Comission and it came to a conclusion that in the Czech Republic, there is transparent and fully credible environment for foreign investors. Receipt of this legal standard was created the credible legal frame for providing investment incentives in the Czech Republic transparent as for investors, as for involved central organs of the state

administration. In addition, for all authorities participating on the administrative decision about the providing of investment incentives of the Ministry of industry and trade became it transparent.

In the system of investment incentives were accepted two accompanying programmes as programme of subcontractor and programme for support of development of industrial zones. The first one contributes to the increase of competitiveness of Czech subcontractors by mediation of information between them and investors. The programme of development of industrial zones is every year approved by government and its aim is by the support to municipalities to assure the investment preparation of the land for the particular investor who applied its requirement for investment incentives. In this case there are so called incentives projects. The programme makes it possible in advance according to the established criteria to support investments preparation of the area of the industrial zone in advance. It is so called developed projects.

Act No. 72/2000 adjusts on the directly used regulation of the European Community general conditions for providing of investment incentives, process of gaining the investment incentives and state administration process. To this relates the support of economic development and creation of the labour force in the Czech Republic. From above results the necessity of many novelisation of the Act No. 72/2000 due to high-quality care of the investment surrounding in the Czech Republic as the dynamic and still developing event. Goal-directed and qualitative care about the investment environment is necessary elements for the further grow of competitiveness of the Czech Republic.

## 3.3  Types of investment incentives

Provided fulfillment of law condition it is possible  to provide these necessary investment incentives[23]:

- corporate income tax relief for up to 10 years for new companies in case of  building a new factory or partial corporate income tax relief for up to 10 years for existing companies in cases of extension, modernisation of existing production capacity;
- job creation grants,
- training and retraining grants,
- cash grant on capital investment,
- transfer of public land at a favourable price according to § 17 para 3 Act No. 229/1991, about the treatment of property relation to land and other agriculture property as amended by Act No. 183/1993, registered in real estate cadastre as agriculture land and transfer of other types of lands, according to the prices identified according to the § 11 Act No. 151/1997,

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[23] Available from: http://business.center.cz/business/pravo/zakony/invpob/cast1.aspx/

about the property evaluation, effectual to the day of concluded agreement about the transfer.

According to the Act about the investment incentives are promised to investors on the basis of Decision about the promise of the investment incentives. The process of providing investment incentives consists of two phases. There are two independent administrative procedures adapted in Act of investment incentives. Every administrative procedure is finished by the issuing relevant administrative procedure and *Offer on providing of investment incentives* (according to § 4 para 3 Act about investment incentives administrative procedure starts after the day since submission of concept of providing investment incentives by applicant according to § 3 para 1 given organisation) and *Decision about the promise of investment incentives* according to § 5 para 3 Acts on Investment incentives (administrative procedure starts since submission of application for undertaking of investment incentives according to § 5 para 1 by applicant).

## 3.4 The role of the CzechInvest agency

In the Czech Republic was founded an Agency for support of business „CzechInvest[24]", which is a contribution agency subordinated to Ministry of industry and trade of the Czech Republic. Its goal is to strengthen the competitivenss of the Czech economy by the support of small and middle businesses, enterprises infrastructure, innovation and gaining by foreign investments from the manufacturing, strategic services and the technology centres.

To easen the communication between the government, enterprises, and the European Union, the CzechInvest is responsible for the whole range of support in the manufacturing industry as from the EU and the state budget. CzechInvest promotes the Czech Republic. It is an unique organisation who can submit application for investment incentives and support Czech companies who are interested in subcontractors chains of MNCs. Within thesse services CzechInvest contributes to the development of home companies, Czech, foreign investors and the total business surrowdings.

Since April 1998 until 14. 1. 2013 have been aproved [25] on 681 projects to gain investment incentives in amount of 19 574 mil. EUR (22 703 mil. USD) and will be created about 140 375 work places. Investment incentives directed mostly to the manufacturing sectors, especially to the production of automobiles, engineering industry, rubber industry, electronic, chemistry and food industry. The least part of investment incentives are directed into textile, woodprocessing and paper industry.

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[24] Available from: http://www.czechinvest.org/
[25] Available from: http://www.czechinvest.org/investicni-pobidky-nove

The highest investments were in 2002, the least in 1993. By the help of CzechInvest agency was the highest part of the foreign investments in 2006. At that time among 93% of foreign investment were invested by the help of CzechInvest.

According to Durčáková and Mandel (2007), the direct investment in based on the long term relationship between the investor and its investment. From the quantitative point there are investments, by them the investors gains minimal value of 10% share on the base capital of the company.

Tab. 6 – Total FDI and FDI provided by CzechInvest (in mil.)

| Year | Total influx of FDI | | | Investments by Czechinvest | |
|---|---|---|---|---|---|
| | CZK | USD | EUR | CZK | rate (%) |
| 1993 | 19,050 | 657 | 559 | 361.39 | 2 |
| 1994 | 24,994 | 869 | 734 | 2,131.99 | 9 |
| 1995 | 67,993 | 2,562 | 1,982 | 2,260.10 | 3 |
| 1996 | 38,775 | 1,428 | 1,140 | 5,216.76 | 13 |
| 1997 | 41,251 | 1,300 | 1,152 | 1,624.00 | 4 |
| 1998 | 119,969 | 3,718 | 3,317 | 28,621.17 | 24 |
| 1999 | 218,812 | 6,324 | 5,933 | 15,259.34 | 7 |
| 2000 | 192,421 | 4,986 | 5,404 | 94,164.97 | 49 |
| 2001 | 214,585 | 5,641 | 6,296 | 54,690.05 | 25 |
| 2002 | 277,689 | 8,483 | 9,012 | 61,714.92 | 22 |
| 2003 | 59,316 | 2,101 | 1,863 | 35,850.80 | 60 |
| 2004 | 127,844 | 4,974 | 4,007 | 55,595.14 | 43 |
| 2005 | 279,181 | 11,658 | 9,374 | 77,470.00 | 28 |
| 2006 | 123,431 | 5,459 | 4,355 | 11, 617.00 | 93 |
| 2007 | 211,944 | 10,436 | 7,634 | 70,954.00 | 33 |
| 2008 | 110,130 | 6,465 | 4,415 | 27,859.64 | 25 |
| 2009 | 55,794 | 2,928 | 2,110 | 16,888.91 | 30 |
| 2010 | 117,275 | 6,137 | 4,637 | 16,247.87 | 14 |
| 2011 | 41,011 | 5,407 | 3,890 | 33,665.83 | 35 |
| 2012 | 207,374 | 8,248 | 10,590 | 38,069.00 | 18 |
| *Total* | *2,548,839* | *99,781* | *88,404* | *753,263.00* | *537* |

Source: CNB[26](2012)

The highest influx of FDI to the Czech Republic was in 2005, when the total FDI was 11 658 USD. The second highest influx took place in 2007. The highest

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[26] Available from: http://www.cnb.cz/en/statistics/bop_stat/fdi/index.html

rate of FDI (93%) which were invested by the help of the CzechInvest was in 2006.

The results of the work CzechInvest is displayed in the following table since 1993 until 2011.

Tab. 7 – Territorial structure of investments

| Country | Projects | Investment (mil.CZK) | Investment (mil. USD) | Jobs |
|---|---|---|---|---|
| Belgium, Luxembourgh, Netherlands | 81 | 48,584.91 | 1,953.17 | 14,017 |
| Czech Republic | 1041 | 132,035.98 | 5,772.05 | 41,648 |
| China, India | 11 | 3,241.27 | 148.72 | 2,697 |
| Denmark, Finland, Sweden, Norwegen | 33 | 15,047.25 | 637.40 | 5,856 |
| France | 36 | 30,056.85 | 1,052.77 | 8,525 |
| Ireland, Great Britain | 89 | 23,522.07 | 855.21 | 14,381 |
| Italy, Cyprus, Spain | 59 | 24,624.45 | 1,017.56 | 6,873 |
| Japan | 101 | 98,150.13 | 3,209.86 | 25,000 |
| Korea | 19 | 46,289.78 | 1,893.33 | 8,432 |
| Germany | 254 | 171,116.52 | 6,390.03 | 45,647 |
| Canada, Mexico | 10 | 14,131.86 | 409.78 | 4,048 |
| Austria, Switzerland | 66 | 33,285.93 | 1,356.07 | 6,516 |
| Tchai-wan | 24 | 11,594.96 | 478.29 | 17,912 |
| USA | 154 | 58,500.88 | 2,379.63 | 29,699 |
| Poland, Slovakia, Russia | 9 | 3,289.79 | 182.39 | 641 |
| Others | 8 | 6,444.87 | 311.59 | 1,000 |
| **Total** | **1991** | **719,917.50** | **28,047.85** | **232,889** |

Source: Czechinvest[27]

## 3. 5 Process of providing investment incentives

Process providing of investment incentives is based on the Decision to grant the investment incentives on the base of the Offer for investment incentives. Providing of investment incentives is based on the judgement of the investments intend of the applicant by the affected ministries before the issuing Offer to receiving of investment incentives. Before the issue of final Decision to Grant Investment Incentives has to express its statement Ministry of Finance and Ministry of Labour and Soccial Affairs (MLSA).

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[27] Available from: http://www.czechinvest.org/podpora-investic

Ministry of Finance or more precisely locally authorized Revenue Authority is obliged to controll information from the tax return and verification of calculation tax discount regarding to other provided types of public support;

- control of general conditions[28]:

    1. obtaining machine engineering device in amount of at least 40% of the total value of long-term tangible and non-tangible property, until 3 years since issuing the Decision to grant investment;
    2. assets in amount of 200 mil. CZK (in regions with the unemployment rates exceeding an average unemployment rate according to the statistics of MLSA less than 25% only 150 mil. CZK in regions with the unemployment rate exceeding the average rate according to the MLSA less than 50%, only 100 mil. CZK. At least half of these amounts has to be covered by the own capital or own means by the physical person at least until 3 years since issuing Decision to grant investment;
    3. buying of assets in the frame of investment action since the day of the Intent to gain investment incentives.

Act No. 72/2000, in amendment Act No. 453/200, contributed to the improvement of the legal security of its members and ensured consistent control of financial means provided from the state budget. By this amendment was reached better compliance with other legal documents, especially the law about the public support.

Act No. 72/2000 was determined only for manufacturing industries. According to the amendment to the Act on Investment Incentives in July, 2012, there are included Technology centres (research and development), business support services centres as software development, shared service centres, high-tech repair centres.

Strategical services are chosen types of services especially centrum of customer support, shared service centres. These investment incentives contribute to more dynamic development of these services than manufacturing industry.

By the dissemination of the system of investment incentives it is necessary to take into consideration the initial investments into the assets and on the contrary high requirements stressed on the qualification of the work labour related to expenses in this field.

The important core of these projects is also process of concentration acitivities from various countries into an one centrum, which operate on international market. In the relation with his factor, the reflux of work places can occurred.

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[28] Available from: http://www.czechinvest.org/podpora-investic

*Tax investment incentives according to the Amendmet to the Act on Investment Incentives and to the Act on Income Taxes*

Prerequisite to the exercise of tax investment incentives according to the Act on Investment Incentives and Act on Income Taxes is issuance the Decision to investment incentives and fulfillment of general conditions required in Acts on Investmnet Incentives and special conditions mentioned in Act on Income taxes.

Corporate income tax relief is possible to exercise in the duration 10 consecutive taxation period. Corporate income tax relief for up to 10 years is as a public support. Without the permission of Ministry of Industry and Trade with the cooperation of Office for the Protection of Competition, which will declare the maximum of public support and it can not be exceeded.

By the determination of maximum rate and amount of public support can be the public support drawn before the 10 year´s period and the further support can not be drawn. Corporate income tax relief is conditioned by all means to decrease the tax base including using of all possibilities to decrease it, by tax loss.

## 3.6 Situation in the Czech Republic

Czech Republic was considered to a competitive country because of the relatively cheap labour force. However this assumption changed, because competitive economies are not any more the states with cheap labour force. Countries pulled by primar resources, but economies which aspire about the achievement of knowledge economy. Knowledge help to support economic and social development of a country and finally they lead to the growing of competitiveness of a country. Therefore it is necessary for the Czech Republic to focus on widening its knowledge potential. This potential will lead to growing competitiveness of a country. According to the World´s Bank it is recommended to have educated and qualified population which will share and use its knowledge. According to the White Book of Tertiary Education of Czech Republic (2008)[29], CR was in the beginning of 3th stage, so called economy pulled by innovations. This stage lay stress on the developing of quality of human resources and their development and education (especially tercial education). Moreover investment into the research with the high innovative potential.

Orientation of investment incentives in the Czech Republic Amendmet to the Act on Investment Incentives does not support the businesses by the education and development of knowledge to its employees. Structure of investment incentives does not reflect the endeavour of the EU to turn to knowledge and information society. Investment incentives are directed on providing tax relief,

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[29] Available from: http://vos.tul.cz/zapisy/bila-kniha.pdf

subventions to assets (financial stimulus). The reason is that on the decision have the influence especially financial investment incentives. Due to this fact are reduced the initially costs and investors have to face with lower risks by the realisation of its project. However to attract investors do not have to various subventions and investment projects. The same effect can have modern infrastructure, increasing the level of education, improving of the business environment, etc.

Barry and Crafts[30] (1999) deal with this idea on the example of Irish economy. Where the influx of foreign capital influence factors as the size of the market, real level of income in economy, knowledge level in host country, modern infrastructure and further political and macroeconomic factors.

There is one barrier in increasing of competitiveness which is the system of investment incentives dealing with. It is discrepancy between the offer and demand for work. This is characteristic especially for weak and structural affected regions. Since 1999 the financial support is provided to these support until 2004, when it was part of the programme Support of regional development. This programme was expired in 2007, nevertheless 3 years later was created new list of structural affected regions needing state help. The main feature of new specified regions is the high unemployment rate. One of the possibilities how to solve this problem, is to design investment incentives focused on education.

## 3.7 Investment incentives into manufacturing industry

Investors who locate their investments in the Czech Republic can obtain aid in the form of investmnet incentives. Czech and foreign legal entities and natural persons conducting business can apply for investment incentives. Only a legal entity with its registered office in the Czech Republic can be a recipient of investment incentives.

Supported areas[31]:
**1) Industry**
Introduction or expansit of production in sectors of the manufacturing industry.
**2) Technology centres**
 Construction or expansion of research and development centres.
**3) Business support services centres**
Launch or expansit of the activities of:
- shared-services centres,
- software-development centres,
- high-tech repair centres.

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[30] Available from: http://publish.ucc.ie/ijpp/2011/02/Barry/01/en
[31] Available from: http://www.czechinvest.org/data/files/ipo-brozura-vnitrek-obalka-2013-nahled-3298-en.pdf

The Investment Incentives Act stipulates for each activity conditions which must be fulfilled in order for the investor to apply for investment incentives. In the case of each activity, the conditions must be fulfilled within three years from the date on which the investment incentives are granted (i.e. issuance of the decision to grant investment incentives).

For all types of activities, it further applies that the recipient shall not start work on the project (i. e. shall not acquire any assets including orders of machines and equipment and shall not commence construction works) prior to issuance of the confirmation of project registration by CzechInvest, and that the recipient shall retain the required assets and created jobs throughout the entire period of utilising state aid (at least for a period of five years).

Enterprises with an investment project which will be implemented within the manufacturing industry pursuant to the classification of economic activities (CZ-NACE) can be supported.

## General Conditions for Qualification[32]

A basic condition is a minimum investment in long-term tangible and intangible assets in the amount of CZK 50 million in Regions I, of which at least CZK 25 million must be invested in new machinery, and CZK 100 million in Regions II, of which at least CZK 50 million must be invested in machinery, whereas at least half of the minimum investment amount must by financed with the investor's own capital.

## Strategic Investment

A strategic investment is considered to be an investment wherein the value of the minimum amount invested in long-term tangible and intangible assets reaches the value of **CZK 500 million**, of which at least CZK 250 million is invested in new machinery **and at least 500 new jobs are concurrently created.**

Tab. 8 - Strategic investment

| Manufacturing Industry | Division of Regions | Min. Amount of Investment in Assets | Min. Amount of Investment in New Machinery | Min. Number of Newly Created Jobs |
|---|---|---|---|---|
| Investment | Regions I | CZK 50 mil. | CZK 25 mil. | 0 |
| | Regions II | CZK 100 mil. | CZK 50 mil. | 0 |
| Strategic investment | Regions I and II | CZK 500 mil. | CZK 250 mil. | 500 |

Source: Czechinvest[33]

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[32] Available from: http://www.czechinvest.org/data/files/brozura-investicnich-pobidek-po-novele-3297-cz.pdf

[33] Ibid.

*Fig. 14 Specification of Regions*
*Source: Czechinvest*[34]

### 3.7.1 Technology Centres

Enterprises focused on applied research, development and innovation of technically advanced products, technologies and production processes for the purposes of use in production and increasing value added can be supported.

**General Conditions for Qualification**
The minimum amount of investment in long-term tangible and intangible assets is CZK 10 million, of which at least CZK 5 million must be invested in new machinery, whereas at least half of the minimum investment amount must be financed with the investor's own capital. Concurrently, it is necessary to create at least 40 new jobs.

**Strategic Investment**
A strategic investment in the area of technology centres is considered to be an investment wherein the minimum amount invested in long-term tangible and

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[34] Available from: http://www.czechinvest.org/data/files/brozura-investicnich-pobidek-po-novele-3297-cz.pdf

intangible assets is CZK 200 million, of which CZK 100 million comprises the value of new machinery and at least 120 jobs are concurrently created.

Tab. 9 – Strategic Investment Action

| Technology Centres | Min. Amount of Investment in Assets | Min. Amount of Investment in New Machinery | Min. Number of Newly Created Jobs |
|---|---|---|---|
| Investment | CZK 10 mil. | CZK 5 mil. | 40 |
| Strategic investment | CZK 200 mil. | CZK 100 mil. | 120 |

Source: Czechinvest[35]

### 3.7.2   Business Support Services Centres

Aid is intended for shared-services centres focused on taking over management, operation and administration of internal activities such as accounting, finance, administration in the area of human resources, marketing and administration of information systems, and also for high-tech repair centres and software development centres.

In order to qualify for the programme, it is necessary to create at least 40 new jobs in the case of software-development centres or at least 100 new jobs in the case of other business support services centres.

Tab. 10 - Business Support Service Centres

| Business Support Services Centres | Min. Number of Newly Created Jobs | |
|---|---|---|
| | Software-development Centres | Other Centres |
| Investment | 40 | 100 |

Source: Czechinvest[36]

### 3.7.3 State Aid

State aid is understood to be tax incentives, job creations grants and cash grant on capital investment. In the case of transfer of land for favourable prices,

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[35] Available from: http://www.czechinvest.org/data/files/brozura-investicnich-pobidek-po-novele-3297-cz.pdf

[36] Available from: http://www.czechinvest.org/data/files/brozura-investicnich-pobidek-po-novele-3297-cz.pdf

state aid comprises the difference between the purchase price and market prices of the given land.

Training and retraining grants are not counted within the maximum amount of state aid.

**Maximum Amount of State Aid**

Aid is provided up to the amount of the ceiling of maximum state-aid intensity stipulated by the Regional Map of State-Aid Intensity (see below).

The maximum aid amount is 40% (30% in the Southwest region) of total eligible costs. In the case of the manufacturing industry with investments in Regions II and concurrently with low-tech sectors, aid is reduced to 75% of the maximum state-aid intensity in individual regions. The territory of the city of Prague is excluded from the possibility to receive investment incentives.

