

2. DETERMINANTS OF FOREIGN DIRECT INVESTMENT INFLOWS IN ESTONIA

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Introduction

Research on determinants of foreign direct investments (FDIs) intensified in the 1950s due to the rapid growth in global FDI flows. Since that time, a number of theories explaining capital flows between countries have been propounded. Empirical research on the validity of these theories in developed and developing countries has shown the absence of a theory that would summarize all the aspects of capital movement.

A new group of FDI host countries emerged at the beginning of 1990. The need for foreign investments in the transition countries is the result of industrial restructuring characteristic of the post-socialist Central and Eastern European countries. The latter appear to attract foreign investors who are motivated to invest in the transition countries because of their new markets, lower production costs, and higher profit rates. Privatization programmes of some of these countries have also facilitated foreign direct investments.

Continuous interest in foreign direct investments has made a large number of studies to analyze the determinants of such investments both in developing and developed countries. To-date several studies have been carried out in order to analyze FDI determinants in the Central and Eastern European transition

countries, however, no extensive research has been accomplished yet. The transition countries are interesting to study, bearing some resemblance, on the one hand, to developing countries and on the other, to developed countries. The availability of infrastructure, the quality of labour force and a comparatively high level of education are the advantages of the transition countries over the countries classified as developing. At the same time, the economic and political risk is much higher in the transition countries than in the developed countries.

Estonia has been one of the most successful ones among the Central and Eastern European transition countries in attracting foreign direct investments. Estonia's situation is quite unique – it is a small open economy on the borders of Russia and the European Union. Disadvantages deriving from the small size of the market and lack of natural resources are balanced with the attractive geographical location and the rapid transformation process. The neighbouring countries — Finland and Sweden — have also had an important role to play in increasing the attractiveness of the Estonian market. Due to their geographical and cultural proximity as well as several other factors, they started investing in Estonia at the early stage of transformation. Owing to these investments, restructuring of enterprises and transformation from a command to a market economy could gain momentum.

The main aim of this chapter is to find out which types of foreign investors prevail and what are the main FDI determinants for different groups of investors in Estonia. Such analysis will make it possible to forecast the effect of several economic political decisions on the flows of different types of foreign investments.

The chapter is organized as follows — first a short review of earlier empirical research in this field is presented. A description of investment climate in the transition countries is given in the second part of the paper, whereas the third part of the

chapter introduces and discusses the results of the foreign investors surveys that have been carried out in Estonia between 1997 and 2000. Finally, the principal component and multinomial logit analyses are carried out in order to study the determinants of different types of foreign investors in Estonia.

2.1. Previous research of FDI determinants

Many authors have analyzed the theoretical foundations of how foreign direct investments move between countries (see, for example, Brewer, 1993; Calvet, 1981; Caves, 1974; Dunning, 1981, 1993; Grosse, 1980; Haigh *et al.*, 1989; Kravis *et al.*, 1982; Petrochilos, 1989; Ragazzi, 1973; Rugman, 1979, 1980, 1985; Taggart *et al.*, 1993). The division into three groups of foreign direct investment theories is widespread (Agarwal, 1980; Lizondo, 1991; Meyer, 1998). There are: 1) theories assuming perfect markets, 2) theories based on markets imperfections and 3) other theories of foreign direct investment. The differential rates of return, portfolio diversification, and output and market size theories represent the first group. The most famous theories based on market imperfections are those of industrial organization, internalization, eclectic approach (also known as the OLI paradigm), product cycle and oligopolistic reaction. The liquidity and currency area theories as well as the Kojima hypothesis are usually classified as other foreign direct investment theories.

The real market conditions differ greatly from those assumed by the theories based on perfect markets, therefore these theories are somewhat limited in explaining the determinants of international capital flows. Empirical studies have also failed to provide strong supporting evidence to these theories. Theories based on market imperfections and other theories take account of a real economic situation and have quite good explanatory power. These theories have got empirical support, but despite that explain only some aspects of the flows of foreign direct investment.

