ANALYSIS OF FOREIGN DIRECT INVESTMENT IN THE CZECH REPUBLIC

M. Domesová

Received: October 31, 2010

Abstract


The foreign direct investments are joined with the process of world globalisation. Foreign direct investments are carried out especially by multinational companies. The basic forms of the foreign direct investments are “greenfield” investments and “brownfield” investments in the form of the privatization. The Czech Republic has shown mass inflow of foreign direct investments since 1998. The aim of the paper is to evaluate the inflow of foreign direct investments in the context of the balance of payments and the evaluation their impact on the outside economic equilibrium and gross value added in the Czech Republic. The subject of the analysis is the identification of the most important factors of foreign direct investments inflow and the classification of foreign direct investments inflow from the point of view of branches and technological intensity of production as well. The aim is fulfilled by analysis of selected indicators of the balance of payments, analysis of gross value added and international comparison of foreign direct investments inflow in countries of Visegrad Group. The results show the part of privatization in foreign capital inflow, increasing import intensity and export efficiency linked with foreign direct investments. The results are subject of research focused on the process of world globalisation and regional development.

foreign direct investment, import, export, balance of payments, gross value added, Czech Republic

The Czech Republic has registered mass inflow of foreign direct investments since 1998. The inflow of foreign capital has been made in different forms: “greenfield” investment, it means the establishment a new branch in the foreign countries and “brownfield” investment in the form of privatization, consolidation and acquisition. Direct investments are carried out particularly by multinational companies and they are a direct demonstration of the process of world globalisation and liberalisation of international trade. This form of capital represents positive aspects as well as considerable risks for host economy.

MATERIALS AND METHODS

The aim of this paper is to evaluate the inflow of foreign direct investments (FDI) in the balance of payments and to evaluate their impact on external economic equilibrium and gross value added in the Czech Republic. The subject of the analysis is the identification of the most important factors of FDI inflow and the classification of FDI inflow from the point of view of branches and technological intensity of production as well. The aim is fulfilled by analysis of selected indicators of the balance of payments:

- FDI inflow
- percentage FDI inflow on total financial account
- development of current account, efficiency balance, financial account
- percentage of export and import of companies with foreign capital participation on the total export and import of the Czech Republic.

In terms of analysis of GDP are used following indicators:

- percentage of privatisation on the total FDI inflow
- percentage of gross value added of foreign controlled companies on the total gross value added of the Czech Republic.
The international comparison is fulfilled by applying following indicators:

- **cumulative FDI inflow per capita**
- FDI inflow into branches
- classification of FDI inflow into branches based on technological intensity of production.

The data have been drawn from the database: Organisation for Economic Co-operation and Development (OECD), Czech Investment and Business Development Agency, Slovak Investment and Trade Development Agency, Polish Information and Foreign Investment Agency, Hungarian Investment and Trade Development Agency.

The information about foreign direct investment in the Czech Republic provide following institution:

- **Czech National Bank** (information about FDI inflow in the balance of payments and information about companies with foreign capital participation in which a foreign investor owns 10 per cent or more of the ordinary shares or voting power),
- **Czech Statistical Office** (information about foreign controlled companies in which a foreign investor owns 50 per cent or more of the ordinary shares or voting power),
- **Department of Trade and Industry** (information about incentive firms – national and foreign firms that received investment incentives).

### Methodological content of foreign direct investment

Foreign direct investment means ownership by a foreign investor of 10% or more of the equity capital of a company, conditional on the investor having a lasting interest in the company and participating in its management. A direct investor need not own a controlling stake or the largest stake in the company. In addition to the non-resident company’s share of the equity capital, foreign direct investment comprises reinvested earnings and other capital, including credit relations with the direct investor. The composition of direct investment can thus be expressed using the following relationship (Kalínská, 1999):

\[
\text{Direct investment} = \text{equity capital} + \text{reinvested earnings} + \text{other capital}
\]

The basic forms of FDI are: “greenfield” investment, which means establishment of a subsidiary company and a branch office abroad, investment in existing firms in the form of acquisition or consolidation, privatisation. FDI are carried out especially by multinational companies. The basic motives of multinational companies for FDI implementation involve: a positive effect of horizontal or vertical integration, cheap production input costs, dismantling of tariff barriers, exchange risk decrease, cheap labour, convenient tax conditions or investment incentives, following business partners etc (Dučáňková, Mandel, 2000).