State aid is increased by 10 percentage points for medium-sized companies and 20 percentage points for small companies.



| Region | State Aid | |
|---|---|---|
| Prague | 0 % | 🟥 |
| South – West | 30 % | 🟦 |
| Other Regions | 40% | ⬜ |
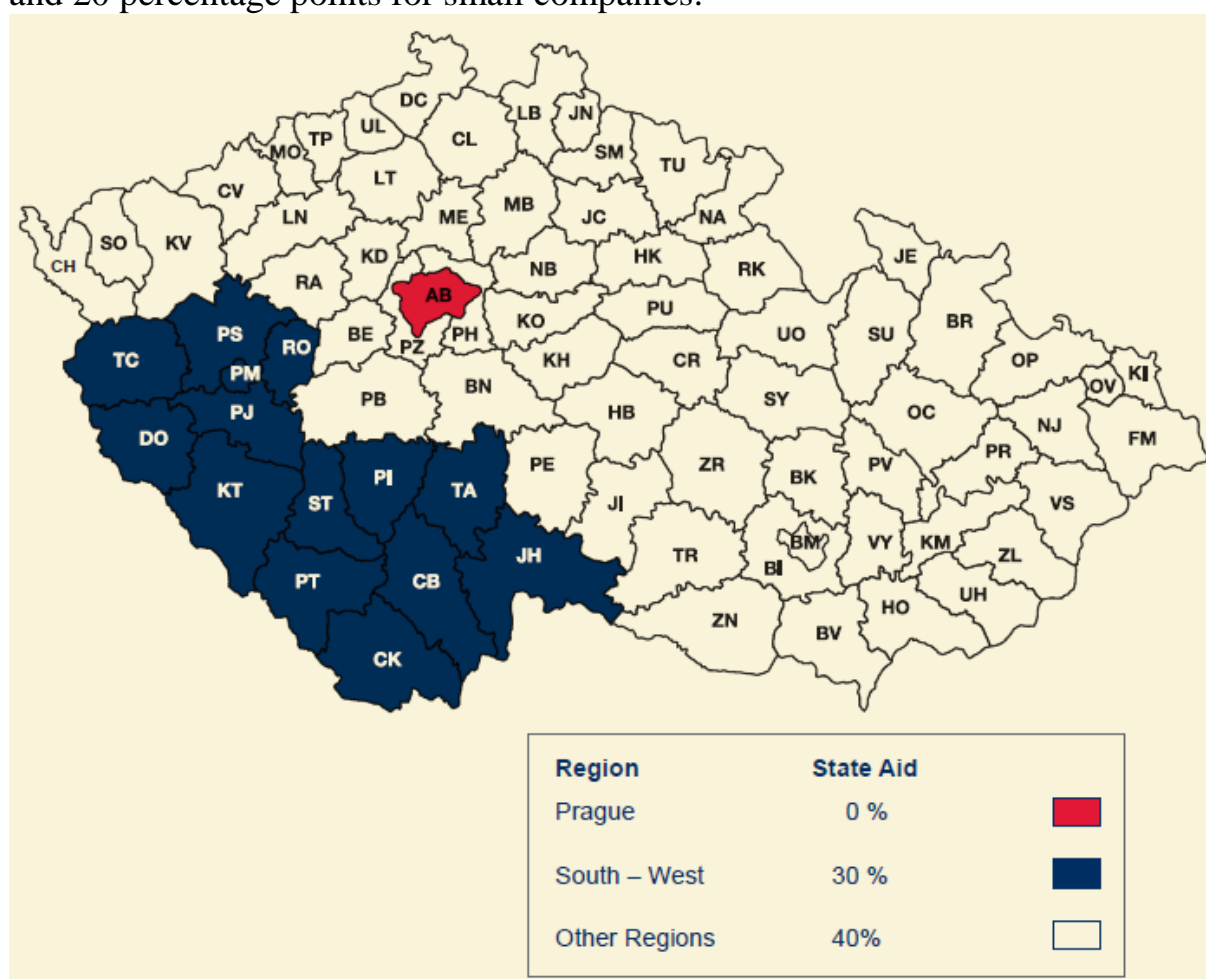
*Fig.  15 Regional Map of State-Aid Intensity for the Period 1. 1. – 31. 12. 2013*
*Source: Czechinvest[37]*

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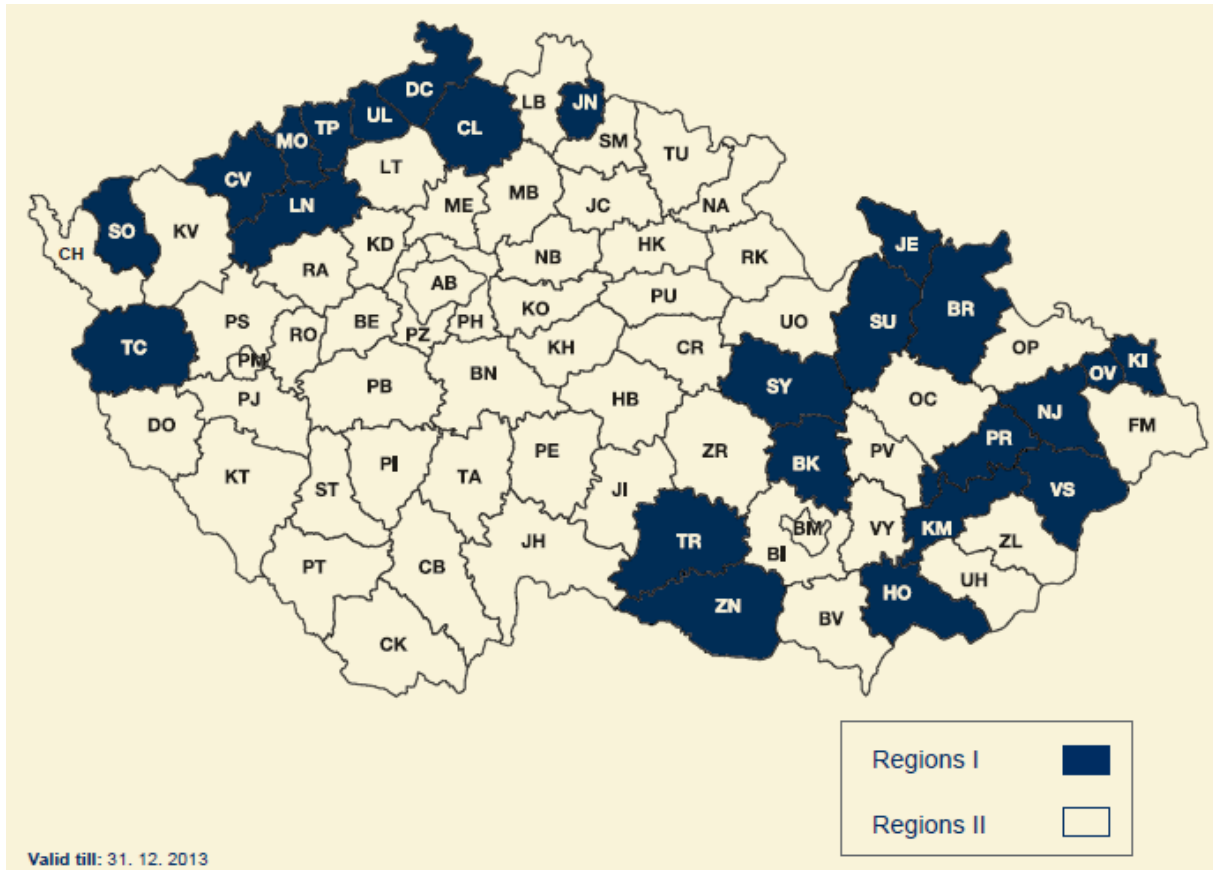[37] Available from: http://www.czechinvest.org/data/files/brozura-investicnich-pobidek-po-novele-3297-cz.pdf

### 3.7.4 Forms of Investment Incentives

In the Czech Republic there are the following forms of investment incentives[38]:
- **corporate income-tax relief,**
- **transfer of land for favourable prices,**
- **job creation grants,**
- **training and retraining grants,**
- **cash grants on capital investment, (in the case of strategic investments).**

All of the above-mentioned forms of support (with the exception of Training and retraining grants) are provided to investors maximally up to the amount of the ceiling of state-aid intensity (see the Regional Map of State-Aid Intensity).

### Corporate Income-tax Relief

It is possible to draw corporate income-tax relief for a period of **ten years** or, as the case may be, **for a period of ten consecutive tax periods** when the first tax period for which tax relief can be utilised is the tax period in which the statutory conditions are fulfilled, though no later than in the tax period in which a period of three years has elapsed since the issuance of the decision to grant investment incentives.

Tax relief is provided maximally up to the amount of the ceiling of state-aid intensity after deduction of job creation grants or the difference between the market and purchase prices of land and cash grant on capital investment.

The current corporate income-tax rate is **19%.**

### Transfer of Land for Favourable Prices

It is possible to undertake the favourable transfer of land or land equipped with infrastructure owned by the state or an organisational unit thereof or by a municipality. This depends on the consent of the owners of such land with such favourable transfer.

**The difference between the purchase price and the market price of the given land** is considered to be an investment incentive in this case.

### Job Creation Grants and Training and Retraining Grants

Cash grants are available **only** in regions with an unemployment rate that is at least 50% higher than the average unemployment rate in the Czech Republic, so-called **A regions.**

**Cash grant for one newly created job amounts to CZK 50,000. Cash grant for training and retraining** is provided in the amount of **25% of total expenditures on training and retraining.**

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[38] Available from: http://www.czechinvest.org/data/files/brozura-investicnich-pobidek-po-novele-3297-cz.pdf

Tab.  11– Type of Region

| Type of Region | Cash Grant per One Newly Created Job | Cash Grant for Training and Retraining |
|---|---|---|
| A regions | CZK 50 000 | 25%/35%/45% large/medium-sized/small enterprise |
| Other regions | N/A | N/A |

Source: Czechinvest[39]
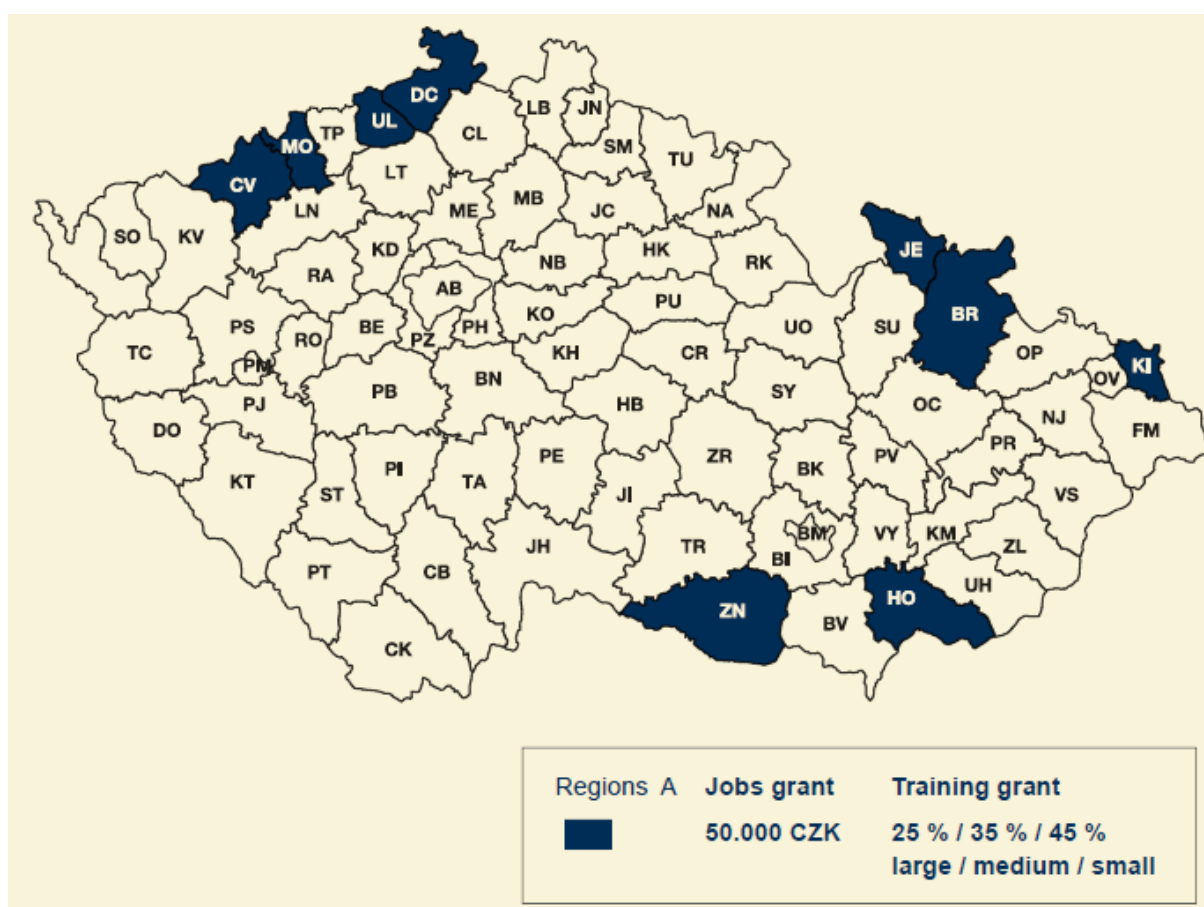


*Fig.  16 Job Creation Grants and Training and Retraining Grants*
*Source:  Czechinvest[40]*

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[39] Available from: http://www.czechinvest.org/data/files/brozura-investicnich-pobidek-po-novele-3297-cz.pdf

[40] Available from: http://www.czechinvest.org/data/files/brozura-investicnich-pobidek-po-novele-3297-cz.pdf

### 4.  Cash Grant on Capital Investment

**Cash grant on capital investment** can be provided **up to the amount of 5% of eligible costs** (max. CZK 1.5 billion in the case of a manufacturing project and max. CZK 0.5 billion in the case of a technology-centre project).

If commencement or expansion of production and establishment or expansion of a technology centre occur **simultaneously** within the given investment, the amount of cash grant can be **up to 7% of eligible costs.**

Aid is again provided maximally up to the amount of the ceiling of state-aid intensity and must be approved by the Government of the Czech Republic prior to provision.

## 3.7 Eligible Costs

Either **long-term assets,** when the value of machinery comprises at least half of the value of acquired assets, **or two years' gross wages** for newly created jobs can serve as eligible cost from which the maximum state-aid intensity is calculated.

The investor shall select one option; in the case of an investment in the manufacturing industry, only long-term assets comprise eligible costs.

### Long-Term Assets

Eligible costs comprise the value of long-term tangible assets in the form of **machinery** and, furthermore, the value or part of the value of long-term tangible assets in the form of **land** or **buildings** or **long-term intangible assets** purchased for the market price from entities other than related entities up to the value of machinery included in the eligible costs.

### Gross Wages

Eligible costs comprise the value of **wage costs** expended on new jobs in the course of **24 months** immediately following the month in which the jobs were occupied. New jobs can include only new jobs created and occupied by employees with the stipulated weekly working period in the period from the date of issuance of confirmation of project registration by CzechInvest until expiry of the three-year period from the issuance of the decision to grant investment incentives.

## 3. 8 Procedure for Completing the Investment-incentives Application

The procedure for competing the investment incentives are different according to the status of applicant and recipient.

*The applicant and recipient of investment incentives are two different entities:*
1. The applicant shall submit to CzechInvest a completed **investment-incentives application** with all required appendices.
2. CzechInvest shall prepare an opinion of the submitted application and submit it to the Ministry of Industry and Trade (hereinafter referred to as the "Ministry") (1 month).
3. In cooperation with other ministries, the Ministry shall evaluate the investor's investment project and prepare an **Offer for the investment incentives** (2-3 months).
4. Based on the Offer for the investment incentives, the investment-incentives recipient can submit to the Ministry, via CzechInvest, the **Application for a grant of Investment Incentives = acceptance of the Offer for investment incentives** (0-3 months).
5. The Ministry shall prepare a Decision to Grant Investment Incentives (1 month).

The total duration of the approval process is approximately 5-6 months.
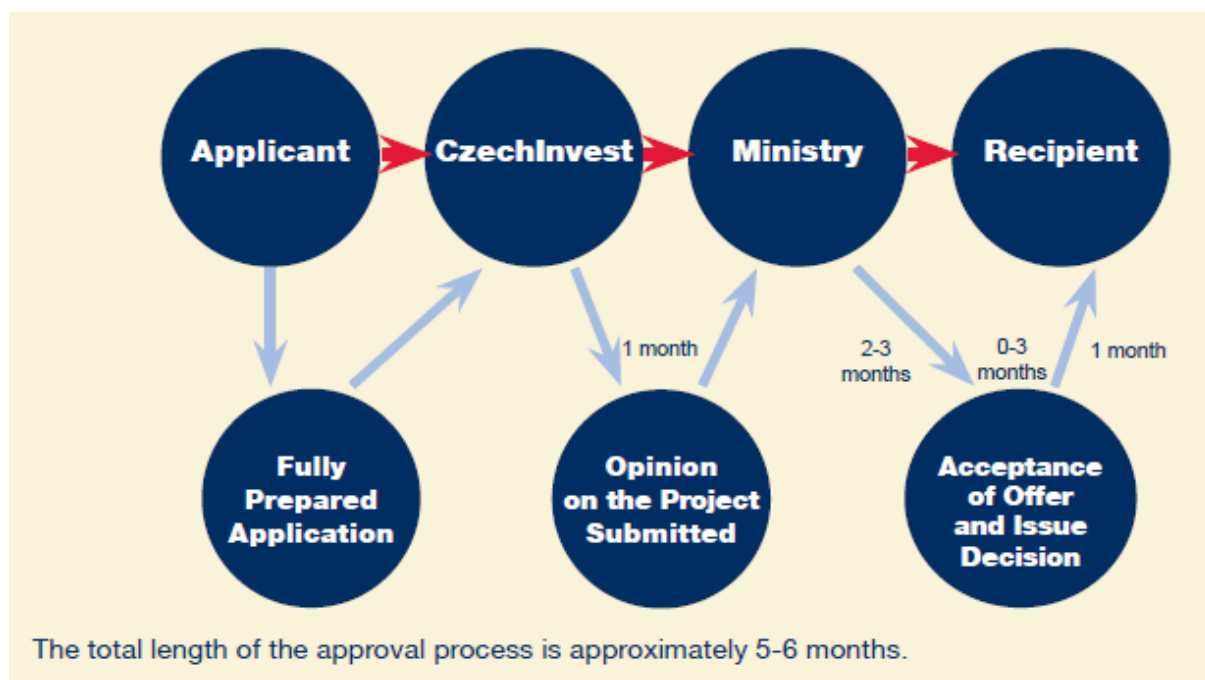


*Fig. 17 - The Applicant and Recipient of the Investment Incentives are Two Different Entities*
*Source: CzechInvest*[41]

***The applicant is concurrently the recipient of investment incentives***
1. The applicant shall submit to CzechInvest a completed investment-incentives application with all required appendices.
2. CzechInvest shall prepare an opinion of the submitted application and transfer it to the Ministry (1 month).

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[41] Available from http://www.czechinvest.org/data/files/brozura-investicnich-pobidek-po-novele-3297-cz.pdf

***3.*** In cooperation with other ministries, the Ministry shall evaluate the investor's investment project and prepare a Decision to Grant Investment Incentives (2-3 months).

The total duration of the approval process is approximately 3-4 months.