Taking into account the data that are going to be used in this chapter, the FDI theories are divided into two groups – theories of micro-level (or enterprise-level) and macro-level determinants of foreign direct investments (see Table 2.1). Further research will concentrate on the macro-level host country determinants presented by the FDI theories (see Table 2.2).

Table 2.1

Theories of micro-level and macro-level determinants of FDI

Micro-level determinants	Macro-level determinants
<ul style="list-style-type: none"> • Theory of industrial organization • Internalization theory • Theory of oligopolistic reaction • Liquidity theory 	<ul style="list-style-type: none"> • Differential rates of return theory • Portfolio diversification theory • Output and market size theory • Product cycle theory • Currency area theory • Kojima hypothesis
<ul style="list-style-type: none"> • Eclectic theory 	

Source: Compiled by the author.

Table 2.2

Main host country determinants of FDI

Theory	Host country determinants
Differential rates of return theory	<ul style="list-style-type: none"> • rate of return • labour costs • interest rates • taxes • income level
Portfolio diversification theory	<ul style="list-style-type: none"> • political risk • economic risk

Theory	Host country determinants
Output and market size theory	<ul style="list-style-type: none"> • GDP • GDP <i>per capita</i> • GDP growth rate • population
Product cycle theory	<ul style="list-style-type: none"> • labour costs • interest rates • level of technological development
Currency area theory	<ul style="list-style-type: none"> • difference between the real and nominal exchange rates • exchange rate fluctuations
Kojima hypothesis	<ul style="list-style-type: none"> • existence of raw materials • labour costs • interest rates
Eclectic theory	<ul style="list-style-type: none"> • existence of raw materials • incentives or restrictions for FDI • economic environment • other conditions

Source: Modified and adapted by the author, based on Agarwal, 1980; Calvet, 1981; Dunning, 1993; Lizondo, 1991; Ragazzi, 1973; Rugman, 1980; Taggart *et al.*, 1993.

The FDI determinants that are presented in Table 2.2 can be systematized by dividing them into three groups — economic, political, and other determinants. At least one additional dimension — the objective of the foreign investor — should also be taken into account. Sometimes the need to consider the type of FDI (greenfield, acquisition, merger, or joint venture), the sector of investment (agriculture, services, or manufacturing) and/or the size of investment (small or medium-size enterprises or large multinational companies (MNC)) is also stressed (see, for example, World Investment Report, 1998,

pp. 90–91). Nevertheless, the analysis of FDI determinants in this chapter will focus on different objectives of foreign investments.

Four groups of foreign investors have been distinguished in the literature considering their different strategic objectives (Brewer, 1993, p. 4; Chudnovsky *et al.*, 1997, p. 2; Dunning, 1994, p. 36; Foreign Direct Investment, 1998, p. 21; Oxelheim, 1993, p. 180):

- 1) market-seeking foreign investors concentrate on servicing the host country's (and its neighboring countries') market(s);
- 2) efficiency-seeking investors are interested in low-cost host countries and the production is exported to the home country of foreign direct investment and/or other target markets;
- 3) natural-resources-seeking investments are motivated by the desire to reduce costs and provide access to raw materials;
- 4) strategic-assets-seeking foreign direct investments are orientated towards acquiring resources and capabilities that the investing firm believes will sustain or advance its core competencies in regional or global markets.

Although some FDI projects include elements of more than one of these strategic objectives, most projects are focussed on only one.

The main aim of market-seeking investments is to provide access to the host country's (and sometimes also to its neighbouring countries') market. Brewer (1993, p. 180) has suggested that in service industries where many FDI projects are undertaken by firms that follow their home country corporate clients, these foreign investments could also be classified as market-seeking ones. Some authors (see, for instance, Brouthers *et al.*, 1996, p. 2; Foreign Direct Investment, 1998, p. 22) distinguish between two types of market-seeking investors. Defensive market-seeking investments are made to prevent the host coun-

try's tariff or non-tariff barriers. At the same time, offensive market-seeking investors are interested in taking advantage of the growing demand and opening up of new markets. However, distinguishing between the two types of market-seeking investments is quite complicated in practice.