**Horizontal integration** occurs in an industry when firms produce the same output at different locations. A horizontally integrated a multinational firm (MNF) must decide how much to produce in its branch plants. The firm wants to produce where marginal revenue MR equals marginal cost MC to maximize profit, and considers MC in its domestic and foreign branch plants separately (Thompson, 2006).

Multinational **vertical integration** occurs when an MNF produces an intermediate product in a foreign plant and uses it in the home plant to produce a final product, or vice versa. Natural resources products may be produced in one country and shipped to another for processing as intermediate products (Thompson, 2006).

### Foreign direct investment demonstration in the balance of payments

According to the methodology of The International Currency Fund, FDI is stated as a financial account entry in the balance of payments. The inflow of FDI is connected with macroeconomic impact of replenishment of domestic savings in the form of non-debt financing of the current account deficit of the balance of payments. If national investments exceed national savings, current account deficit occurs that can be financed from foreign savings or by drop of foreign exchange reserves. Foreign savings can be financed by national investment by force of inflow of debt or non-debt foreign capital. Financing by force of inflow of debt foreign capital represent credits from controlling company in the terms of FDI inflow, debt securities in the terms of inflow of portfolio investments. However, this financing leads to increase of foreign indebtedness of the country, therefore from a long-term point of view, the only sustainable source of financing of the current account deficit is balance of non-debt financing by force of FDI inflow (investments in basic capital and profit reinvestment) or inflow of portfolio investment in the form of property securities (Žák, 2001).

When demonstrating FDI, it is necessary to be aware of the possibility of distortion of the balance of payments by force of the entry of reinvested profit. At the company level, the reinvested profit represents the value of retained profit that is the difference between the company profit and repatriated profit that has been transferred abroad in the form of dividends. In the balance of payments reinvested profits are shown according to double principal. First as an entry within FDI on the financial account, which reflects increase of foreign investment in the form of shareholder’s capital growth. Reinvested profits also occur as an entry in income balance (annuity) within a current account, which reflects profit of a foreign investor from earlier invested capital. The margin of the financial account as well as the current account deficit of the balance of payment goes up by reinvested profits in the same value. Both entries are fully compensated in the balance of payments, but they can significantly distort the structure of the balance of payments and
overestimate the importance of FDI for external balance. Because of these reasons, the entry of reinvested profits would not have to be accounted in the balance of payments at all, as these means do not represent real currency flow and they do not burden external balance. The reason to integrate reinvested profits into the balance of payments is its connection and unification with the methodology of national accountancy. From the macroeconomic point of view, reinvested profits represent profits of foreign investors, annuity of non-residents that enter in the difference between the value of the gross domestic product and gross national product (Srholec, 2004).

RESULTS

There is the development of selected factor (FDI inflow/financial account) of the balance of payments in the following graph 1.

The balance of payments represents an account of international payments. The balance of payments consists of the three following accounts: current account, capital account and financial account. The current account is made by trade balance (goods balance), service balance, profit balance and current transfers. The total of the goods balance and the service balance is called efficiency balance. The capital account is created by international flow of capital, it means the difference between the inflow of foreign capital into domestic country and the outflow of domestic capital into foreign country (purchase and sale of securities etc.). The financial account is created by the balance of direct investment, portfolio investment, financial derivatives and other investments. It is obvious from graph 2 that in all years except 1993 there was a current account deficit of the balance of payments. The main determinant of the current account deficit of
the balance of payments was deficit of trade balance, it means goods import surplus over goods export. A positive effect (positive balance) was recorded at the service balance in the whole analysed period. Since 2004 the positive balance of efficiency balance due to the positive balance of trade balance is stated.

**Companies with foreign capital participation in the efficiency balance**

The efficiency balance represents the difference between export and import of goods and services. Negative balance of efficiency balance of the Czech Republic was stated in the years 1994–2003. Since 2001 there has been positive balance of efficiency balance of companies with foreign capital participation that positively affects decreasing of efficiency balance deficit of the Czech Republic. Following graph 3, graph 4 and graph 5 show the development of efficiency balance, export and import of goods and services of the Czech Republic and companies with foreign capital participation. Following graph 6 shows percentage of export and import of goods and services of companies with foreign capital participation on the total export and import of goods and services of the Czech Republic. It is obvious from the graph that the share of export is growing and the share of import is fluctuating. Since 2001 the share of export of goods and services predominates over their import. However, this difference is not striking. The average share of export is 43% and import is 40%.