If the investor is granted job creation grants or training and retrainig grants, such investor shall sign, with the Ministry of Labour and Social Affairs, Contracts on Grants (no later than within three years of the issuance of the Decision to Grant Investment Incentives).
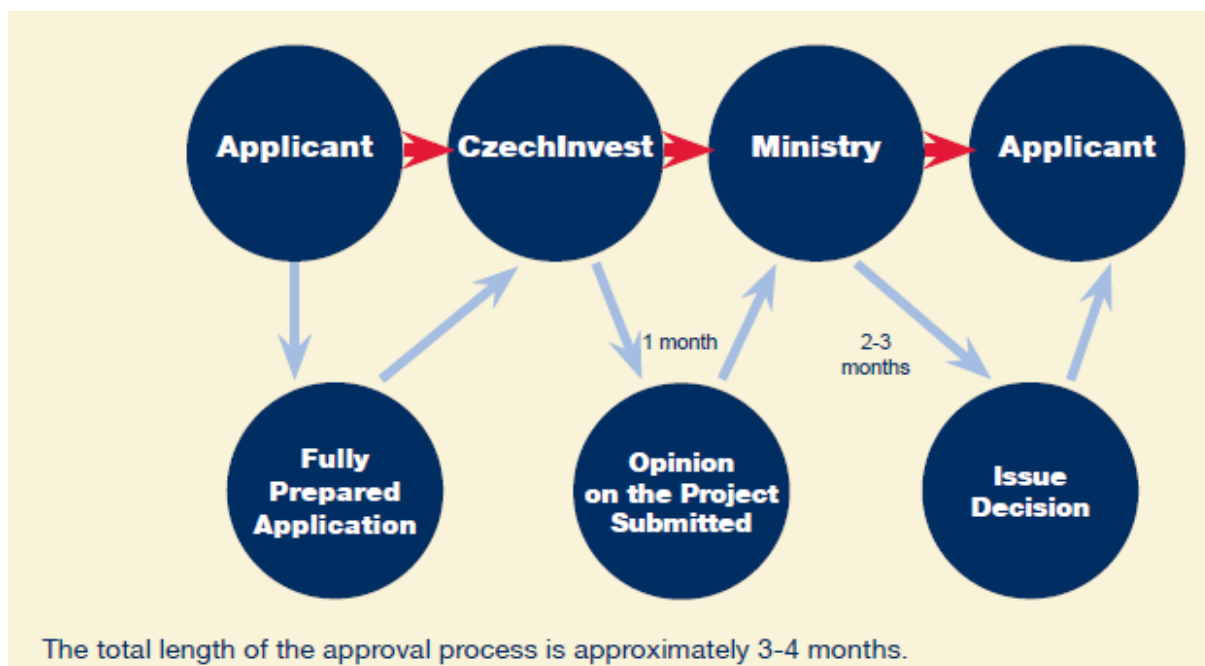


*Fig. 18 The Applicant is Concurrently the Recipient of Investment Incentives*
*Source: CzechInvest[42]*

## 3.9 Investment Incentives in Slovak Republic

Slovakia presents itself as an ideal investment destination mainly because of its political and economic stability strengthened by the common European currency Euro, competitive taxation system tax, availability of highly skilled and educated workforce offering the highest labour productivity in the CEE region with favourable labour costs[43].

Infrastructure that is growing steadily, large selection of industrial land and offices available for purchase or lease, harmonised investment incentives and high innovation potential for R&D projects are further assets of the country. Last but not least, the country has a favourable location in the heart of the Europe, between East and West, and between Poland, Hungary, Austria and the Czech Republic. Slovakia, the country in the heart of Europe, offers great advantages to foreign investors: strategic location between East and West with

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[42] Available from http://www.czechinvest.org/data/files/brozura-investicnich-pobidek-po-novele-3297-cz.pdf
[43] Available from http://www.sario.sk/userfiles/file/sario/pzi/statna/Statna%20pomoc.pdf

great export potential, the common European currency Euro and eight lowest debt of GDP in the EU27. In 2010 Slovak economy recorded a 4% GDP growth, one of the highest in EU. By the end of 2011, the GDP growth fell to 3.3%, but with the positive outlook for 2012. The European Commission forecast expects Slovak economy to grow by 2,6% in the following years and reach the highest GDP growth in Eurozone. In 2011 the inflation reached 3.9%.The country enjoys positive ratings from international rating companies and gained the best position among the CEE countries in World Bank's Doing Business Report 2008 - 2013.

Current best investment opportunities are observed in sectors R&D, Design & Innovation, Technology centres, ICT & SW development, BPO - Regional headquarters, High-tech sectors and Tourism centres. Additional opportunities can be found in the traditionally strong sectors with the growth potential found in Slovakia: Machinery & Precision engineering, Automotive, Metallurgy & Metal processing, Electronics and Chemistry & Pharmacy.

SARIO (Slovak Investment and Trade Development Agency) is the name of an agency who is responsible for investment stimulus in Slovakia.

The Act on Investment Aid divides projects which may be supported into four categories[44]:

- **Industry,**
- **technological centers,**
- **shared services centers,**
- **tourism.**

All types of projects may apply for the following forms of incentives: cash grant, tax relief, contribution to new jobs (certain percentage of two-year salary costs per each new employee) or transfer of the state/municipality property to the investor for the discounted price.

### 1. Industry

Minimum amount of investment in industry depends on the unemployment rate in the proposed location:

Tab. 12– Requirements for providing of financial support by industrial projects

| Unemployment rate | Minimum investment amount | | Part of new machingery | Own equity | |
|---|---|---|---|---|---|
| | Large enterprise | Middle and small enterprise | | Large enterprise | Middle and small enterprise |
| Lower than Slovak average (<13,16%) | 14 mil. EUR | 7 mil. EUR | 60% | 7 mil. EUR | 3,5 mil. EUR |
| Higher than Slovak average (>13,16%) | 7 mil. EUR | 3,5 mil. EUR | 50% | 3,5 mil. EUR | 1,75 mil. EUR |
| At least by 50% higher than Slovak average (>19,74%) | 3,5 mil. EUR | 1,75 mil. EUR | 40% | 1,75 mil. EUR | 0,875 mil. EUR |

Source: Sario[45]

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[44] Available from http://www.sario.sk/userfiles/file/sario/pzi/statna/Statna%20pomoc.pdf
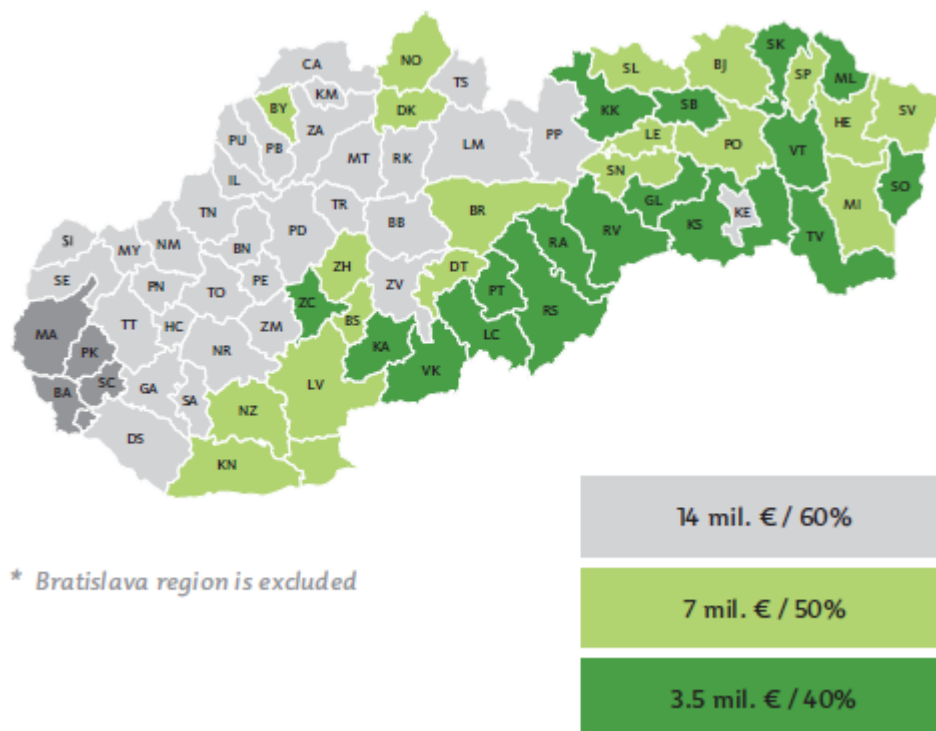
*Fig. 19 Minimum investment amount/share of new machinery by the industrial projects*
*Source: SARIO[46]*

### *2. Technological centres and Shared services centres*

Minimum amount of investment in technological centres and shared services centres is independent from the unemployment rate in the proposed location. The conditions are following:

Tab. 13 – Technological centres and Shared services centres

| Technological centres | Shared services centres |
|---|---|
| Minimum investment of 500 ths. EUR on the fixed assets. | Minimum investment of 400 ths. EUR on the fixed assets acquirement. |
| At least 250 ths. EUR must be covered by own equity. | At least 200 ths. EUR must be covered by own equity |
| The company must employ at least 60% of employees having university education. | The company must employ at least 30% of employees having university education. |

Source: Sario[47]

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[45] Available from http://www.sario.sk/userfiles/file/sario/pzi/statna/Statna%20pomoc.pdf
[46] Ibid.
[47] Ibid.

### 3. Tourism

Slovak Republic offers investment incentives into tourism. The details can be found in the following tab.

Tab. 14 - Investment incentives into tourism

| Unemployment rate | Minimum investment amount | Own equity |
|---|---|---|
| Lower than Slovak average (<13,16%) | 10 million EUR | 5 million EUR |
| Higher than Slovak average (>13,16%) | 5 million EUR | 2.5 million EUR |
| At least by 50% higher than Slovak average (>19,74%) | 3 million EUR | 1.5 million EUR |

Source: Sario[48]



* Bratislava region is excluded
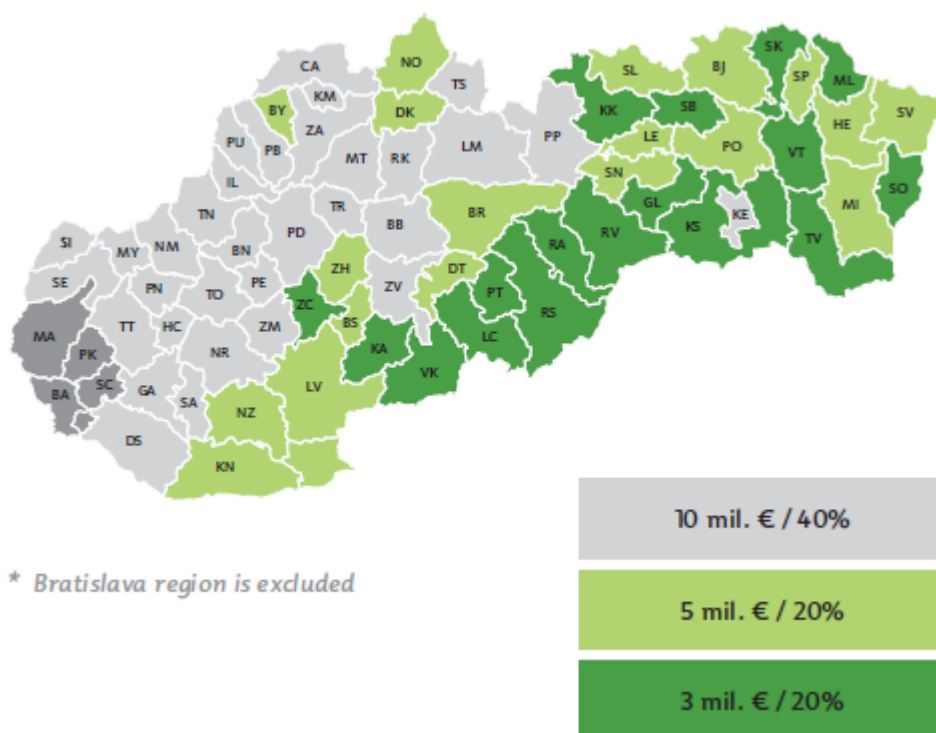
Fig. 20. Survey of parts of Slovakia with minimum investment amount/ share of new technology
Source: Sario[49]

[48] Available from: http://www.sario.sk/userfiles/file/sario/pzi/statna/Statna%20pomoc.pdf
[49] Ibid.

- half of the minimum investment (i.e. 5 mil./2.5 mil./1.5 mil. EUR) must be financed by own equity of the investor,
- 40% / 20% of eligible costs must be used for acquisition of new machinery and equipment,
  - incentives are available for launch of a new center as well as for extension of an existing one.

**Eligible costs**
• costs of land acquisition,
• costs of buildings acquisition,
• costs of technological equipment and machinery acquisition,
•intangible fixed assets – licences, know-how, etc.

*Regional Aid Intensity – maximum amount of the aid*
The intensity of the aid means the maximum proportion of the eligible costs, which may be approved for the investor in the form of particular investment incentives. The total amount of the approved aid must take into account the particular regional specifics.
The exact volume and available forms of incentives depends on the selected region.
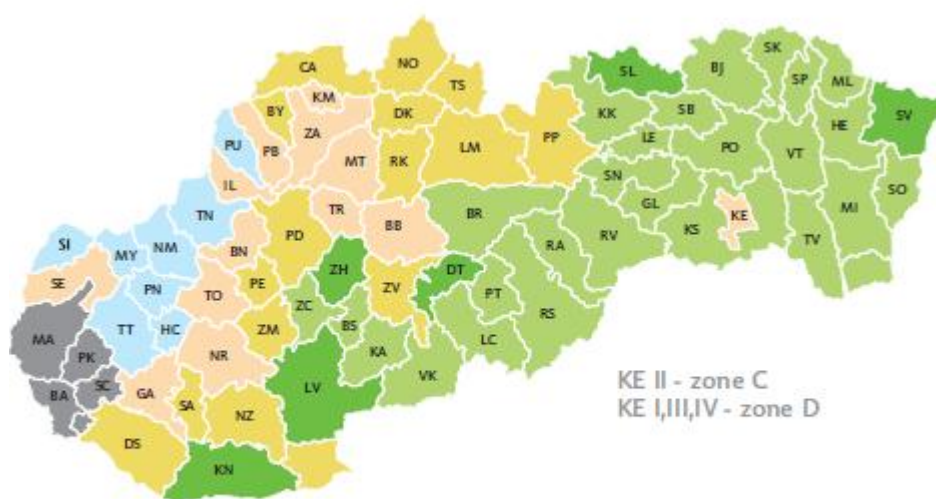


* Bratislava region is excluded

*Fig. 21 Regional Aid Intensity*
*Source: SARIO[50]*

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[50] Available from: http://www.sario.sk/userfiles/file/sario/pzi/statna/Investment%20incentives.pdf

| | Zone A | Zone B | Zone C | Zone D | Zone E |
|---|---|---|---|---|---|
| Investment aid | 40 - 50% | 35 - 44% | 30 - 38% | 25 - 31% | 20 - 25% |
| Cash grant | 30 - 37% | 25 - 31% | 10 - 12% | - | - |
| Income tax relief | 40 - 50% | 35- 44% | 30- 38% | 25 – 31% | 20 – 25% |
| Contribution for new jobs | 8000 – 10000 EUR | 6000 - 8000 EUR | 4000 - 5000 EUR | - | - |

*Fig.  22 Amount of investment aid depended on the selected region*
*Source: SARIO[51]*

## 3. 10 Investment incentives in Poland

The system of investment incentives in Poland is valid since May, 2002. Poland offers financial support to investors, subvention for retraining and existency on specific economic zones. In Poland there is an investment agency called PAIZ (Polish Information and Foreign Investment Agency)[52].

Poland offers the following financial support to its investors:
### 1. Special economic zones
**Special Economic Zone (SEZ)** is part of Polish territory which is administered separately, allocated for the running of businesses on preferential terms. The SEZ is a place which is subject to special treatment and tax exemptions where an entrepreneur can establish a business on a specially prepared site and run it without paying income tax.

If a company decides to invest in one of the SEZ's, the income which it receives from business carried out on its terrain will be exempt from income tax (CIT - from legal persons or PIT – on physical persons, depending on the legal form used to run the business).

**In an SEZ the entrepreneur can obtain the following privileges**
- tax exemption (CIT or PIT),

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[51] Available from: http://www.sario.sk/userfiles/file/sario/pzi/statna/Investment%20incentives.pdf
[52] Available from: http://www.paiz.gov.pl/investment_support/investment_incentives_in_SEZ

- a site fully prepared for development by the investor at a competitive price,
- free assistance in dealing with formalities in connection with the investment,
- exemption from property tax (on the territory of certain gminas).

Exemption from income tax granted in the SEZ is regarded as publicly funded regional aid, which serves to speed up the development of the most poorly developed EU regions; by supporting new investments and creating new workplaces linked to these new investments.

## 2. *New investment*

Investment in fixed stock and also intangible or legal costs, involved with the formation of a new or the expansion of an existing business, the diversification of a firm's production or the introduction of new additional products, or in the fundamental change of a complete production process of an existing business. The acquisition of an existing business which is in receivership or would have been wound up, if it had not been acquired by a new and independent investor - is also deemed a new investment.

## 3. *The creation of new jobs in connection with new investments*

The net growth in jobs of a given enterprise in connection with the realisation of a new investment, is in relation to the average employment in the firm, during the 12 months prior to the day that acceptance was granted.

New employees are those employed after the day on which acceptance of the new investment is granted, however, no later than three years from that time. The number of employees are those employed full time, together with those employed part time and also seasonal workers, calculated on a full time basis.

**The permission to operate in SEZ:**

The administrative-legal basis for being able to receive public assistance in a SEZ, is permission to set up a business in the SEZ, which is granted by the SEZ board.

The permitted level of regional aid available to the entrepreneur is dependent on:

- location of the investment,
- level of capital input, or
- costs of employing new workers,
- and also, the size of the business seeking tax relief.

The right of access to tax exemptions under the terms of a new investment in an SEZ, may be granted to an entrepreneur, on condition that:

1. there can be no transfer of any kind in the ownership of fixed assets, which are connected to investment expenditure – for a period of 5 years from the date of their entry into the inventory of fixed assets and

intangible or legal expenses, according to the provisions on income tax, in the case of small and medium sized businesses for a period of 3 years;

2. the business will be conducted for a period of no less than 5 years, whilst in the case of small and medium sized businesses no less than 3 years;

3. new workplaces will be maintained for no less than 5 years, 3 years in the case of small and medium sized businesses.

**Regional State Aid Map in Poland**

The maximum permitted level of aid in each Polish region is shown on the **map of regional aid**. From the 1st January 2007 a new map of regional aid is in force for the years **2007 - 2013**. In accordance with the map, the basic maximum level of regional public aid is expressed in percentages of the amount of aid which qualifies for the receipt of assistance, amounting to:

1. **50%** - in areas belonging to the provinces (województwa) of: Kujawy-Pomerania, Lublin, Lubuskie, Łódź, Malopolska, Opole, Podkarpacie, Podlasie, Warmia - Masuria, Świętokrzyskie;

2. **40%** - in the area belonging to the provinces (województwa) of: Lower Silesia, Pomerania, Silesia, West Pomerania, Wielkopolska, and also during the period of 1st January 2007 till 31st December 2010 in the area of the Mazovia province;

3. **30%** - in the area belonging to the Mazovia province.
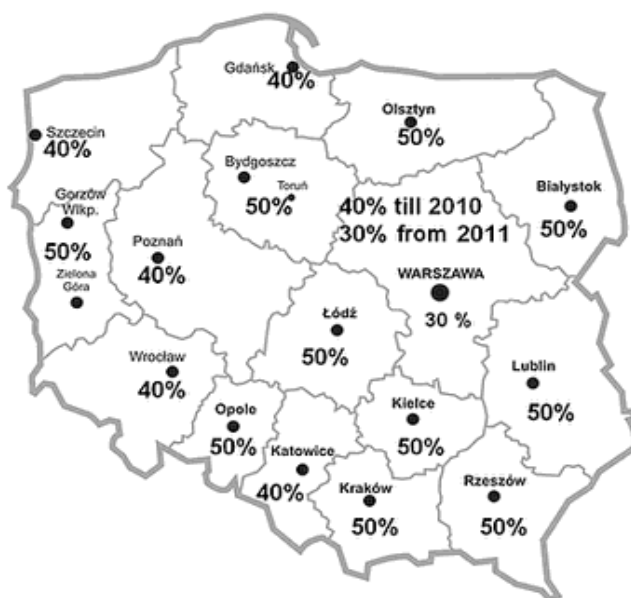


*Fig. 23 Regional State Aid in Poland*
*Source: PAIZ[53]*

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[53] Available from http://www.paiz.gov.pl/governmental_grants

**The costs qualifying for cover under regional aid in a SEZ**, i.e. costs forming the basis for calculating the maximum amount to be exempted from tax, could be:

- costs of new investment or
- costs of work of newly employed workers, depending on whether the tax exemption is in the form of aid for a new investment or as aid for new workplaces.