![Graph 3: Efficiency balance (milliard CZK)](image)

Source: author

![Graph 4: Export of goods and services (milliard CZK)](image)

Source: author
Companies with foreign capital participation recorded high share of export and import mainly in the branch of processing industry. In the terms of processing industry, branches of car, engineering and electrical industry (BOSH DIESEL – production of motor vehicle parts, MITSUBISHI ELECTRIC AUTOMOTIVE CZECH – production of starters and alternators, Škoda Auto VW, TOYOTA-PEUGEOT-CITROËN AUTOMOBILE – car production, MATSUSHITA COMMUNICATION – production of mobile phones and car radios) prevail. In Tab. I there is high share of export as well as import of goods.

**Impact of FDI inflow on the outside economic equilibrium and economic growth**

The outside economic equilibrium/disequilibrium grows when the current account credit/deficit is showed in the balance of payments. There was a current account deficit of the balance of payments since 1994. The outside economic disequilibrium is measured by the current account deficit. The fluctuating development of a current account deficit of
the balance of payments is related to the economic growth in the Czech Republic. Since 1998, when the system of investment incentives was introduced, gradual inflow of FDI has occurred. FDI has become the major determinant of the financial account of the balance of payments development and an acceptable tool of non-debt deficit financing of the current account of the balance of payments in the long term. FDI help to decrease outside economic disequilibrium. Firms with foreign capital participation have recorded active balance of efficiency balance since 2001, which influences the development of the total efficiency balance of the Czech Republic positively. This fact helps to decline outside economic disequilibrium.

The economic growth is measured by the rate of growth GDP. The gross domestic product (GDP) can be measured by expenditure approach and production approach. In terms of expenditure approach is growing export the significant indicator of GDP growth. In terms of production approach is growing gross value added the significant indicator of GDP growth. The following graph 7 shows growing percentage of gross value added of foreign controlled companies on the total gross value added of the Czech Republic.

Investment incentives are pledged to the investors on the basis of the application for investment incentive grand with enclosure of investment plan filed at Ministry of Industry and Trade by force of agency CzechInvest. The application for investment incentive grand contains information about the future activity of the investor, the number of working stations, data concerning provision of machinery and product export expectations.

Incentive firms in processing industry

The analytic data published by Ministry of Industry and Trade shows following tables. These analytic data concerns a file of 397 incentive investors that received investment incentive at 31. 12. 2006. Following Tab. II features organisation of a number of firms into subintervals according to the expected share of imported machinery in the total value of new machinery.

Almost half of the evaluated firms (43.8%) are planning only to import their machinery. More than three fifths of the firms (cca 247) will import more than 90% of machines to carry out their business activities and only 59 firms will import less than 60% of machines. It is obvious from these data that the firms that have gained investment incentives and want to obtain machinery for the purpose of their investment implementation will have temporarily negative influence on the trade balance of the Czech Republic. As soon as these firms start their production, the influence on the trade balance will improve, because most firms expect to export their production (Tab. III).

In constituent groups in Tab. III there are firms that have gained investment incentives due to expected export percentage of goods produced in connection with awarded incentives. Almost one third of these firms (28.2%) will head their production only towards export, a half of the firms will export 93% of their products and 61.2% firms will export more than 90% of their new production.
Only 14 firms will head all their production towards home trade. It follows from these figures that incentive firms export major part of their production, which strengthens export efficiency of the Czech Republic. It is a logical consequence of the plan of foreign firms that implement greenfield investment in the Czech Republic particularly to expand their capacity of production with minimal manufacturing and transaction cost and to sell their products on foreign markets in the whole Europe successfully.

Other selected factors of FDI inflow in the Czech Republic

- government stability and economic growth,
- privatization,
- macroeconomic and political stability,
- liberalization in the field of external relations, passing the new foreign exchange bill in the year 1995 and expansion of currency convertibility in the connection with the entrance of the Czech Republic to the Organisation for Economic Co-operation and Development,
- change of exchange mode from fixed mode to controlled floating in the year 1997,
- strategic position of the Czech Republic in the middle of Europe,
- cheap and qualified labour,
- establishment of investment incentives in processing industry (1998),
- introduction of support in the field of strategic services and technologic centres (2001),
- entrance of the Czech Republic to the European Union and dismantling of tariff barriers within the Eurozone,
- other factors.

The following graph 8 shows percentage of privatization on the total FDI inflow. Almost (cca 18%) of FDI inflow produce foreign capital linked with privatization in banking services and telecommunication services (1993–2005). The following Tab. IV shows the most important privatization in the Czech Republic.