There is also the possibility of utilising both forms of aid simultaneously, on a condition that the joint amount of aid does not exceed the permitted maximum in a given investment; so that the maximum aid level is determined by the ratio of the aid's intensity to the highest level of costs: the new investment, or two year costs of the newly employed staff.

### Costs of new investment

- expenditure which make up the costs of realising a new investment, reduced by the deductible input VAT and by excise duties, if the possibility for the deduction is based on separate provisions, incurred in the area of the after receiving the permission for operate in SEZ, for:

1. purchase of land or the right to its perpetual use,
2. purchase or acquisition within their own scope of fixed assets on condition of their inclusion, in accordance with separate provisions, to the estate of the taxpayer,
3. development or modernisation of existing fixed assets,
4. purchase of intangible assets by the transfer of technology through the acquisition of patent rights, licenses, know-how or unpatented technical knowledge.

Costs linked to the acquisition of assets that are hired or leased, other than land or buildings, can only be taken into consideration, when the hire or lease is in the form of a financial lease and includes the obligation to acquire the assets at the end of the period of hire or leasing.

**Fixed assets acquired by entrepreneurs - that are not for small or medium sized businesses - should be new.**

The minimal level of investment enabling a firm to utilise the public aid under a SEZ is EUR 100 000.

The cost of work of newly employed staff is the gross cost over a two year period, increased by the mandatory payments linked with their employment, incurred by the employer from their first day of employment.

The maximum level of regional aid which can be granted for the realisation of a large investment project is limited in relation to its basic scope and is calculated by the following formula[54]:

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[54] Available from http://www.paiz.gov.pl/governmental_grants

$$I = R \times (50 \text{ million EUR} + 0.5 \times B + 0.34 \times C), \qquad (3.10.1)$$

**Where the given symbols are:**

*I* – *the maximum amount of aid for a large investment project,*
*R* – *intensity of aid (depending on the area in which the investment is to be located),*
*B* – *size of the costs qualifying for the allocation of aid, over the equivalent of 50 million EUR – but not exceeding 100 million EUR,*
*C* – *size of costs qualifying for the allocation of aid over the amount of 100 million EUR.*

**A large investment project** – is a new investment, undertaken over a period of three years by one or more investors, in the case where fixed assets are linked together, which are economically indivisible and where the qualifying costs for aid are jointly valued at over 50 million EUR, as calculated according to the prices and exchange rates, on the day permission is granted.

In the case of investment projects which do not exceed 50 million EUR, the aid ceiling for small businesses may be raised by 20 percentage points, medium sized businesses may receive aid increased by 10 percentage points.

**Small businesses are defined as** - a business which employs fewer than 50 workers, the annual turnover of which or the annual balance does not exceed 10 million EUR.

**Medium sized businesses** – those which are not small businesses, which employ fewer than 250 workers, the annual turnover of which does not exceed 50 million EUR, or whose annual balance does not exceed 43 million EUR.

## 3.11 Investment incentives in Hungary

In Hungary there is „Hungarian Investment and Trade Agency" (HITA) responsible for offering investment incentives.

The Hungarian Government is committed to ease doing business, to increase the competitiveness of both SMEs and large enterprises in Hungary. The focus is on high value added activities, like shared service centers, research and development, high value added production.

**Skilled, cost efficient and the most productive labor force** in Central and Eastern Europe, **excellent infrastructure** and at last but not least the Hungarian Government grants **financial assistance** to companies that decide to realize their investments in this business-friendly country.

As member of the European Union, Hungary can offer a broad scale of subsidies. An investment of a large enterprise – depending on the location – can be entitled to receive **state subsidies of up to 50%** of the eligible costs of the investment.

The legal basis for all investment subsidies[55] within Hungary is provided by common legal framework of the European Union. Following maximum regional subsidy intensity ratios have been set by the European Commission:
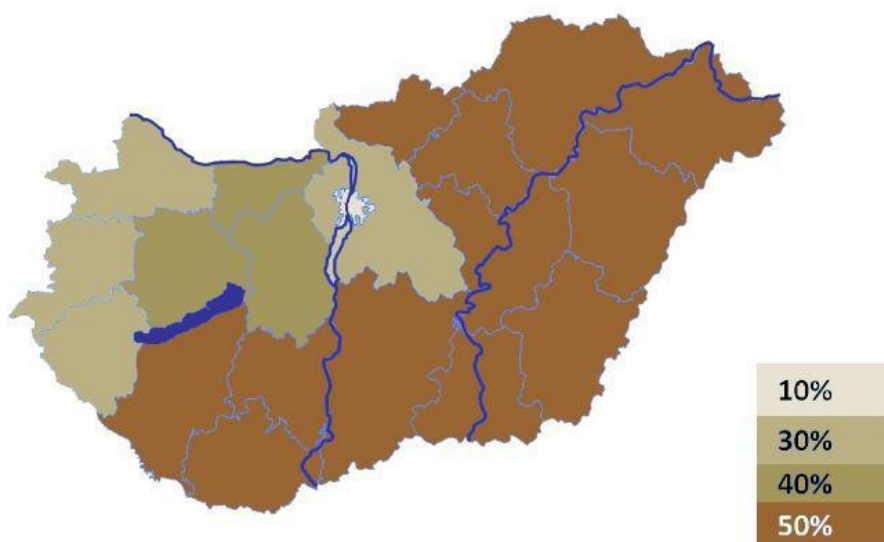


*Fig. 24Maximum of regional intensity support*
*Source: HITA[56]*

For investments not exceeding EUR 50M the maximum intensity ratio is increased by 10 percentage points for medium-sized and by 20 percentage points for small enterprises. For criteria determining SME categories see table below:

Tab. 15 - Criteria determining SME categories

| Size | Headcount | Turnover | OR | Balance Sheet |
|------|-----------|----------|-----|---------------|
| Small | < 50 | <= EUR 10M | OR | <= EUR 10M |
| Medium | < 250 | <= EUR 50M | OR | <= EUR 43M |
| Large | >= 250 | > EUR 50M | OR | > EUR 43M |

Source: HITA[57]

Subsidy for large investment projects is also subject to an adjusted regional aid ceiling, on the basis of the following scale:

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[55] Available from: http://www.hita.hu/en/Content.aspx?ContentID=220482e5-5231-4d5f-bf8a-bbe11268d14a
[56] Ibid.
[57] Ibid.

Tab. 16– Subsidy for large investment projects

| Eligible expenditure | Adjusted aid ceiling |
|---|---|
| Up to EUR 50M | 100% of regional ceiling |
| For part between EUR 50-100M | 50% of regional ceiling |
| For part exceeding EUR 100M | 34% of regional ceiling |

Source: HITA[58]

### 3.11.1 Investment incentives

Investment incentives can be dividend into some groups:
1) **EU co-financed tenders**
below EUR 25 M

As a member of the European Union Hungary has access to EU funds for a number of development goals, like asset acquisition, infrastructural development, new construction, renovation, service development, job creation, and financing human resources costs. The relevant tenders are concluded in the frame of New Széchenyi Plan in the forms of both refundable and non-refundable incentives.

As the specific calls for tenders have different conditions and aid intensities, as well as they might be available only at a limited period of time.

**2. Subsidy based on individual Government decision**
above EUR 10 M and no EU funds are available or above EUR 25 M
**Type:** cash, non-refundable
**Amount of subsidy:** decided individually by the Hungarian Government
**Conditions:** min. 100 new jobs (50 in preferred regions)
**Application**: „request list" containing core investment data shall be submitted to HITA, official subsidy offer of the Hungarian Government in short deadline
**Provider of incentive:** Hungarian Government

**3. Development tax allowance**
**Type:** tax allowance for post-investment period
**Amount of subsidy:** exemption for 80% of the corporate tax payable for 10 years following the fulfillment of the investment
**Conditions:**
**A.** investment volume min. EUR 10 M, min. 150 new jobs or wage cost growth reaches 600 times the yearly minimum wage
**B.** EUR 3.3 M investment volume and 75 new jobs in preferred regions or wage cost growth reaches 300 times the yearly minimum wage
**Provider of incentive:** Ministry for National Economy

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[58] Available from http://www.hita.hu/en/Content.aspx?ContentID=220482e5-5231-4d5f-bf8a-bbe11268d14a

## 4. Training Subsidy
**Type:** cash subsidy, non-refundable
**Amount of subsidy:** 25-90% of eligible training costs,
- max. EUR 1 M (HUF 300 M) if job creation is between 50-500
-max. EUR 2 M (HUF 600 M) if job creation >500
**Conditions:** min. 50 new jobs
**Provider of incentive:** Ministry for National Economy

## 5. Workshop establishment aid
**Type:** cash subsidy, non-refundable
**Amount of subsidy:** max. EUR 2 M (HUF 600 M)
**Conditions:** employment of min. 50 new students
**Provider of incentive:** Ministry for National Economy

## 6. Job creation subsidies
**Type:** cash subsidy, non-refundable
**Amount of subsidy:** HUF 350 – 900 M (approx. EUR 1.2 - 3 M) per project
**Conditions:** cash subsidy based on individual Government decision is granted; in preferred or most preferred locations; min. 250 new jobs in preferred, min. 150 new jobs in most preferred regions
**Provider of incentive:** Ministry for National Economy

## 7. Job Protection Action Plan (Social Tax)
**Type**: tax allowance
The social tax payable can be decreased for five prioritized labour groups. The claim of the allowance is to be indicated in the tax documentation.
**Amount of subsidy:** The social tax is in this case either 0% or 14% (instead of the general 28.5%) depending on the type of labour group.
**Providers of incentive:** Hungarian Government

### 3.11.2 Incentives for Shared Service Centre projects

*Subsidy with Individual Government Decision*
above EUR 10 M and no EU funds are available or above EUR 25 M
*Type:* cash, non-refundable
*Amount of subsidy:* decided individually by the Hungarian Government
*Conditions:* creating at least 100 new jobs or at least 200 in the Central Hungary region
*Provider of incentive:* Hungarian Government

*2. Development tax allowance*
*Type:* tax allowance for post-investment period

*Amount of subsidy:* exemption for 80% of the corporate tax payable for 10 years following the fulfilment of the investment

*Conditions:*

**A.** investment volume min. EUR 10 M, min. 150 new jobs or wage cost growth reaches 600 times the yearly minimum wage

**B.** EUR 3.3 M investment volume and 75 new jobs in preferred regions or wage cost growth reaches 300 times the yearly minimum wage

*Provider of incentive:* Ministry for National Economy

### 3. Training subsidy

*Type:* cash subsidy, non-refundable

*Amount of subsidy:* 25-90% of eligible training costs

- max. EUR 1 M (HUF 300 M) if job creation is between 50 and 500,

- max. EUR 2 M (HUF 600 M) if job creation >500

*Conditions:* min. 50 new jobs

*Provider of incentive:* Ministry for National Economy

### 4. Job Protection Action Plan (Social Tax)

**Type**: tax allowance

The social tax payable can be decreased for five prioritized labour groups. The claim of the allowance is to be indicated in the tax documentation.

*Amount of subsidy:* The social tax is in this case either 0% or 14% (instead of the general 28.5%) depending on the type of labour group.

*Providers of incentive: Hungarian Government*

# 4 EFFECTIVENESS OF INVESTMENT INCENTIVES IN THE CZECH REPUBLIC

Governments provide sizeable financial means on investment incentives. As it was stressed in the theoretical part, politics and economists are not able to agree, if they re effective or not.

As an effective activity can be considered such activity, where all of the means are fully used by the most possible efficiency and the amount of inputs brings as much as possible outputs. It is possible to measure for example effectiveness of the investment as the ratio of the yields from the investment and the costs on them spent. However the category of the effectiveness have many other dimensions.

Concerning the effectiveness of investment incentives, it is possible to judge it by the comparison of the costs related and yields received or gains followed from the incentives.

## 4.1 Calculation of the fiscal effectiveness of the investment incentives

This part will explain how to calculate the efficiency of investment incentives. At first it is necessary to focus on theoretical aspects that influence fiscal (tax) effectiveness, provided investment incentives are one of the possible kinds of public support provided by the government.

In the calculation of the efficiency of investment incentives from the government's point of view are considered the revenues (inputs) especially taxes, charges, insurance and the public health security. Taxes are considered as the yield of income tax resulting from the dependent activity of the firm's employees (15%), the tax yield of the legal entity, and the income tax yield collected from the separated tax base special tax rate. Further, tax yields stem from the Vehicle Excise Duty, estate duty and various charges. Another source of revenues is insurance on social security; an employee pays 6.5% and employer deducts 25% from the employee's salary. The last revenue source is public health security, of which the employee pays 4.5% and employer 9%.

Regarding tax effectiveness was concerned Vybíhal (2002).

Tax effectiveness is possible to express as revenues divided by expenditures in the following formula:

$$Ef = \frac{Tn + Tw + Tv + Te + To + I + H + S + T_{LE}}{Wp + \mathrm{Re} + Tr + Di + Tc} \quad (4.1.1)$$

In the numerator are several variables considered as inputs to the state budget:

($Tn$) yield of income tax of a natural person from the dependent activity,

($Tw$) yield of income tax which is collected from the separated tax base special tax rate, i. e. yield from the withholding tax,

($Tv$) yield from the Vehicle Excise Duty,

($Te$) yield from the estate duty,

($To$) various charges,

($I$) insurance on social security,

($H$) public health security,

($S$) savings on the expenditure side of the state budget, for example savings on the amount of provision in the change of physical person on account of employment,

($T_{LE}$) tax yield of the legal entity.

Outputs in the process of pursuing fiscal (tax) effectiveness ($Ef$) is the real yield from taxes, alternatively other incomes from the state budget, as the determinative source of the income side of the public budgets, in particular considered as the denominator in the equation:

($Wp$) financial support on the created working place, in CZK,

($Re$) subvention for costs related to the retraining of employees, in CZK (other cost for retraining which are paid from the public budget),

($Tr$) the amount of income tax relief, in CZK,

($Di$) subvention for support the development of the industrial estate,

($Tc$) administrative costs related to tax collecting.

Financial support for a newly created working place and subsidizing part of the cost for retraining are expenses from the point of view of the public budget. Its source lies in the collection of taxes and social insurance. The amount of tax relief does not belong to the expenditure part of the public budget as the investment incentives should have produced income for the public.

It should be noted that from the methodological point of view the model of the fiscal efficiency was modified and there are not included yields of value added tax. In the studied companies, the export exceeded the import, which influenced the excessive deduction, i. e. that the tax on input is higher than the amount of tax in output.

It is assumed that investment incentives are direct imputs in the category of effectiveness and it is possible to consider them as investment of the government and it is expected some returnability. It should be measured the effects on the income side of the state budget, especially the source oriented tax yields, charges, insurence and duties.

## 4.2 Analysis of the questionnaries completed by selected companies

The questionnaires concerned enterprises with foreign participation that received investment incentives in the past. A calculation of effectiveness was provided in all cases for the duration of 5 years, beginning the year after receiving investment incentives. According to the results of special consultations and expert opinions, the 5 year period is an optimal duration for study that reflects the real situation of business plans of the recipients of investment incentives.

The results of this study are detailed in the next part of the dissertation. The names of the enterprises are not given for reasons of anonymity.

**Researched companies**
Total number of enterprises: 30

*Line of business :*
  - electronic + electrical engineering (9 companies),
  - transport industry (6 companies),
  - engineering industry (6 companies),
  - rubber making + plastic industry (3 companies),
  - food industry (3 companies),
  - textile industry (3 companies).

*Provided investment incentives:*
  - corporate income-tax relief (27 companies),
  - training and retraining grants (12 companies),
  - job creation grants (6 companies).

The fiscal effectiveness of providing investment incentives is rightfully a subject of interest and should be for the following reasons. The government provides, via the public budget, financial means to receivers and expects in return incomes into the state budget in the form of taxes, social and health insurance. It is expected that unemployment will be decreased, production and exports will increase. The resuls are displayed in the following table.

Tab. 17 - Fiscal effectiveness of investment incentives by selected companies (in K CZK)

| No. | Inputs | Outputs | $E_f$ | $E_f$ |
|---|---|---|---|---|
| 1. | 231,634 | 359,027 | 0.65 | -127,393 |
| 2. | 98,954 | 610799 | 0.16 | -511,845 |
| 3. | 1,459,491 | 1,136,799 | 1.28 | 322,692 |
| 4. | 307,353 | 149,274 | 2.06 | 158,079 |
| 5. | 119,773 | 28,316 | 4.23 | 91,457 |
| 6. | 91,086 | 32,774 | 2.78 | 58,312 |
| 7. | 614,214 | 77,016 | 7.98 | 537,198 |
| 8. | 588,820 | 255,570 | 2.3 | 333,250 |
| 9. | 334,182 | 125,985 | 2.65 | 208,197 |
| 10. | 211,460 | 15,651 | 13.51 | 195,809 |
| 11. | 608,990 | 684,259 | 0.89 | -75,269 |
| 12. | 510,714 | 359,658 | 1.42 | 151,056 |
| 13. | 365,606 | 75,852 | 4.82 | 289,754 |
| 14. | 1,447,815 | 965,210 | 1.5 | 482,605 |
| 15. | 120,934 | 45,294 | 2.67 | 75,640 |
| 16. | 249,384 | 148,443 | 1.68 | 100,941 |
| 17. | 162,046 | 27,653 | 5.86 | 134,393 |
| 18. | 224,817 | 95,667 | 2.35 | 129,150 |
| 19. | 246,887 | 68,963 | 3.58 | 177,924 |
| 20. | 335,831 | 135,964 | 2.47 | 199,867 |
| 21. | 144,275 | 151,869 | 0.95 | -7,594 |
| 22. | 442,932 | 69,425 | 6.38 | 373,507 |
| 23. | 174,942 | 45,322 | 3.86 | 129,620 |
| 24. | 186,118 | 95,445 | 1.95 | 90,673 |
| 25. | 510,214 | 179,653 | 2.84 | 330,561 |
| 26. | 139,559 | 96,248 | 1.45 | 43,311 |
| 27. | 692,347 | 250,850 | 2.76 | 441,497 |
| 28. | 571,294 | 167,535 | 3.41 | 403,759 |
| 29. | 602,563 | 248,993 | 2.42 | 353,570 |
| 30. | 197,842 | 67,523 | 2.93 | 130,319 |
| Total | x | x | x | 5,221,040 |

Source: Own research

By the using a model of fiscal effectiveness on the 30 companies, it was determined that in 4 cases effectiveness was lower than 1. For the remaining 26 companies, the effectiveness was higher than 1. As a result, it is possible to consider financial actions of the government as effective. These results

demonstrate how much financial support the government provided the companies for a duration of 5 years and how much was returned to the state budget.

For example, company No. 1 received financial support amounting to 359 mil. CZK, however inputs into state budget were 175 mil. CZK. From the point of view fiscal effectiveness, this investment was not effective.

On the other hand, the investment in company No. 10 was highly effective at 6.71. The government provided a subvention in the amount of 15 mil. CZK and the company returned to the state budget around 105 mil. CZK, or 21 mil. CZK every year.

The following section shows the results of 10 companies.

**Company No.1**
Brief description:
Line of business:              transport industry
Number of employees:          500 – 1000
Type of investment:           greenfield project

Tab. 18 - Survey of total inputs and outputs company No. 1

| Outputs from the state budget | Total in CZK | Total in % |
|---|---|---|
| Corporate income-tax relief | 356,296,527 | 99.2 |
| Job creation grants | 2,730,000 | 0.8 |
| Total outputs | 359,026,527 | 100.0 |
| **Inputs into the state budget** | | |
| Yield of income tax of a natural person from the dependent activity | 46,396,473 | 20.0 |
| Yield from the withholding tax | 4,363 | 0.0 |
| Insurance on social security | 114,843,547 | 49.6 |
| Public health security | 45,599,643 | 19.7 |
| Yield from the Vehicle Excise Duty | 9,800 | 0.0 |
| Yield from the estate duty | 416,436 | 0.2 |
| Various charges, | 944,216 | 0.4 |
| Tax yield of the legal entity | 23,419,510 | 10.1 |
| Total inputs | 231,633,988 | 100.0 |
| *Difference, effectiveness of provided state support* | *-127,392,539* | *0.65* |

Source: Own research based on the information provided company No.1

This is a company acting in the transport sector – manufacturing cars. Investment incentives were provided to the company on its long term

development of business in the phase of expansion. Investment incentives related to corporate income-tax relief were provided for 10 years. This company demonstrates the ineffectiveness of the investment incentives. During the observed 5 year period, it received from the government 127 mil. CZK. However, the company created over 5 years around 300 work places. The yield of income tax of persons from the dependent activity was 46 mil. CZK, and the newly created jobs will lead to higher levies in social and health insurance (about 160 mil. CZK). This amount is calculated for the whole company, however the contribution to the creation labour is indisputable. Subvention in the creation of jobs comes to about 1 % from the provided alleviation.

The company kept its position in the market and half of its production is exported into the EU and the US. In this case it is important to look at production after the provision of investment incentives. Even though the company brought to the state budget for the monitored period taxes amounting to 23 mil. CZK, in the case of increased production the company will pay the whole amount of assessed taxes.

The sole value of the indicator of effectiveness is to show the reality of how many times public support will be provided in the form of investment incentives. It just shows if it is higher or lower than the financial flows into the public budget for the monitored period. It does not reveal the value of these financial flows.

To add to the calculation, the effect from the creation of jobs will be calculated.

An average salary in the Czech Republic was about 22,691 CZK in 2008. In 2009 it was 23,488 CZ, in 2010 25,803 CZK, 2011 26,067 CZK and in 2012, 27,170 CZK. However in company No.1 the average salary was always higher than the average in the Czech Republic. Particular in 2008, 26,500 CZK, 2009, 27,500 CZK, 2010, 28,000 CZK, 2011, 30,000 CZK and in 2012 about 31,000 CZK. (Own research).

As mentioned, the company created 300 jobs. Benefits to the state budget will be calculated. What is stable and stays in the Czech Republic is social and health insurance. Every employer has to levy the following amount.

According to the calculation, an employee will bring to the state budget the following contributions:

Tab. 19 – Calculation of levies paid by an employee and employer

| | | |
|---|---|---|
| 1. | *Social (25%) and health insurance (9%)* levied by the employeer. Total levied amount is 34%. | 31,000 CZK x 1.34 = = 41, 540 CZK |
| 2. | *Tax base was rounded* to whole hundreds up to | 41,600 CZK |
| 3. | *Tax of the physical person (15%).* | 41,600 CZK x 0.15 = 6, 240 CZK |
| 4. | Deduction for every *tax payer´s* (2,070 CZK). | -2,070 CZK |
| 5. | Deduction for *a child* (1 117 CZK). | -1,117 CZK |
| 6. | Tax paid by an employee: | 3,053 CZK |
| 7. | Public health security (4.5%): 31,000 CZK x 0.045 = | 1,395 CZK |
| 8. | Insurance on social security (6.5%): 31,000 x 0.065 = | 2,015 CZK |
| 9. | Total levies (tax paid by an employee + public health security + insurance and social security) | 3,053+1,395 + 2,015 = **6,463 CZK/per 1 month** |

Source: Own research based on the information provided company No.1

If a year´s contribution to the state budget is considered, it will be 6,463 CZK x 12 = 77,556 CZK. Company No. 1 created 300 work spaces. In this case the contribution will be 77,556 CZK x 300 = 23,266,800 CZK/1 year. In 5 years that contribution will be the following: 23,266,800 x 5 = 116,334,000 CZK from the creation of the work spaces. This signifies a large contribution to the state budget. The job creation grant was in the amount of 2,730,000 CZK. Company No. 1 will pay the corporate income-tax relief after 5 years. It is expected that levies to the state budget will be increased.

Even though the provided investment incentives seem to be inefficient, it is necessary to think of them in this complex fashion.


**Company No. 2**
Brief description:
Line of business:                       manufacturing of transport machines
Number of employees:        500 – 1000
Type of investment:            greenfield project

Company No. 2 seems to be ineffective. It received the corporate income tax relief for 5 years and brought to the state budget less than received. It is expected that the retraining of employees will increase production and all levies to the state budget.

Investment incentives were provided to the company on its long term development in the phase of expansion. The highest item of investment incentives was corporate income tax relief. However the largest amount levied to the state budget created insurance on social security 54 mil. CZK and yield

of income tax of a natural person from the dependent activity. Whereas yield from the Vehicle Excise Duty, yield from the estate duty and various charges represent nearly 1% of levies to the state budget.

The company representative expect that the production will be increased and in 5 years will levy corporate tax rate into state budget. Industry manufacturing of transport machines influenced global crisis.

Tab. 20 - Survey of total inputs and outputs company No. 2

| Outputs from the state budget | Total in CZK | Total in % |
|---|---|---|
| Corporate income tax relief | 608,349,000 | 99.5 |
| Retraining | 2,450,000 | 0.5 |
| Total outputs | 610,799,000 | 100 |
| **Inputs into the state budget** | | |
| Yield of income tax of a natural person from the dependent activity | 25,033,000 | 25.3 |
| Yield from the withholding tax | 23,000 | 0 |
| Insurance on social security | 54,081,000 | 54.7 |
| Public health security | 19,201,000 | 19.4 |
| Yield from the Vehicle Excise Duty | 200,000 | 0.2 |
| Yield from the estate duty | 201,000 | 0.2 |
| Various charges | 215,000 | 0.2 |
| Tax yield of the legal entity | 0 | 0 |
| Total inputs | 98,954,000 | 100 |
| *Difference, effectiveness of the provided state support* | *-511,845,000* | *0.16* |

Source: Own research based on the information provided company No.2

**Company No. 3**

Brief description:
Line of business:                      rubber+plastic industry
Number of employees:               until  500
Provided investment incentives:    corporate income-tax relief
Type of investment:                  brownfield project

Company No. 3 works in the rubber and plastics industry. It maintains a strong position despite the global economic crisis. The provided investment incentive as corporate income tax relief (1,136 billion CZK) brought significant inputs to the state budget (1,249 billion CZK). The highest item was the tax yield of the legal entity. The company drew the financial incentives but during

the observed period paid this tax. The number of employees was increased by 100. According to the company's representative, investment incentives figured heavily in the company's decisions.

A significant factor was also the insurance on social security and public health security. This company employs about 50 foreigners. Due to this fact, it is criticised that through the spillover effect, investment incentives provide work for foreigners. On the other hand, these foreigners pay taxes that stay in the country.

Tab. 21 - Survey of total inputs and outputs company No. 3

| Outputs from the state budget | Total in CZK | Total in % |
|---|---|---|
| Corporate income tax relief | 1,136,799,000 | 100 |
| Total outputs | 1,136,799,000 | 100 |
| **Inputs into the state budget** | | |
| Yield of income tax of a natural person from the dependent activity | 51,745,000 | 3.5 |
| Yield from the withholding tax | 138,000 | 0 |
| Insurance on social security | 115,906,000 | 7.9 |
| Public health security | 40,191,000 | 2.8 |
| Yield from the Vehicle Excise Duty | 0 | 0 |
| Yield from the estate duty | 716,000 | 0 |
| Various charges | 1,381,000 | 0.1 |
| Tax yield of the legal entity | 1,249,414,000 | 85.6 |
| Total inputs | 1,459,491,000 | 100 |
| ***Difference, effectiveness of the provided state support*** | ***322,692,000*** | ***1.28*** |

Source: Own research based on the information provided company No.3

**Company No. 4**

Brief description:
Line of business:                    engineering
Number of employees:            until 500
Type of the investment:           greenfield project

Company No. 4 works in the engineering industry. In this case the effectiveness of the investment incentives was 2.06. The highest item was the corporate income tax relief of about 105 mil. CZK. The company paid to the state budget 73 mil. CZK. After the expiration of investment incentives it can be

expected that the company will generate future profits and levies will be increased due to it. The highest item was the insurance on social security and public health security. During the observed period the company paid tax of the legal entity inspite of the corporate income tax relief.

Tab. 22 - Survey of total inputs and outputs company No. 4

| Outputs from the state budget | Total in CZK | Total in % |
|---|---|---|
| Corporate income tax relief | 105,140,000 | 70.43 |
| Retraining of employees | 44,134,000 | 29.57 |
| Total outputs | 149,274,000 | 100 |
| **Inputs into the state budget** | | |
| Yield of income tax of a natural person from the dependent activity | 60,359,000 | 19.6 |
| Yield from the withholding tax | 2,802,000 | 9.1 |
| Insurance on social security | 125,334,000 | 40.7 |
| Public health security | 43,666,000 | 14.2 |
| Yield from the Vehicle Excise Duty | 83,000 | 0.02 |
| Yield from the estate duty | 425,000 | 0.1 |
| Various charges | 694,000 | 0.2 |
| Tax yield of the legal entity | 73,991,000 | 24.0 |
| Total inputs | 307,354,000 | 100 |
| *Difference, effectiveness of the provided state support* | *158,080,000* | *2.06* |

Source: Own research based on the information provided company No.4

**Company No. 5**

Brief description:
Line of business:                electronic industry
Number of employees:             500 -1000
Type of the investment:          greenfield project

The investment incentives by this company was around 28 mil. CZK. It was a stimulus for an investment to jumpstart production. Moreover the company was successful and employed more than 300 new employees. During the observed 5 year period, the company levied 4.23 times, i.e., more than 119 mil. CZK.

The highest item was the insurance on social security, at around 58%. The next was public health security, and the yield of income tax of a natural person from the dependent activity.

Tab. 23 - Survey of total inputs and outputs company No. 5

| Outputs from the state budget | Total in CZK | Total in % |
|---|---|---|
| Corporate income-tax relief | 28,316,000 | 100 |
| Total outputs | 28,316,000 | 100 |
| *Inputs into the state budget* | | |
| Yield of income tax of a natural person from the dependent activity | 19,850,000 | 16.6 |
| Yield from the withholding tax | 3,000 | 0.1 |
| Insurance on social security | 68,887,000 | 57.5 |
| Public health security | 22,232,000 | 18.4 |
| Yield from the Vehicle Excise Duty | 84,000 | 0.1 |
| Yield from the estate duty | 207,000 | 0.2 |
| Various charges | 2,493,000 | 2.1 |
| Tax yield of the legal entity | 6,017,000 | 5.0 |
| Total inputs | 119,773,000 | 100 |
| *Difference, effectiveness of the provided state support* | *91,457,000* | *4.23* |

Source: Own research based on the information provided company No.5

The company increased profit and drew investment incentives. Company increased profit and drawn the investment incentives. During the observed 5 years company No.5 levied about 68 mil. CZK on instance on social security nad 22 mil. CZK on public health security.

**Company No. 6**

Brief description:
Line of business:                     electric+electrotechnic industry
Number of employees:           500 -1000
Type of the investment:          greenfield project
   This company created 500 work places. Its contribution to the state budget is significant. The company paid it back in the form of insurance on social and public health security and income tax of a natural person from the dependent activity. During the observed period the company paid taxes. The state support was the highest in the job creation grants. It is expected, as with company No. 1, that the levies into state budget will be increased.

Tab. 24 - Survey of total inputs and outputs company No. 6

| Outputs from the state budget | Total in CZK | Total in % |
|---|---|---|
| Corporate income-tax relief | 6,740,000 | 20.6 |
| Job creation grants | 24,000,000 | 73.2 |
| Retraining grants | 2,034,000 | 6.2 |
| Total outputs | 32,774,000 | 100 |
| *Inputs into the state budget* | | |
| Yield of income tax of a natural person from the dependent activity | 21,070,000 | 23.1 |
| Yield from the withholding tax | 611,000 | 0.7 |
| Insurance on social security | 50,227,000 | 55.1 |
| Public health security | 18,000,000 | 19.8 |
| Yield from the Vehicle Excise Duty | 58,000 | 0.1 |
| Yield from the estate duty | 236,000 | 0.3 |
| Various charges | 765,000 | 0.8 |
| Tax yield of the legal entity | 119,000 | 0.1 |
| Total inputs | 91,086,000 | 100 |
| *Difference, effectiveness of the provided state support* | *58,312,000* | *2.78* |

Source: Own research based on the information provided company No.6

**Company No. 7**
Brief description:
Line of business:            electric+electrotechnic industry
Number of employees:      500 - 1000
Type of the investment:    greenfield project

Comany No. 7 works in electric and electrotechnic industry. It created about 500 jobs. This company kept its position in the market and half of its production is exported into the EU and Japan. In this case it is important to look at production after the provision of investment incentives. The company brought to the state budget for the monitored period taxes amounting 614 mil. CZK. Company received investment incentives in amount 77 mil. CZK. The highest item was job creation grants and corporate income tax relief. The contribution to the state budget is significant. The company paid it back in the form of insurance on social and public health security. It is expected that planned levies to the state budget will be doubled.

Tab. 25 - Survey of total inputs and outputs company No. 7

| Outputs from the state budget | Total in CZK | Total in % |
|---|---|---|
| Corporate income-tax relief | 35,074,000 | 45.5 |
| Job creation grants | 38,508,000 | 50 |
| Retraining grants | 3,434,000 | 4.5 |
| Total outputs | 77,016,000 | 100 |
| *Inputs into the state budget* | | |
| Yield of income tax of a natural person from the dependent activity | 133,894,000 | 21.8 |
| Yield from the withholding tax | 50,000 | 0 |
| Insurance on social security | 347,048,000 | 56.5 |
| Public health security | 124,937,000 | 20.3 |
| Yield from the Vehicle Excise Duty | 36,000 | 0 |
| Yield from the estate duty | 2,157,000 | 0.4 |
| Various charges | 6,092,000 | 1.0 |
| Tax yield of the legal entity | 0 | 0 |
| Total inputs | 614,214,000 | 100 |
| *Difference, effectiveness of the provided state support* | *537 198 000* | *7.98* |

Source: Own research based on the information provided company No.7

**Company No. 8**
Brief description:
Line of business:                    engineering
Number of employees:            500 - 1000
Type of the investment:          greenfield project

Company No. 8 is acting in the engineering industry. Investment incentives were provided to the company on its long term development of business. This company demonstrates effectiveness 2.3. During the observed 5 years period, it received from the government corporate income tax relief amounting 255 mil. CZK and in the same period the company brought to the state budget tax of the legal entity amounting 182 mil. CZK. The highest item was the insurance on social security, at around 38% and and income tax of a natural person from the dependent activity, at around 15%. Company created more than 200 work places and increased its production. It is expected, as with company No. 1, that the levies into state budget will be increased. According to the company´s representative, tradition in engineering industry in the Czech Republic figured heavily, in the company´s decision to place here the investment incentives.

Tab. 26 - Survey of total inputs and outputs company No. 8

| Outputs from the state budget | Total in CZK | Total in % |
|---|---|---|
| Corporate income tax relief | 255,570,000 | 100 |
| Total outputs | 255,570,000 | 100 |
| *Inputs into the state budget* | | |
| Yield of income tax of a natural person from the dependent activity | 92,275,000 | 15.7 |
| Yield from the withholding tax | 3,535,000 | 0.6 |
| Insurance on social security | 227,393,000 | 38.6 |
| Public health security | 80,371,000 | 13.6 |
| Yield from the Vehicle Excise Duty | 573,000 | 0.1 |
| Yield from the estate duty | 945,000 | 0.2 |
| Various charges | 1,502,000 | 0.3 |
| Tax yield of the legal entity | 182,226,000 | 30.9 |
| Total inputs | 588,820,000 | 100 |
| *Difference, effectiveness of the provided state support* | *333,250,000* | *2.3* |

Source: Own research based on the information provided company No.8

**Company No. 9**

Brief description:

Line of business:                          food
Number of employees:              500 - 1000
Type of the investment:            greenfield project

Company No. 9 operates in food industry. In this case the effectiveness of the investment incentives was 2.65. The highest item was the corporate income tax relief of about 125 mil. CZK. The company paid to the state budget 334 mil. CZK. During the observed period the company paid taxes of the legal entity amounting 89 mil. CZK. After the expiration of investment incentives it can be expected that the company will generace future profits and levies will be increased due to it. The highest item was the instance on the social security, tax yield on the legal entity and public health security. The company widened the production.

According to the company´s represeantative, investment incentives was an important stimulus for the company to jumpstart production. Moreover the company was successful and employed more than 200 new employees. During the observed 5 years the company levied 2.65, i. e. more than 208 mil. CZK.

Tab. 27 - Survey of total inputs and outputs company No. 9

| Outputs from the state budget | Total in CZK | Total in % |
|---|---|---|
| Corporate income tax relief | 125,985,000 | 100 |
| Total outputs | 125,985,000 | 100 |
| *Inputs into the state budget* | | |
| Yield of income tax of a natural person from the dependent activity | 51,812,000 | 15.5 |
| Yield from the withholding tax | 540,000 | 0.2 |
| Insurance on social security | 123,707,000 | 37 |
| Public health security | 53,167,000 | 15.9 |
| Yield from the Vehicle Excise Duty | 322,000 | 0.1 |
| Yield from the estate duty | 5,965,000 | 1.8 |
| Various charges | 9,451,000 | 2.8 |
| Tax yield of the legal entity | 89,218,000 | 26.7 |
| Total inputs | 334,182,000 | 100 |
| *Difference, effectiveness of the provided state support* | *208,197,000* | *2.65* |

Source: Own research based on the information provided company No.9

**Company No. 10**
Brief  description:
Line of business:                          textile
Number of employees:            500 - 1000
Type of the investment:         greenfield project

Company No. 10 works in textile industry. In this case the effectiveness was the highest 13.51 from the all observed companies. The company levied more than 211 mil. CZK. It maintained a strong position despote the global economic crisis and the line of business which does not seems to be popular.

According to the company´s representative, the provided investment incentives especially corporate income tax relief and retraining grants figured heavily in increasing the production and jumpstart of production with export oriented to EU countries, Russia, and Japan. Due to this fact the company created more than 200 new jobs.

The highest item was the yield of the income tax of a natural person from the dependent activity, at around 50%. The second highest item was the insurance on social security, at around 32% and the third highest item was the public health security, at around 14%. The lowest items were yield from the withholding tax, yield from the Vehicle Excise Duty and yield from the estate duty.

Tab. 28 - Survey of total inputs and outputs company No. 10

| Outputs from the state budget | Total in CZK | Total in % |
|---|---|---|
| Corporate income-tax relief | 12,651,252 | 80.8 |
| Retraining grants | 3,000,000 | 19.2 |
| Total outputs | 15,651,252 | 100 |
| Inputs into the state budget | | |
| Yield of income tax of a natural person from the dependent activity | 105,908,303 | 50.1 |
| Yield from the withholding tax | 490,347 | 0.2 |
| Insurance on social security | 68,754,242 | 32.5 |
| Public health security | 30,307,348 | 14.3 |
| Yield from the Vehicle Excise Duty | 234,675 | 0.1 |
| Yield from the estate duty | 1,161,980 | 0.5 |
| Various charges | 4,603,200 | 2.2 |
| Tax yield of the legal entity | 0 | 0 |
| Total inputs | 211,460,095 | 100 |
| Difference, effectiveness of the provided state support | 195,808,843 | 13.51 |

Source: Own research based on the information provided company No.10

## 4.3 Statistical data evaluation of effectiveness of the investment incentives

Gained data were statistically evaluated by the following statistical methods as the average value, median, One Sample t-test and Wilcoxons test.