International comparison of FDI inflow

The transfer of technology is linked with positive effect of FDI inflow. The government of host countries support FDI inflow into branches with high technological intensity of production. The investment incentives form the main political tool to the filling of this government’s aim. 

II: Import of machinery of incentive firms

<table>
<thead>
<tr>
<th>Share of imported machinery in the total value of new machinery (%)</th>
<th>Number of firms</th>
<th>Substitution into subinterval (%)</th>
<th>Cumulative substitution into subinterval (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>174</td>
<td>43.8</td>
<td>43.8</td>
</tr>
<tr>
<td>95–99</td>
<td>42</td>
<td>10.6</td>
<td>54.4</td>
</tr>
<tr>
<td>90–94</td>
<td>31</td>
<td>7.8</td>
<td>62.2</td>
</tr>
<tr>
<td>80–89</td>
<td>33</td>
<td>8.3</td>
<td>70.5</td>
</tr>
<tr>
<td>60–79</td>
<td>58</td>
<td>14.6</td>
<td>85.1</td>
</tr>
<tr>
<td>Less then 60</td>
<td>59</td>
<td>14.9</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>397</td>
<td>100.0</td>
<td>x</td>
</tr>
</tbody>
</table>

Source: Department of Trade and Industry

III: Export production of incentive firms

<table>
<thead>
<tr>
<th>Share of export production in the total production (%)</th>
<th>Number of firms</th>
<th>Substitution into subinterval (%)</th>
<th>Cumulative substitution into subinterval (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>112</td>
<td>28.2</td>
<td>28.2</td>
</tr>
<tr>
<td>95–99</td>
<td>81</td>
<td>20.4</td>
<td>48.6</td>
</tr>
<tr>
<td>90–94</td>
<td>50</td>
<td>12.6</td>
<td>61.2</td>
</tr>
<tr>
<td>70–89</td>
<td>60</td>
<td>15.1</td>
<td>76.3</td>
</tr>
<tr>
<td>50–69</td>
<td>33</td>
<td>8.3</td>
<td>84.6</td>
</tr>
<tr>
<td>25–49</td>
<td>29</td>
<td>7.3</td>
<td>91.9</td>
</tr>
<tr>
<td>1–24</td>
<td>18</td>
<td>4.5</td>
<td>96.4</td>
</tr>
<tr>
<td>0</td>
<td>14</td>
<td>3.5</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>397</td>
<td>100.0</td>
<td>x</td>
</tr>
</tbody>
</table>

Source: Department of Trade and Industry
All countries of Visegrad Groups use investment incentives as political tool to attract FDI. In the period 1999–2007 the most of FDI flowed into the Czech Republic and at least FDI flowed into Poland.

There are four groups of technological intensity of production from the point of view of branches (Hatzichronoglou 1997):

1. **high intensity** – aeronautics and cosmonautics, electronics, office and computer technique, pharmaceuticals,
2. **middle high intensity** – motor and others vehicles, electric machinery and apparatus, chemical products,
3. **middle low intensity** – rubber and plastic products, metal and non-metallic products, ships, chemistry,

IV: **The most important privatization (1999–2004)**

<table>
<thead>
<tr>
<th>Corporation</th>
<th>Privatization</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999 ČSOB</td>
<td>KBC Bank</td>
</tr>
<tr>
<td>2000 Česká spořitelna</td>
<td>Erste Bank</td>
</tr>
<tr>
<td>2001 Komerošini banka</td>
<td>Société Générale</td>
</tr>
<tr>
<td>2002 Transgas</td>
<td>RWE Gas</td>
</tr>
<tr>
<td>2003 Unipetrol</td>
<td>PKN Orlen</td>
</tr>
<tr>
<td>2004 Český Telecom</td>
<td>Telefónica</td>
</tr>
</tbody>
</table>

Source: author

Cumulative inflow FDI per capita, 1999–2007 (USD)

Source: author
The following Tab. V, Tab. VI, Tab. VII show average percentage FDI inflow in branches, services and manufacturing (1998–2006).

The most FDI flowed into services (banking and financial services due to privatization) and machinery industry. These branches present branches with middle low or middle high technological intensity. From this point of view is eligible to support FDI inflow into branches with high technological intensity of production.