According to the sample of 30 companies, it was determined that the average value is 2.586 and median 2.27. These are selective statistics valid for 30 companies. However, the question is whether whole population (all of the companies in the Czech Republic) which received investment incentives have an average value higher than 1. As described above, it would be impossible to do an analysis of all of the companies due to cost and time constraints. Moreover the list published on the CzechInvest website does not reveal the actual state and real drawing of investment incentives.

It is expected that the average value of the provided investment incentives is higher than 1. (A value higher than 1 supposedly shows the effectiveness of investment incentives).

H0: average value ($\mu$) of effectiveness of the investment incentives in the Czech Republic is 1.

HA: average value (μ) of effectiveness of the investment incentives in the Czech Republic is higher than 1.

1.The results tested by t.test: **One Sample t-test**

On the significance level 5 % H0 is rejected in favour HA and therefore there is evidence that the average value of the efficiency is higher than 1.

(p-value is lower than 5 %).

2.Testing by **Wilcoxons test:**

H0: the median value **(μ)** of effectiveness of investment incentives is higher than 1.

HA: the median value **(μ)** of effectiveness of investment incentives in the Czech Republic is higher than 1.

Wilcoxon designed rank test with continuity correction to V = 448, p-value = <0.01. There is an alternative hypothesis: true location is greater than 1.

On the significance level of 5 %, H0 is rejected in favour of HA and therefore there is evidence for claiming that the median value of effectiveness is higher than 1.

According to the statistical analysis, it is obvious that the investment incentives are effective because the median value is higher than 1.

## 4.4 Another viewpoint on measuring the effectiveness of investment incentives by Schwarz et al.

Schwarz et al. (2007) carried out an analysis of investment incentives in the Czech Republic as a reaction to a study performed by Deloitte (2006). They are critical of investment incentives and attacked the myths about them. Schwarz et al. al.´s analysis, is summarized[59] as follows:

Schwarz and al. reacted to an analysis by the Deloitte company[60]. They concentrate on a quantitative expression of the effects of direct and indirect investment support in the frame of the system of investment incentives. It is possible to understand it as the ex ante analysis of the expected effects but at the basis of the same indicators after modification of discounts it is possible to perform an ex post evaluation of the particular policy.

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[59] Available from: http://download.mpo.cz/get/32013/35445/388865/priloha001.pdf/ Schwarz (2007) Analýza investičních pobídek v České republice, p. 3

[60] Available from: http://www.czechinvest.org/data/files/moravsko-slezsky-kraj-205.pdf/ and available from: http://www.czechinvest.org/data/files/kralovehradecky-kraj-204.pdf/

According to Schwarz et al. (2007), an analysis of the total impact of particular investment incentives requires the quantification of all its outputs and costs in comparison with all costs and outputs in case of its absence. They are aware that this comparison is impossible to calculate for two reasons. Firstly, in comparing the real state with a hypothetical state, estimation is necessary. Secondly, only some of these effects are possible to quantify, and therefore it is necessary to establish the parameters by which the effects and effectiveness of a particular policy can be determined.

Schwarz proceeded symmetrically, i.e., if the fiscal output is considered in the calculation "in the second round," at the same time it is necessary to calculate the fiscal costs. Schwarz et al. criticise the former analyses for the following reasons:

1) They do not work with the incentives as partial factors for the decision – by the absence of incentives they assume zero investments, which is in contradiction with common investment practice.
2) Analyses do not work symmetrically on the side of outputs and costs: whereas on the side of outputs "two rounds" of multiplication are considered on the side of costs only one round is considered.
3) Analyses make efforts to evaluate the effectiveness of incentives politics based on the data in the current year, and at the same time they ignore the correlation of outputs and costs. Costs of provided incentives will have a delayed impact, when tax deductions will be enforced.
4) Analyses do not work with the unpaid (saved) unemployment benefits as fiscal output, and administrative costs are omitted.

Concerning induced tax incomes from the supported investor, only incomes which are causally related to incentives should be considered. The question remains, what is the role of incentives in the decision of investors, i.e., what is the probability that the investor would not have invested in the Czech Republic or even the in the particular region without the existence of incentives.

Schwarz et al. introduced a formula[61] for calculating fiscal costs and revenues.

$$FV^{SH} = \sum_{k=1}^{n} \frac{FV_{Ii}^{k} * p_1 * (1-p_2)}{(1+i)^n (1+\pi)^k} + \sum_{k=11}^{n} \frac{FV_{Ki}^{k} * p_1}{(1+i)^k (1+\pi)^k} + \sum_{k=1}^{n} \frac{FV_{Id}^{k} * p_1 * (1-p_2) * (1-p_3)}{(1+i)^k (1+\pi)^k} +$$

$$+ \sum_{k=1}^{n} \frac{FV_{Kd}^{k} * p_1 * (1-p_3)}{(1+i)^k (1+\pi)^k} + \sum_{k=1}^{n} \frac{PN^k * p_1}{(1+i)^k (1+\pi)^k}$$

(4.4.1)

The above mentioned formula (2) is divided into 5 fraction:

1) The first mathematical fraction represents the present value of future fiscal yields from individual taxes from the supported investor.

[61] Available from: Schwarz, Analýza investičních pobídek, p. 57
http://www.google.cz/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=0CEYQFjAA&url=http%3A%2F
%2Fdownload.mpo.cz%2Fget%2F32013%2F35445%2F388865%2Fpriloha001.pdf&ei=Lm1aUvzxGKTg7Qb8
hoG4BQ&usg=AFQjCNEjrggSUDP3CDGiBtV1eRUkLi2-ug&bvm=bv.53899372,d.ZGU

2) The second fraction represents the present value of future fiscal yields from the corporate taxes from the supported investor.
3) The third fraction represents the net present value of future fiscal yields from the corporate taxes from the suppliers. In the case of the calculation of the yields in the first round, this part will be omitted.
4) The fourth part of the fraction represents the net present value of the future fiscal yields from the individual taxes from the supplier side. In the case of the calculation of the yields in the first cycle, this part will be omitted.
5) The last part of the formula represents the present value of future unpaid unemployment compensation.

Explanatory notes to formula:

- $FV^{SH}$ – represents the net value of future direct and induced fiscal yields,
- $FV_{Ii}^{k}$ - the amount of estimated fiscal yields from supported investors in the year $k$.
  This information would be gained from a questionnaire made by the Ministry of Industry and Trade.
- $FV_{Ki}^{k}$ - the amount of estimated fiscal yields from corporate taxes from the suppliers of supported investors in the year $k$. The estimation can be made based on the amount of the profit, which is evinced by companies not supported by incentives in the particular industry. In this data the motivation of companies to achieve a lower tax base will be considered. In the case of the investor operating in the market long term, it is possible to estimate profitability from the last results (during the time when incentives were not awarded). Due to the enforcment of a tax discounts in the first 10 years, the existence of inputs from corporate taxes will be considered starting with the 11$^{th}$ year in the considered period.
- $FV_{Id}^{k}$ - the amount of estimated fiscal yields from the corporate taxes from the suppliers of supported investors in the year $k$.
- $FV_{Kd}^{k}$ - the amount of estimated fiscal yields from the individual taxes from the suppliers of supported investors in the year $k$.
- $PN^{k}$ - saved support for the unemployed in the year $k$.
- i – interest rate, determined from the average rate paid for the state emitted obligations,
- $k$ – particular year from the considered period,
- $\pi$ - estimated inflation rate,
- n – number of years in the estimated period,
- $p_1$ – the estimated probability that the investment would not have taken place without the investment incentives.

- $p_2$ – the estimated number of employees poached from other companies in the Czech Republic.
- $p_3$ – the estimated rate of the orders, which the suppliers would have gained even in the case of foreign manufacturing.

Schwarz et al. (2007) created a formula for the calculation[62] of fiscal yields as follows:

$$FN^{SH} = \left[ (PP + SN + AN) + SA + \sum_{k=1}^{n} \frac{SD^k}{(1+i)^k (1+\pi)^k} * (1 - p_1) \right] * k_{fn} \qquad (4.4.2)$$

The first three parts of the equation represent explicit costs. The other two parts represent future discounts on taxes.

- $FN^{SH}$ present value of direct and induced fiscal costs,
- PP amount of direct support,
- SN amount of expenditures on advantageous purchases and other higher state expenditures,
- SA discount on asset sale,
- AN administrative costs,
- $SD^k$ expected tax discounts in the year **k**,
- n number of years in the estimated period,
- k – particular year from the considered period,
- $p_1$ an estimation of probability that the investment would not have been realized.

The coefficient of induced financial costs reflects how much tax revenues are sacrificed in favour of support of investment incentives. It is the relation between the real and the sacrificed incomes of support (i.e., the total economic cost of support) and the amount of this support showed in the first round. A decrease of revenues in the second round is possible to estimate, as the average tax rate multiplied by the amount of financial means "absented" in the expenditure flow, the amount of fiscal costs. Schwarz et al. (2007) created the following formula[63]:

$$k_{fn} = \frac{(PP + SN + AN) + (PP + SN + AN) * f_z}{PP + SN + AN} = 1 + f_z \qquad (4.4.3)$$

- fz – the average fiscal revenue from the one unit of output in the economy. This parameter is possible to estimate as the rate of the total tax incomes on GDP in the particular economy.

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[62] SCHWARZ et al. (2007), p. 60
[63] SCHWARZ et al. (2007), p. 61

To analyse the effectiveness of the investment incentives, it is necessary to mention that in the above mentioned formula the social and health security, duties and various charges and yield from the estate duty are all missing. These fiscal inputs are an important part of the inputs to the state budget. Therefore the Schwarz's model[64] will be modified and particular tax yields will be expanded.

$$
\begin{aligned}
PV = & \sum_{k=1}^{n} \frac{T_{IT}^{k} * p_1 * (1 - p_2)}{(1+i)^k (1+\pi)^k} + \sum_{k=1}^{n} \frac{T_{w}^{k} * p_1}{(1+i)^k (1+\pi)^k} + \sum_{k=1}^{n} \frac{T_{v}^{k} * p_1}{(1+i)^k (1+\pi)^k} + \sum_{k=1}^{n} \frac{Te^{k} * p_1}{(1+i)^k (1+\pi)^k} + \\
& + \sum_{k=1}^{n} \frac{T_{o}^{k} * p_1}{(1+i)^k (1+\pi)^k} + \sum_{k=1}^{n} \frac{F_{ISC}^{k} * p_1 * (1 - p_2)}{(1+i)^k (1+\pi)^k} + \sum_{k=1}^{n} \frac{F_{H}^{k} * p_1 * (1 - p_2)}{(1+i)^k (1+\pi)^k} + \sum_{k=1}^{n} \frac{T_{LE}^{k} * p_1}{(1+i)^k (1+\pi)^k} + \\
& + \sum_{k=1}^{n} \frac{PV_{Id}^{k} * p_1 * (1 - p_2) * (1 - p_3)}{(1+i)^k (1+\pi)^k} + \sum_{k=1}^{n} \frac{PV_{Kd}^{k} * p_1 * (1 - p_3)}{(1+i)^k (1+\pi)^k} + \sum_{k=1}^{n} \frac{PN^{k} * p_1}{(1+i)^k (1+\pi)^k} + \\
& + \sum_{k=1}^{n} \frac{PV_{Ki}^{k} * p_1}{(1+i)^k (1+\pi)^k}
\end{aligned}
$$

(4.4.4)

Annotation to the formula:

- $PV$ – represents the present value of direct and induced fiscal yields,
- $T_{IT}^{k}$ – yield of income tax of a natural person from the dependent activity,
- $T_{w}^{k}$ - yield of income tax which is collected from the separated tax base special tax rate, i. e. yield from the witholding tax,
- $T_{v}^{k}$ - yields from the Vehicle Excise Duty,
- $Te^{k}$ - yields from the estate duty,
- $T_{o}^{k}$ - various charges,
- $F_{ISC}^{k}$ - yields from social security,
- $F_{H}^{k}$ - yields from the public health security,
- $T_{LE}^{k}$ - tax yields of the legal entity,
- $PV_{Id}^{k}$ - the amount of estimated fiscal yields from the corporate taxes from the suppliers of supported investors in the year k.
- $PV_{Kd}^{k}$ - the amount of estimated fiscal yields from supported investors in the year $k$.
- $PV_{Ki}^{k}$ - the amount of fiscal yields from corporate taxes from the suppliers of supported investors in the year $k$. In case that it was corporate taxes accessed.

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[64] SCHWARZ et al. (2007), p. 57

- $PN^k$ - saved support for the unemployed in the year **k**.
- i – interest rate,
- k – particular year from the considered period,
- $\pi$ - inflation rate
- n – number of years in the estimated period,
- $p_1$ – the estimated probability that the investment would not have taken place without the investment incentives.
- $p_2$ – the estimated number of employees poached from other companies in the Czech Republic.
- $p_3$ – the estimated rate of the orders, which the suppliers would have gained even in the case of foreign manufacturing.

However the empirical study tracks five years history. Therefore the above mentioned formula (4.4.4) will be provided at the basis of the same indicators after modification of discounts in denominators and it is possible to perform an ex post evaluation of the particular policy.

Where:   $A_k = (1+i_k)(1+\pi_k)$
Present value will be calculated:

$$PV = \sum_{k=1}^{n} \frac{T_{IT}^k * p_1 * (1-p_2)}{\prod_{k=1}^{k} A_k} + \sum_{k=1}^{n} \frac{T_w^k * p_1}{\prod_{k=1}^{k} A_k} + \sum_{k=1}^{n} \frac{T_v^k * p_1}{\prod_{k=1}^{k} A_k} + \sum_{k=1}^{n} \frac{Te^k * p_1}{\prod_{k=1}^{k} A_k} + \sum_{k=1}^{n} \frac{T_o^k * p_1}{\prod_{k=1}^{k} A_k} +$$

$$+ \sum_{k=1}^{n} \frac{F_{ISC}^k * p_1 * (1-p_2)}{\prod_{k=1}^{k} A_k} + \sum_{k=1}^{n} \frac{F_H^k * p_1 * (1-p_2)}{\prod_{k=1}^{k} A_k} + \sum_{k=1}^{n} \frac{T_{LE}^k * p_1}{\prod_{k=1}^{k} A_k} + \sum_{k=1}^{n} \frac{PV_{Id}^k * p_1 * (1-p_2) * (1-p_3)}{\prod_{k=1}^{k} A_k} +$$

$$\sum_{k=1}^{n} \frac{PN^k * p_1}{\prod_{k=1}^{k} A_k} + \sum_{k=1}^{n} \frac{PV_{Ki}^k * p_1}{\prod_{k=1}^{k} A_k}$$

(4.4.5)

Annotation to the formula:

Formula 4.4.5 is not a prediction. It transfers realized future yields in the past. Therefore there is present value of particular yields or incomes, however these yields or incomes took place in the past.

The above mentioned formula (4.4.5) was divided into 11 fraction:
1) The first mathematical fraction represents the present value of future fiscal yields of income tax of a natural person from the dependent activity.

2) The second fraction represents the present value of future fiscal yields on income tax which is collected from the separated tax base special tax rate, i. e. yield from the withholding tax.

3) The third fraction represents the present value of future fiscal yields from the Vehicle Excise Duty.

4) The fourth fraction represents the present value of future fiscal yields from the estate duty.

5) The fifth fraction represents the present value of future various charges.

6) The sixth fraction represents the present value of future yields on insurance on social security.

7) The seventh fraction represents the present value of future yields on public health security.

8) The eighth fraction represents the present value of future tax yields of the legal entity.

9) The ninth fraction represents the present value of the amount of estimated fiscal yields from the corporate taxes from the suppliers of supported investors.

10) The tenth fraction represents the present value of the saved support for the unemployed.

11) The last fraction represents the present value of the amount of fiscal yields from corporate taxes from the suppliers of supported investors in case that it was corporate taxes accessed.

Annotation to the formula:

- *PV*– represents the present value of direct and induced fiscal yields,
- $T_{IT}^k$ – yield of income tax of a natural person from the dependent activity in the year *k,*
- $T_w^k$ - yield of income tax which is collected from the separated tax base special tax rate, i. e. yield from the witholding tax in the year *k,*
- $T_v^k$ - yields from the Vehicle Excise Duty in the year *k,*
- $Te^k$ - yields from the estate duty in the year *k,*
- $T_o^k$ - various charges in the year *k,*
- $F_{ISC}^k$ - yields from social security in the year *k,*
- $F_H^k$ - yields from the public health security in the year *k,*
- $T_{LE}^k$ - tax yields of the legal entity in the year *k,*
- $PV_{Id}^k$ - the amount of estimated fiscal yields from the corporate taxes from the suppliers of supported investors in the year *k,*
- $PV_{Kd}^k$ - the amount of estimated fiscal yields from supported investors in the year *k.*

- $PV_{Ki}^{k}$ - the amount of fiscal yields from corporate taxes from the suppliers of supported investors in the year **k**. In case that it was corporate taxes accessed.
- $PN^{k}$ - saved support for the unemployed in the year $k$.
- i – interest rate released by CNB in the particular year,
- $k$ – particular year from the considered period,
- $\pi$ - inflation rate released by CNB in the particular year,
- n – number of years in the estimated period,
- $p_1$ – the estimated probability that the investment would not have taken place without the investment incentives,
- $p_2$ – the estimated number of employees poached from other companies in the Czech Republic,
- $p_3$ – the estimated rate of the orders, which the suppliers would have gained even in the case of foreign manufacturing.

## 4.5 Results of the companies

This chapter provides results of the three mentioned models by Vybíhal, Schwarz et al. after analyses of the foreign companies and calculations of effectiveness. Vybihal's formula does not take into account net present values but instead makes use of real numbers from the accounting statements such as balance sheets, annual reports, general ledgers, and profit and loss statements charting the five years since the receipt of investment incentives.

The Schwarz formula, on the other hand, works with estimated fiscal outputs from the side of supported investors, estimated fiscal yields from the corporate taxes from the side of the suppliers of supported investors, estimated fiscal yields from the suppliers of supported investors, and amounts of estimated fiscal yields from individual taxes from suppliers of supported investors. Moreover Schwarz et al. work with the probabilities that the investments may not have taken place without investment incentives, estimate the role of employee poaching from the other companies in the Czech Republic and estimate the rate of the orders which suppliers would have gained even in the case of foreign manufacturing. This calculation is difficult, and by using estimates and probabilities cannot be as precise as Vybihal´s formula.

Tab. 29 – A calculation of effectiveness using
Vybíhal´s formula, Schwarz´s and modified formula

| Company No. | Vybíhal's formula | Schwarz´s formula | Modified formula |
|---|---|---|---|
| 1. | 0.65 | 0.41 | 0.55 |
| 2. | 0.16 | 0.02 | 0.31 |
| 3. | 1.28 | 1.98 | 1.12 |
| 4. | 2.06 | 1.54 | 2.12 |
| 5. | 4.23 | 2.91 | 3.58 |
| 6. | 2.78 | 3.02 | 2.54 |
| 7. | 7.98 | 5.04 | 6.01 |
| 8. | 2.30 | 1.50 | 2.01 |
| 9. | 2.65 | 2.01 | 3.52 |
| 10. | 13.51 | 11.54 | 12.56 |
| 11. | 0.89 | 0.74 | 0.84 |
| 12. | 1.42 | 1.01 | 1.23 |
| 13. | 4.82 | 2.56 | 4.52 |
| 14. | 1.50 | 1.82 | 1.12 |
| 15. | 2.67 | 1.95 | 2.13 |
| 16. | 1.68 | 0.99 | 1.34 |
| 17. | 5.86 | 4.67 | 5.13 |
| 18. | 2.35 | 1.98 | 2.05 |
| 19. | 3.58 | 2.54 | 3.42 |
| 20. | 2.47 | 1.94 | 2.15 |
| 21. | 0.95 | 0.51 | 0.86 |
| 22. | 6.38 | 5.21 | 5.98 |
| 23. | 3.86 | 4.12 | 3.92 |
| 24. | 1.95 | 0.95 | 1.86 |
| 25. | 2.84 | 1.94 | 2.74 |
| 26. | 1.45 | 1.42 | 1.36 |
| 27. | 2.76 | 2.51 | 2.64 |
| 28. | 3.41 | 3.01 | 3.22 |
| 29. | 2.42 | 1.86 | 2.13 |
| 30. | 2.93 | 2.01 | 2.63 |

Source: Own research.