**DISCUSSION**

The Czech Republic has shown a mass inflow of foreign direct investments since 1998. The foreign direct investments inflow presents positive aspects, but large risks as well. The potential risks are: the growing dependence of the host state on the decisions of the multinational corporations, the genesis of the dual economy, the crash of national little and middle companies, the backward efflux of foreign direct investments (in the form of dividend payment) to the foreign countries. The positive effect is expected on the aggregate economics in the next forms: the growth of employment and the growth of productivity of labour, the growth of the export and the GDP, the transfer of knowledge and the high technologies.

The life of investments can be divided into two stages. The first stage concerns their introduction...
and the other stage their implementation. The period of introduction represents spending financial resources for company establishment, purchases of manufacturing equipment, employees training etc. For companies in processing industry it is characteristic that in the start-up life phase of the investment the import is demanding. Technologically more complicated processing machines and equipment are imported, however, they consequently enable better production conditions and provide higher productivity of labour and contribute to higher aggregate offer of host economy at the same time. Import intensity prevails especially with FDI of implemented greenfields at the time of construction of factory buildings before their production start. The stage of investment introduction has different duration according to the character and intensity of the investment. For instance when constructing a factory building for a car production, the expected duration is two or three years. In a long term (after implementing the investment into the production in full production capacity) the firms are expected to affect positively on the balance of the trade balance with their export efficiency.

SUMMARY

The aim of this paper is to evaluate the infl ow of foreign direct investment (FDI) in balance of payments and the evaluation of their impact on external economic equilibrium and gross value added in the Czech Republic. The subject of the analysis is the identification of the most important factors of FDI infl ow and the classification of FDI infl ow from the point of view of branches and technological intensity of production as well. The aim is fulfilled by analysis of selected indicators of the balance of payments: FDI infl ow, development of current account, efficiency balance, financial account, percentage of FDI infl ow on the total financial account, percentage of export and import of companies with foreign capital participation on the total export and import of the Czech Republic. In terms of analysis of GDP are used following indicators: percentage of privatisation on the total FDI infl ow and percentage of gross value added of foreign controlled companies on the total gross value added of the Czech Republic. The international comparison is fulfilled by applying cumulative FDI infl ow per capita and classification of FDI infl ow into branches based on technological intensity of production.

Since 1998, when the system of investment incentives was introduced, gradual infl ow of FDI has occurred. FDI has become the major determinant of the financial account of the balance of payments development and an acceptable tool of non-debt deficit financing of the current account of the balance of payments in the long term. FDI help to decrease external economic disequilibrium. Firms with foreign capital participation have recorded active balance of efficiency balance since 2001, which influences the development of the total efficiency balance of the Czech Republic positively. In the period 1998–2006 investment incentives were awarded to 397 investors in total. Majority of incentive firms expects to import modern machinery from abroad, which significantly burdens the trade balance. Simultaneously, most of these investors are planning to export their production abroad, therefore strengthening of export efficiency of the Czech Republic can be expected. Positive or negative effect of FDI on the trade (efficiency) balance cannot be stated univocally. It depends on the investment life cycle. In the short life stage of the investment, when firms introduce the investments (they burden the trade balance), but in the long life stage of the investment, when firms implement the production in full capacity of production and they export their production (they strengthen the trade balance). With strengthening of export efficiency we can expect a positive influence on clear export and economic growth (GDP). The gross domestic product (GDP) can be measured by expenditure approach and production approach. In terms of expenditure approach is growing export of firms with foreign capital participation (due to FDI infl ow) the significant indicator of GDP growth. In terms of production approach is growing percentage gross value added of foreign controlled companies on the total gross value added of the Czech Republic the significant indicator of GDP growth. The most important factor of FDI infl ow were showed investment incentives and mass privatization in banking and financial services. In the period 1993–2005 average percentage privatization on the total FDI infl ow were showed cca 18%. All countries of Visegrad Groups use investment incentives as political tool to attract FDI. In the period 1999–2007 the most of cumulative FDI per head flowed into the Czech Republic and at least FDI flowed into Poland. The most FDI flowed into services (banking and financial services due to privatization) and machinery industry. These branches present branches with middle low or middle high technological intensity. From this point of view is eligible to support FDI infl ow into branches with high technological intensity of production. The results are subject of research focused on the globalization process and regional development.
REFERENCES


Address
Ing. Marcela Domesová, Ústav regionální a podnikové ekonomiky, Mendelova univerzita v Brně, Zemědělská 1, 613 00 Brno, Česká republika, e-mail: marcela.domesova@email.cz