The highest effectiveness is found with Vybihal´s formula because it works with real numbers. Schwarz's formula used three probabilities which cannot always be precise, and the estimates made by financial managers are not always accurate. For example, the probability that a specific foreign company would invest in the Czech Republic is an estimate. Moreover the estimate regarding the number of employees poached from other companies in the Czech Republic is

questionable because there are many aspects playing a role in decision to change employer. Probably the greatest weakness is found in the estimated rate of the orders the suppliers would have received even in the case of foreign manufacturing. This is a speculative parameter. By correcting the formula the results are improved because this calculation added values from accounting tables.

Statistical analysis provided the following: Due to the small sample size, the average value is not the suited indicator of the mean value by the deviated allocation. The Wilcoxon signed rank test with continuity correction was used. Statistic analyslis proved that the effectiveness is generally higher than 1. Ho was refused at the level of importance of 5% it was refused Ho hypothesis in favour of HA: $(\mu) > 1$. P-values were lower than 0.05.

## 4.6 The decision of foreign companies to make investments in the Czech Republic

The next part of the study concerns the factors influencing the decision of foreign investors to enter the Czech Republic. Research suggests that there must be some political, institutional and macroeconomic stability, liberalisation of goods and financial flows, especially for candidates and new members of the EU.

The qualitative research involved multi-national enterprises (MNEs). More than 60 financial managers were contacted by telephone and asked to participate in a study about the decision of their MNE to invest in the Czech Republic. This study was joined by 8 companies from Germany, 6 from Japan, 5 from Sweden, 4 each from France and Spain, and 3 from the Great Britain. These MNEs have been doing business in the Czech Republic longer than 10 years. After agreeing to join the study they were contacted by email or personally to answer questions via structured questionnaire concerning 28 factors. They were instructed to assign a point value to each criteria.

The respondents appreciate first and foremost the qualified labour force in the Czech Republic. They are aware of the country's strong education system, a criteria especially significant in the machine industry. The level of machine-engineers is evaluated highly. This is connected with the strong Czech tradition in the machine-industry developed during the communist era. According to the study, labour costs are low in comparison with western countries. These companies received investment incentives from the Czech government, further reducing the labour costs. They worry that in the future the cost of labour will increase. However, unemployment is increasing in the Czech Republic, leaving the supply still higher than the demand and keeping costs low. The MNEs became employers of many unskilled labourers. This can become a weakness for Czech economy in the case of an economic crisis or increased taxes causes companies to moving to countries with a cheaper labour force.

On double taxation, the financial managers had no special remarks. This was not an important factor in foreign investments. A more significant factor is EU membership. Moreover the Czech Republic is conveniently located in the centre of Europe. Especially the connection with other countries is convenient. They evaluate highly the national infrastructure and level of technology, as well as telecommunication. Foreign managers do not find the Czech market to be a significant factor in comparison with Poland or Germany.

There is confusion about the political stability in the Czech Republic. Financial managers try to see it from their point of view as foreigners living in a foreign country. They are aware of corruption and bureaucracy in countries which experienced nationalization and then privatization. Such factors can discourage investors and spoil the image of the country. The political situation influences financial stability.

To the financial indicators, they appreciate the system of investment incentives which was introduced in 2000. They are aware of this possibility in other countries, but especially the alleviation of income tax significantly helped them in their business. They appreciate financial support for new work places more than financial support for training. Providing land at lower prices does not evaluate highly because they consider land as not so expensive as in other countries.
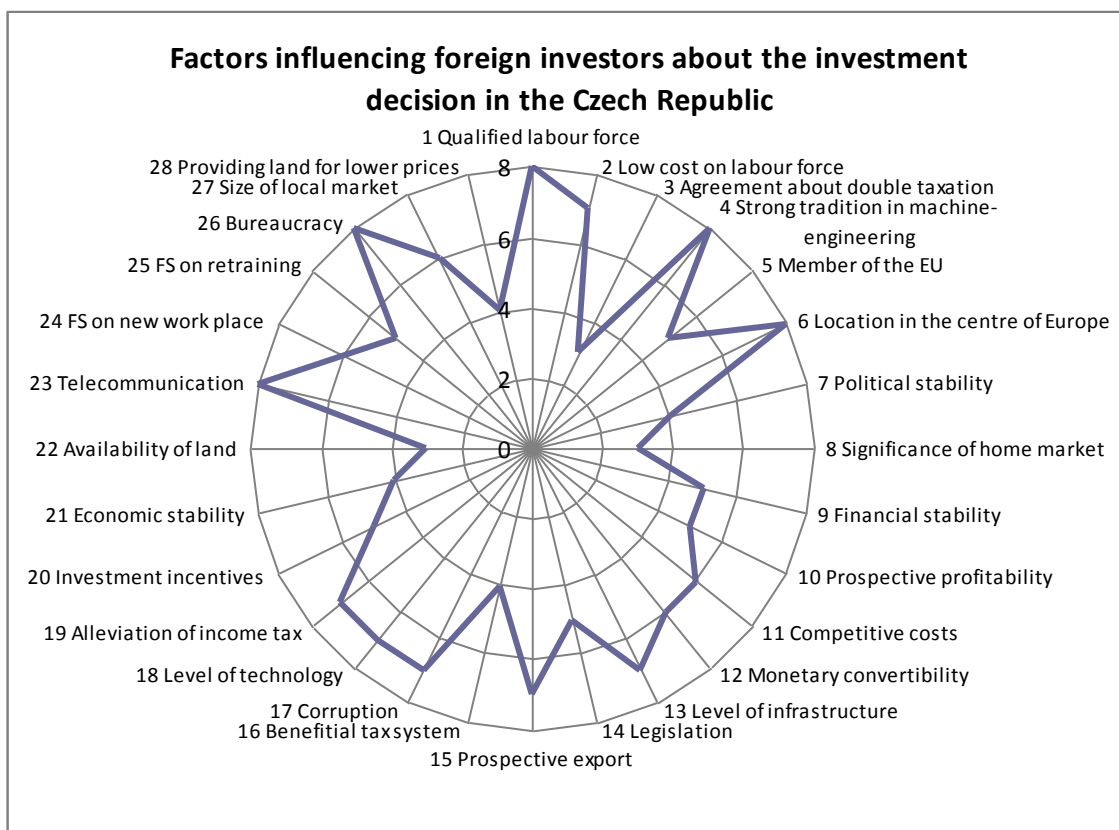


*Fig. 25 - Factors influencing foreign investors about the investment decision in the Czech Republic*
*Remark: 1 – not important factor, 10 – very important factor*
*Source: Author´s research*

According to a study performed in 2000 by PricewaterhouseCoopers (2002, p. 20 and 69) the most important factors were productivity and labour costs, investment incentives and economic stability. The least important factors were corruption, bureaucracy, and the size of the market. At that time, investors appreciated the Czech Republic because of the quality of the labour force and its cost, economical and political stability, investment incentives, industry tradition, low costs, closeness to the EU and the development of the Czech Republic.

In the last decade, the strong tradition in machine-engineering has remained an important factor in attracting foreign investors. On the other hand, the qualified labour force and the location in the centre of Europe continues to be appreciated as well. Investors have grown more worried about increasing levels of bureaucracy, legislation and corruption.

Investors in the Czech Republic evaluate especially highly the qualified labour force, important engineering tradition, location in the centre of Europe, and the high level of telecomunications. However they are alarmed by bureaucracy and corruption.

In fields where positive externalities exists, policies in favour of FDI and investment incentives can be formulated. On the contrary, where positive externalities do not manifest themselves, investors are motivated by predatorial interests and endeavour to seize control of the market. In this case, the investments have negative effects. Creators of economic policy should be very sensitive to this and establish clear rules; otherwise there is a danger of corruption.

# 5. THE MAIN RESULTS OF THE DISSERTATION

The main goal of the dissertation was to determine the effectiveness of investment incentives in the Czech Republic. Effectiveness was considered from the point of view of the government providing investment incentives as an instrument of state support. To help find the solution, the research was conducted:

1. An analysis of macroeconomic indicators in the Czech Republic in relation with FDI.

2. Search factors, which are key in the decision about entrance of foreign companies to the Czech Republic for measuring the effectiveness of investment incentives.

3. The application of currently available models, the improving and modification of the current methodology.

4. A verification of the current models so as to determine the effectiveness of the provided investment incentives, in particular for companies in the Czech Republic, and to find out the influences of investment incentives on the income side of the public budget.

The following summarizes the results of the research question:

Research question 1: Will the current system of investment incentives strengthen the competitiveness of the Czech Republic?

Macroeconomic analysis showed the relation of FDI to macroeconomic indicators. An influx of FDI decreased the unemployment rate in the Czech Republic. Since the system of investment incentives was established in 1998, it has played an important role in attracting foreign investors. The relation was confirmed by statistical analysis. It also considered indicators such as an increase of domestic products and the relationship of FDI to the evolution of corporate taxes.

**Reserach question 1 was confirmed.**

Research question 2: Are investment incentives effective from the point of view of inputs and outputs from the side of the government by the chosen companies that received investment incentives?

This research was not possible to apply to all of companies which received investment incentives in the Czech Republic. The list of companies which received investment incentives and is published on the website of Czechinvest does not reflect the reality, because many of the companies applied for investment incentives, fulfilled the criteria, but finally decided not to draw financial support.

There are many opinions of investment incentives, both positive and negative. Large multinational corporation receive money from taxpayers. However, they indisputably contribute to the state budget from the point of inputs and outputs. Even though there are opinions about abolishing them, it is important that the question of effectiveness and equity be discussed. Although large companies are supported by taxpayers, the future levies are also large, contributing significantly to the state budget. Social insurance takes up about 1/3 of the state budget and duties and charges about 1/20 of the state budget.

The limited study proved the contribution to the state budget. Investment incentives to the studied companies were effective from the perspective of inputs and outputs.

**Research question 2 was confirmed.**

Investors in the Czech Republic especially appreciate the highly qualified labour force, the engineering tradition, its location in the centre of Europe, and its high level of telecomunication. However, they worry about bureaucracy and corruption.

## 5.1 Benefits for theoretical and practical knowledge

This dissertation provides a brief study on the effectiveness of investment incentives in the Czech Republic. The goal of the dissertation was to calculate the effectiveness of investment incentives. It used the models proposed by Vybihal and Schwarz. Vybihal calculates with real inputs and outputs to the state budget. Schwarz focused on the net present value and probabilities. Tax issues are topical, especially in a time of global crisis. Due to globalization, capital is mobile and governments try to attract investors to their country.

The models were used, verified and widened. The calculation belongs to the issue of tax policy.

### 5.1.1　Benefits for theoretical knowledge

The issue dealt with is important because taxes are still a source of disagreement. Taxes may be used as the main instrument of economic policy aimed to influence macroeconomic indicators, e.g., unemployment reduction and an increase in economic growth. In a time of economic crisis, this is more important than ever. The issue of investment incentives is not only economic but political.

An influx of investment incentives influences the economic situation in a country, especially in the Czech Republic, which is an open country and a member of the EU.

In the past, CzechInvest ordered an analysis by auditors. However these results were disputable because of who paid for the analysis. This dissertation offers an unbiased view on the issue.

From a theoretical point of view, this dissertation contributes the following:
- the mapping, summarisation and categorization of knowledge about the FDI, investment incentives and the effectiveness of investment incentives,
- Attitude towards evaluating investment incentives,
- The identification of key factors for foreign investors about their investments,
- research regarding tax competition,
- verified macroeconomic indicators in the Czech Republic on the issue of FDI.

An important theoretical contribution is the verification of the model evaluating the effectiveness of investment incentives. There are various evaluations related to the impact of investment incentives; different analyses of the evaluation of incoming financial resources (demonstrating both positive and negative effects) have been performed. This dissertation contributes. By a calculation of effectiveness according to Vybihal´s formula, from the 30 observed companies only 5 proved ineffective. The detailed analysis suggests

that investment incentives are effective because they create future tax yields for the state. Of the 30 companies, there was an increased effect in 1 in 6 cases. The research showed that about 11 companies had an effectiveness greater than 2. 3 companies had an effectiveness higher than 3. Five companies were effective, and in one case the company's effectiveness was 13.51.

According to the Schwarz´ formula, of the 30 observed companies, 6 were ineffective. Around 11 companies had an effectiveness higher than 1, 6 companies higher than 2, 2 companies higher than 3, 4 and 5. One company had an effectiveness of 11.54.

Due to a calculation of real fiscal yields, the Schwarz modified formula proved that 4 companies were ineffective. 6 companies had a higher effectiveness than 1, 10 companies higher than 2, 5 companies higher than 3, 1 company higher than 4, and 2 companies higher than 5. One company's effectiveness was 12.56.

This dissertation sheds more light on the situation of investment incentives and their influence on the economy of a country and contributes to the verification of the methodology used to measure the effectiveness of investment incentives. The main part of the dissertation was an adaptation of models published by reputable scholars.

### 5.1.2 Practical benefits

From the practical knowledge perspective, this dissertation benefits by mapping the current status of providing investment incentives. Firstly, a detailed investigation of companies which received investment incentives, their exact imputs and outputs to the state budget were calculated. The effects on the economy in the country were shown. Public support is discussed, especially from the point of view effectiveness and equity. Investment incentives seem to be costly from the taxpayer's point of view. Secondly, actual factors which influence foreign investors in placing their investment into the Czech Republic were identified and analyzed. Thirdly, the dissertation demonstrates the contribution of FDI to the macroeconomic situation in the Czech Republic since the Velvet revolution.

An examination of the existing contribution on the macroeconomic level (contribution to government and local policies) and the micro level (foreign investors) was the main practical contribution of this work. Results led to recommendations for future development. The dissertation verified the current methods of identification of research procedures for the future provision of foreign direct investment incentives and their structures in the Czech Republic.

Based on statistical methods used in case studies, the provision of foreign direct investment incentives in the Czech Republic was analyzed in detail. This dissertation also included a calculation of the costs of direct investment incentives in the Czech Republic and their efficiency.

In the end, the dissertation might be of some benefit to local companies and the Czech government in developing a more educated opinion of state support.

### 5.1.3   Benefits for educational and research activity in the faculty

The results of this dissertation can be used for research activity in the TBU Faculty of Management and Economics (FaME), especially in the accredited programme Accounting and Taxes. The dissertation concerns tax issues and provides a new perspective on investment incentives and FDI.

The development of this dissertation is based on the results of projects implemented under the support of the Internal Grant Agency of FaME UTB.

At FaME, most of the economic research and the case studies conducted to be used for pedagogical activities at are focused on an industry or on services. However, the issue of taxes has been neglected.

## 6. CONCLUSION

Investment incentives are a disputable instrument of public support for attracting foreign investors into a domestic economy. Some politicians and businesses suppose that they should be abolished due to ineffectiveness or a distortion of healthy competition in the market. On the other hand, some economic analysts support them.

According to the opinion of some financial directors of foreign subsidiaries, investment incentives play a significant role in the investment of companies into a particular country. Globally, the governments of each country are pressed to offer advantageous incentives to compete for foreign capital. In the case of the Czech Republic, it competes especially with its neighbouring countries: Poland, Hungary and Slovakia.

Investment incentives are a component of international trade. From the point of view of the transformation of postcommunist countries, their importance is enhanced by the desire to gain easier access to the markets of the most developed countries but also due to changes in their microeconomic and business surroundings. Investment incentives can be considered an important instrument of economic restructuralisation.

In accordance with a strategy of development and economic stimulus, the Czech government decided in 1998 to introduce investment incentives to stimulate foreign investment into domestic manufacturing industries. At that time there was an instrument for overcoming economic depression and increasing exports, and an instrument to solve regional unemployment problems and support the transfer of know-how and modern technologies in the Czech Republic. These were signals to foreign investors that the Czech Republic desired foreign investors. In the beginning tax breaks were offered, subsides for creating work places, retraining employees, providing lands and the preparation of industrial zones. Increased experience and the providing of investment incentives opened the way for public investment into strategic services and technological centres.

There is no other alternative to the policy of investment incentives. Even so, a deputy of the Czech Chamber of Commerce and a Union of small and middle-sized business enterprises in the Czech Republic, Jaromír Drábek, is radically against investment incentives and asked the Ministry of Industry and Trade for their abolishment because, as he claims, the risk of suffering damage due to a reflux of qualified work force and the whole distortion of the market is too high and outweighs the perceived benefits of investment incentives.[65] Although he acknowledges that investment incentives did have an influence on the influx of foreign capital into the Czech Republic, they have outlived their usefulness

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[65] Available from http://www.euractiv.cz/podnikani-a-zamestnanost/clanek/investicni-pobidky-nejsou-pro-investory-zasadni-ale-ve-finale-mohou-rozhodnout-010591

and now have a negative influence on the Czech economy by giving preferential treatment to foreign companies.[66] If a liberal country accepts the role of a creator of conditions favourable for economic growth, an important part of its role must be the support of investment activities for private companies.

Indisputably, investment incentives provide money from taxpayers who expect returns in the form of decreased unemployment. The question is not if there should be incentives, but in which amount and in which economic fields. Countries that do not provide them become isolated from investments, which is what happened in the past with Slovakia.

Moreover, investment incentives are topical. Especially concerning government support for small companies, which would affect the local inhabitants and economies. The economy is not equal in effectiveness and fairness. If investment incentives are to be really effective, they have to be provided to large MNEs due to their large number of employees who will levy items to the state budget. As shown, social and health insurance play important roles in the levies to the state budget.

On the other hand if the government were truly fair, foreign companies would not be supported. They would decide to invest into different, possibly neighboring countries. They would establish subsidiaries and compete with the Czech Republic. If there were no investment incentives in any country, this would be fair and investment incentives could be abolished. But if some countries provide incentives, other countries are compelled to do so in order to remain competitive. The Czech Republic should concentrate on competitiveness and renew traditional industries, especially the engineering industry.

Lately, there is a possibility to gain support for projects focused on progressive technologies such as technological centres and centres of strategic services. These activities have high added value and great export potential. This is a new opportunity for Czech companies.

Investment incentives seem to be very effective from the point of view of the national economy and from the point of view of contribution to the state budget. According to the results of this study, in most cases they are effective and recoup the investment within 5 years. The most important components are the financial flows related with social and health insurance (more than 75% levies to the state budget). The corporate tax rate plays a significant role. Charges and other levies are insignificant.

The increased interest in FDI could be explained by the following factors: accelerated privatisation, currency stability, location, qualitative and quite cheap labour, and European Union membership.

Negative effects from FDI can be seen, accompanied by complex industrial factors. One particularly sensitive industry is the auto industry. To be dependent

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[66] Available from http://www.euractiv.cz/podnikani-a-zamestnanost/clanek/investicni-pobidky-nejsou-pro-investory-zasadni-ale-ve-finale-mohou-rozhodnout-010591

on foreign companies threatens employment and economic growth. High numbers of companies owned by foreign capital increase the Czech dependency on the global business cycle. This fact is all too apparent in the automotive industry. There is a higher degree of sensitivity in the case of an economic recession.

The aim of the government should be the creation of predictable and stable surroundings which will support investments. The biggest supports for foreign and domestic investments are especially political stability, economic growth, low levels of taxation, a transparent business environment, protection of investments and a low rate of corruption.

In conclusion, the influx of foreign investment will probably decrease after gaining level of investment saturation. Profit reinvestment may occur, as may profit repatriation (in the form of paying dividends abroad), can be used for development of strategic conceptions to foreign investors in third countries. Solely foreign investments and investment incentives tailored to foreign investors cannot be considered as permanent instruments for gaining business equilibrium. Ideally, the government should create healthy free market conditions with clear law and then adopt a laissez-faire approach.

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# CURRICULUM VITAE

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2001 – 2004       Bachelor´s study programme in Economics and management, Tomas Bata University in Zlín, Faculty of Management and Economics
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**Professional experience:**
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**Foreign languages:**
English       - FCE (First Certificate in English)
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Hobbies:
Clarinet, piano, reading, hiking.

# APPENDIX

Appendix A – Surveys of particular companies
Tab. 1 - Survey of total inputs and outputs company No. 11

| Outputs from the state budget | Total in CZK | Total in % |
|---|---|---|
| Corporate income tax relief | 449,259 | 66 |
| Retraining | 235,000 | 34 |
| Total outputs | 684,259 | 100 |
| *Inputs into the state budget* | | |
| Yield of income tax of a natural person from the dependent activity | 188,587 | 31 |
| Yield from the withholding tax | 2789 | 0 |
| Insurance on social security | 214,617 | 35 |
| Public health security | 91,978 | 15 |
| Yield from the Vehicle Excise Duty | 2,769 | 0 |
| Yield from the estate duty | 1,954 | 0 |
| Various charges | 5,801 | 1 |
| Tax yield of the legal entity | 100,495 | 17 |
| Total inputs | 608,990 | 100 |
| *Difference, effectiveness of the provided state support* | *-75,269* | *0.89* |

Tab. 2 - Survey of total inputs and outputs company No. 12

| Outputs from the state budget | Total in CZK | Total in % |
|---|---|---|
| Corporate income tax relief | 209,108 | 58 |
| Retraining | 150,550 | 42 |
| Total outputs | 359,658 | 100 |
| *Inputs into the state budget* | | |
| Yield of income tax of a natural person from the dependent activity | 73,102 | 14 |
| Yield from the withholding tax | 4,902 | 1 |
| Insurance on social security | 263,646 | 52 |
| Public health security | 112,991 | 22 |
| Yield from the Vehicle Excise Duty | 6,140 | 1 |
| Yield from the estate duty | 3,420 | 1 |
| Various charges | 1,253 | 0 |
| Tax yield of the legal entity | 45,260 | 9 |
| Total inputs | 510,714 | 100 |
| *Difference, effectiveness of the provided state support* | *151,056* | *1.42* |

Tab. 3  - Survey of total inputs and outputs company No. 13

| Outputs from the state budget | Total in CZK | Total in % |
|---|---|---|
| Corporate income tax relief | 42,300 | 56 |
| Retraining | 33,552 | 44 |
| Total outputs | 75,852 | 100 |
| *Inputs into the state budget* | | |
| Yield of income tax of a natural person from the dependent activity | 164,856 | 45 |
| Yield from the withholding tax | 6,514 | 2 |
| Insurance on social security | 101,151 | 28 |
| Public health security | 43,350 | 12 |
| Yield from the Vehicle Excise Duty | 2,147 | 1 |
| Yield from the estate duty | 1,365 | 0 |
| Various charges | 963 | 0 |
| Tax yield of the legal entity | 45,260 | 12 |
| Total inputs | 365,606 | 100 |
| *Difference, effectiveness of the provided state support* | *289,754* | *4.82* |

Tab. 4 - Survey of total inputs and outputs company No. 14

| Outputs from the state budget | Total in CZK | Total in % |
|---|---|---|
| Corporate income tax relief | 550,210 | 57 |
| Retraining | 415,000 | 43 |
| Total outputs | 965,210 | 100 |
| *Inputs into the state budget* | | |
| Yield of income tax of a natural person from the dependent activity | 330,432 | 23 |
| Yield from the withholding tax | 98,324 | 7 |
| Insurance on social security | 472,714 | 33 |
| Public health security | 202,591 | 14 |
| Yield from the Vehicle Excise Duty | 23,032 | 2 |
| Yield from the estate duty | 32,340 | 2 |
| Various charges | 62,013 | 4 |
| Tax yield of the legal entity | 226,369 | 16 |
| Total inputs | 1,447,815 | 100 |
| *Difference, effectiveness of the provided state support* | *482,605* | *1.5* |

Tab. 5 - Survey of total inputs and outputs company No. 15

| Outputs from the state budget | Total in CZK | Total in % |
|---|---|---|
| Corporate income tax relief | 21,987 | 49 |
| Retraining | 23,307 | 51 |
| Total outputs | 45,294 | 100 |
| *Inputs into the state budget* | | |
| Yield of income tax of a natural person from the dependent activity | 25,885 | 21 |
| Yield from the withholding tax | 380 | 0 |
| Insurance on social security | 63,042 | 52 |
| Public health security | 27,018 | 22 |
| Yield from the Vehicle Excise Duty | 789 | 1 |
| Yield from the estate duty | 589 | 0 |
| Various charges | 976 | 1 |
| Tax yield of the legal entity | 2,255 | 2 |
| Total inputs | 120,934 | 100 |
| *Difference, effectiveness of the provided state support* | ***75640*** | ***2.67*** |

Tab. 6 - Survey of total inputs and outputs company No. 16

| Outputs from the state budget | *Total in CZK* | *Total in %* |
|---|---|---|
| Corporate income tax relief | 86,543 | 58 |
| Training and Retraining | 61,900 | 42 |
| Total outputs | 148,443 | 100 |
| Inputs into the state budget | | |
| Yield of income tax of a natural person from the dependent activity | 53,023 | 21 |
| Yield from the withholding tax | 3,806 | 2 |
| Insurance on social security | 90,383 | 36 |
| Public health security | 38,735 | 16 |
| Yield from the Vehicle Excise Duty | 2,548 | 1 |
| Yield from the estate duty | 1,549 | 1 |
| Various charges | 2,856 | 1 |
| Tax yield of the legal entity | 56,484 | 23 |
| Total inputs | 249,384 | 100 |
| *Difference, effectiveness of the provided state support* | ***100,941*** | ***1.68*** |

Tab. 7 - Survey of total inputs and outputs company No. 17

| Outputs from the state budget | Total in CZK | Total in % |
|---|---|---|
| Corporate income tax relief | 27,653 | 100 |
| Total outputs | 27,653 | 100 |
| Inputs into the state budget | | |
| Yield of income tax of a natural person from the dependent activity | 44,232 | 27 |
| Yield from the withholding tax | 5,643 | 3 |
| Insurance on social security | 63,491 | 39 |
| Public health security | 27,210 | 17 |
| Yield from the Vehicle Excise Duty | 1,897 | 1 |
| Yield from the estate duty | 1,450 | 1 |
| Various charges | 1,462 | 1 |
| Tax yield of the legal entity | 16,661 | 10 |
| Total inputs | 162,046 | 100 |
| *Difference, effectiveness of the provided state support* | *134,393* | *5.86* |

Tab. 8 - Survey of total inputs and outputs company No. 18

| Outputs from the state budget | Total in CZK | Total in % |
|---|---|---|
| Corporate income tax relief | 55,876 | 58 |
| Retraining | 39,791 | 42 |
| Total outputs | 95,667 | 100 |
| *Inputs into the state budget* | | |
| Yield of income tax of a natural person from the dependent activity | 40,648 | 11 |
| Yield from the withholding tax | 8,965 | 2 |
| Insurance on social security | 80,949 | 22 |
| Public health security | 34,692 | 9 |
| Yield from the Vehicle Excise Duty | 1,393 | 0 |
| Yield from the estate duty | 17,654 | 5 |
| Various charges | 6,945 | 2 |
| Tax yield of the legal entity | 33,571 | 9 |
| Total inputs | 224,817 | 61 |
| *Difference, effectiveness of the provided state support* | *129,150* | *2.35* |

Tab. 9 - Survey of total inputs and outputs company No. 19

| Outputs from the state budget | Total in CZK | Total in % |
|---|---|---|
| Corporate income tax relief | 68,963 | 100 |
| Total outputs | 68,963 | 100 |
| *Inputs into the state budget* | | |
| Yield of income tax of a natural person from the dependent activity | 60,321 | 24 |
| Yield from the withholding tax | 4,072 | 2 |
| Insurance on social security | 103,999 | 42 |
| Public health security | 44,142 | 18 |
| Yield from the Vehicle Excise Duty | 2,795 | 1 |
| Yield from the estate duty | 3,012 | 1 |
| Various charges | 7,649 | 3 |
| Tax yield of the legal entity | 20,897 | 8 |
| Total inputs | 246,887 | 100 |
| *Difference, effectiveness of the provided state support* | *177,924* | *3.58* |

Tab. 10 - Survey of total inputs and outputs company No. 20

| Outputs from the state budget | Total in CZK | Total in % |
|---|---|---|
| Corporate income tax relief | 96,325 | 71 |
| Retraining | 39,639 | 29 |
| Total outputs | 135,964 | 100 |
| *Inputs into the state budget* | | |
| Yield of income tax of a natural person from the dependent activity | 52,270 | 16 |
| Yield from the withholding tax | 9,563 | 3 |
| Insurance on social security | 148,003 | 44 |
| Public health security | 63,430 | 19 |
| Yield from the Vehicle Excise Duty | 7,543 | 2 |
| Yield from the estate duty | 2,890 | 1 |
| Various charges | 1,890 | 1 |
| Tax yield of the legal entity | 50,242 | 15 |
| Total inputs | 335,831 | 100 |
| *Difference, effectiveness of the provided state support* | *199,867* | *2.47* |

Tab. 11 - Survey of total inputs and outputs company No. 21

| Outputs from the state budget | Total in CZK | Total in % |
|---|---|---|
| Corporate income tax relief | 151,869 | 100 |
| Total outputs | 151,869 | 100 |
| *Inputs into the state budget* | | |
| Yield of income tax of a natural person from the dependent activity | 49,902 | 35 |
| Yield from the withholding tax | 3,091 | 2 |
| Insurance on social security | 45,147 | 31 |
| Public health security | 19,349 | 13 |
| Yield from the Vehicle Excise Duty | 3,896 | 3 |
| Yield from the estate duty | 2,603 | 2 |
| Various charges | 3,096 | 2 |
| Tax yield of the legal entity | 17,191 | 12 |
| Total inputs | 144,275 | 100 |
| *Difference, effectiveness of the provided state support* | ***-7,594*** | ***0.95*** |

Tab. 12 - Survey of total inputs and outputs company No. 22

| Outputs from the state budget | Total in CZK | Total in % |
|---|---|---|
| Corporate income tax relief | 47,940 | 69 |
| Training and Retraining | 21,485 | 31 |
| Total outputs | 69,425 | 100 |
| Inputs into the state budget | | |
| Yield of income tax of a natural person from the dependent activity | 101,661 | 23 |
| Yield from the withholding tax | 49,461 | 11 |
| Insurance on social security | 155,081 | 35 |
| Public health security | 66,463 | 15 |
| Yield from the Vehicle Excise Duty | 7,504 | 2 |
| Yield from the estate duty | 5,049 | 1 |
| Various charges | 23,504 | 5 |
| Tax yield of the legal entity | 34,209 | 8 |
| Total inputs | 442,932 | 100 |
| *Difference, effectiveness of the provided state support* | ***373,507*** | ***6.38*** |

Tab. 13 - Survey of total inputs and outputs company No. 23

| Outputs from the state budget | Total in CZK | Total in % |
|---|---|---|
| Corporate income tax relief | 45,322 | 100 |
| Total outputs | 45,322 | 100 |
| *Inputs into the state budget* | | |
| Yield of income tax of a natural person from the dependent activity | 41,904 | 24 |
| Yield from the withholding tax | 7,078 | 4 |
| Insurance on social security | 59,652 | 34 |
| Public health security | 25,565 | 15 |
| Yield from the Vehicle Excise Duty | 4,302 | 2 |
| Yield from the estate duty | 7,903 | 5 |
| Various charges | 4,502 | 3 |
| Tax yield of the legal entity | 24,036 | 14 |
| Total inputs | 174,942 | 100 |
| *Difference, effectiveness of the provided state support* | *129,620* | *3.86* |

Tab. 14 - Survey of total inputs and outputs company No. 24

| Outputs from the state budget | Total in CZK | Total in % |
|---|---|---|
| Corporate income tax relief | 95,445 | 100 |
| Total outputs | 95,445 | 100 |
| *Inputs into the state budget* | | |
| Yield of income tax of a natural person from the dependent activity | 46,137 | 25 |
| Yield from the withholding tax | 9,704 | 5 |
| Insurance on social security | 63,431 | 34 |
| Public health security | 27,184 | 15 |
| Yield from the Vehicle Excise Duty | 1,809 | 1 |
| Yield from the estate duty | 6,905 | 4 |
| Various charges | 2,943 | 2 |
| Tax yield of the legal entity | 28,497 | 15 |
| Total inputs | 186,118 | 100 |
| *Difference, effectiveness of the provided state support* | *90,673* | *1.95* |

Tab. 15 - Survey of total inputs and outputs company No. 25

| Outputs from the state budget | Total in CZK | Total in % |
|---|---|---|
| Corporate income tax relief | 78,901 | 44 |
| Job creation grants | 85,401 | 48 |
| Retraining | 15,351 | 9 |
| Total outputs | 179,653 | 100 |
| *Inputs into the state budget* | | |
| Yield of income tax of a natural person from the dependent activity | 71,103 | 14 |
| Yield from the withholding tax | 45,403 | 9 |
| Insurance on social security | 197,284 | 39 |
| Public health security | 84,550 | 17 |
| Yield from the Vehicle Excise Duty | 14,930 | 3 |
| Yield from the estate duty | 52,430 | 10 |
| Various charges | 24,930 | 5 |
| Tax yield of the legal entity | 19,584 | 4 |
| Total inputs | 510,214 | 100 |
| *Difference, effectiveness of the provided state support* | ***330,561*** | ***2.84*** |

Tab. 16 - Survey of total inputs and outputs company No. 26

| Outputs from the state budget | Total in CZK | Total in % |
|---|---|---|
| Corporate income tax relief | 96,248 | 100 |
| Total outputs | 96,248 | 100 |
| *Inputs into the state budget* | | |
| Yield of income tax of a natural person from the dependent activity | 27,651 | 20 |
| Yield from the withholding tax | 7,403 | 5 |
| Insurance on social security | 55,541 | 40 |
| Public health security | 23,803 | 17 |
| Yield from the Vehicle Excise Duty | 3,924 | 3 |
| Yield from the estate duty | 2,694 | 2 |
| Various charges | 879 | 1 |
| Tax yield of the legal entity | 17,664 | 13 |
| Total inputs | 139,559 | 100 |
| *Difference, effectiveness of the provided state support* | ***43,311*** | ***1.45*** |

Tab. 17 - Survey of total inputs and outputs company No. 27

| Outputs from the state budget | Total in CZK | Total in % |
|---|---|---|
| Corporate income tax relief | 250,850 | 100 |
| Total outputs | 250,850 | 100 |
| *Inputs into the state budget* | | |
| Yield of income tax of a natural person from the dependent activity | 137,940 | 20 |
| Yield from the withholding tax | 57,017 | 8 |
| Insurance on social security | 257,330 | 37 |
| Public health security | 110,285 | 16 |
| Yield from the Vehicle Excise Duty | 11,089 | 2 |
| Yield from the estate duty | 26,048 | 4 |
| Various charges | 9,038 | 1 |
| Tax yield of the legal entity | 83,600 | 12 |
| Total inputs | 692,347 | 100 |
| *Difference, effectiveness of the provided state support* | *441,497* | *2.76* |

Tab. 18 - Survey of total inputs and outputs company No. 28

| Outputs from the state budget | Total in CZK | Total in % |
|---|---|---|
| Corporate income tax relief | 87,930 | 52 |
| Job creation grants | 48,960 | 29 |
| Retraining | 30,645 | 18 |
| Total outputs | 167,535 | 100 |
| *Inputs into the state budget* | | |
| Yield of income tax of a natural person from the dependent activity | 140,978 | 25 |
| Yield from the withholding tax | 78,023 | 14 |
| Insurance on social security | 142,317 | 25 |
| Public health security | 60,993 | 11 |
| Yield from the Vehicle Excise Duty | 24,890 | 4 |
| Yield from the estate duty | 40,291 | 7 |
| Various charges | 13,803 | 2 |
| Tax yield of the legal entity | 69,999 | 12 |
| Total inputs | 571,294 | 100 |
| *Difference, effectiveness of the provided state support* | *403,759* | *3.41* |

Tab. 19 - Survey of total inputs and outputs company No. 29

| Outputs from the state budget | Total in CZK | Total in % |
|---|---|---|
| Corporate income tax relief | 102,594 | 41 |
| Job creation grants | 94,058 | 38 |
| Retraining | 52,341 | 21 |
| Total outputs | 248,993 | 100 |
| *Inputs into the state budget* | | |
| Yield of income tax of a natural person from the dependent activity | 64,067 | 26 |
| Yield from the withholding tax | 30,954 | 12 |
| Insurance on social security | 82,640 | 33 |
| Public health security | 35,417 | 14 |
| Yield from the Vehicle Excise Duty | 2,147 | 1 |
| Yield from the estate duty | 2,703 | 1 |
| Various charges | 601 | 0 |
| Tax yield of the legal entity | 30,464 | 12 |
| Total inputs | 248,993 | 100 |
| *Difference, effectiveness of the provided state support* | *353,570* | *2.42* |

Tab. 20 - Survey of total inputs and outputs company No. 30

| Outputs from the state budget | Total in CZK | Total in % |
|---|---|---|
| Corporate income tax relief | 67,523 | 100 |
| Total outputs | 67,523 | 100 |
| *Inputs into the state budget* | | |
| Yield of income tax of a natural person from the dependent activity | 51,059 | 26 |
| Yield from the withholding tax | 39,504 | 20 |
| Insurance on social security | 63,382 | 32 |
| Public health security | 27,163 | 14 |
| Yield from the Vehicle Excise Duty | 1,906 | 1 |
| Yield from the estate duty | 9,068 | 5 |
| Various charges | 496 | 0 |
| Tax yield of the legal entity | 5,264 | 3 |
| Total inputs | 197,842 | 100 |
| *Difference, effectiveness of the provided state support* | *130,319* | *2.93* |

**Appendix B**

Questionnaire for financial managers of MNEs:

1) Research about advantage of the Czech Republic and its location.
Please assign to the following factors numbers 1-10 according to the significance.

              1- Non significant factor,
              10- Significant factor.

1) Qualified labour force,
2) Low cost on labour force,
3) Agreement about double taxation,
4) Czech Republic is considered as a country with strong tradition in machine-engineering industry,
5) Member of the EU,
6) Location in the centre of Europe,
7) Political stability,
8) Significance of home market,
9) Financial stability,
10) Prospective profitability,
11) Competitive costs,
12) Monetary convertibility,
13) Level of infrastructure,
14) Legislation,
15) Prospective export,
16) Beneficial tax system,
17) Corruption,
18) Level of Technology,
19) Alleviation of income tax,
20) Investment incentives,
21) Economic stability,
22) Availability of land,
23) Telecommunication,
24) Financial support on new work place,
25) Financial support on retraining,
26) Bureaucracy,
27) Size of local market,
28) Providing land for lower prices.

2) According to my opinion, the current system of investment incentives should stay the same, or I have the following reservations:

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3) According to my opinion, the strongest competitor is:
a) Poland,
b) Hungary,
c) Slovakia,
d) none of these countries.

4) Our company would have invested in the Czech Republic even without an investment incentives.

5) We considered investing in the different country because (types of investment incentives, location, ……).

6) We appreciate investment incentives as important part in the decision of MNE to enter the Czech Republic.

7) In our point of view, investment incentives are effective and useful.

8) Our company has a considerable influence on the location where is our subsidiary located.

9) Detailed analysis of inputs and outputs to the state budget.