Efficiency-seeking (or rationalized) foreign investors are interested in taking advantage of low production costs "for increasing the efficiency of regional or global MNC activities" (Dunning, 1994, p. 36). They can produce either components or final products to be exported to the home country or other countries. Unlike market-seeking investment, efficiency-seeking investment occurs only in the case of relatively free trade between the host country and export markets (Dunning, 1992, p. 352; Éltető, 1999, p. 2). Dunning (1998a, p. 5) has pointed out that most efficiency-seeking foreign investments in the developing countries tend to be vertically integrated and most horizontally integrated FDIs are concentrated in the advanced industrial economies (and particularly in some of the knowledge-intensive sectors).

The purpose of the natural-resources-seeking investments is to use the raw materials available in the host country and lacking in the home country (Brouthers *et al.*, 1996, p. 2). Brewer (1993, p. 180) has an opinion that this kind of FDI projects are "typically orientated to export for world markets rather than for the domestic host country market", but Borsos-Torstila (1998, p. 28) suggests that raw materials are used "either for export or further processing and sale in the host country".

Dunning (1994, p. 36) has defined strategic-assets-seeking investment as one whose purpose is to acquire resources and capabilities that an investing firm believes will sustain or advance its core competencies in regional and global markets. These assets may range from innovatory capability and organizational structures to accessing foreign distribution channels and a better appreciation of the needs of consumers in unfamiliar markets. This kind of FDI is expected to occur in

capital, technology or information intensive sectors, and those in which an oligopolistic market structure is the norm (Foreign Direct Investment, 1998, p. 22).

Market-seeking and natural-resources-seeking motives are typical in the case of initial entry to the foreign market. Efficiency- and strategic-assets-seeking investments are believed to represent the main modes of expansion by established foreign investors. (Dunning, 1994, p. 35)

Éltető (1999) has noted in the case of market-seeking investments, and Narula and Dunning (1998, p. 7) in the case of purely resource-seeking investments that the relationships between the parent company and its affiliate are likely to be weak and the affiliate is integrated into the parent's international network to a limited extent. At the same time, Petrochilos (1989, p. 18), and Chudnovsky and Lopez (1997, p. 2) have stressed the ease and importance of integrating an affiliate into the parent company's network in the case of efficiency-seeking foreign investments in order to enhance the affiliate's export activities.

Table 2.3 gives a short overview of major host country determinants of FDIs, taking into account differences in the foreign investor's strategic objectives. In his article "Location and the Multinational Enterprise: A Neglected Factor" (Dunning, 1998, p. 15–16) J.H. Dunning has thoroughly discussed the main changes in FDI determinants during the period 1970–1990.

Foreign investments to the developed countries mostly have a market-seeking nature. On the other hand, efficiency- or natural-resources-seeking FDI flows are usually orientated towards the developing countries (Brouthers *et al.*, 1996, p. 4; Narula, 1994, p. 3). Strategic-assets-seeking investments, as a rule, are secondary in explaining foreign capital movements (Hunya, 1998, p. 2). In the transition countries, however, due to privatization-related foreign investments, the share of such FDIs is relatively large. Figure 2.1 gives an overview of the

Table 2.3

Main host country FDI determinants considering the foreign investor's strategic objective

Strategic objective	Economic determinants	Political determinants	Other determinants
Market-seeking FDI	<ul style="list-style-type: none"> • nominal GDP • GDP <i>per capita</i> • GDP growth rate • previous FDI • real wage • production costs • transport action costs • infrastructure • tariffs and other import restrictions 	<ul style="list-style-type: none"> • ownership policies • price control • convertibility of foreign exchange • performance requirements • market access constraints • sector-specific controls 	<ul style="list-style-type: none"> • geographical location • cultural differences • different languages • population • local content requirement • country-specific customer preferences
Efficiency-seeking FDI	<ul style="list-style-type: none"> • inflation • exchange rate • real wage • savings rate • domestic investments • production costs • infrastructure • transportation costs • previous FDI 	<ul style="list-style-type: none"> • market access constraints • ownership constraints • taxes/subsidies • price controls • performance requirements • foreign investment's incentives • trade agreements • requirements of environmental protection 	<ul style="list-style-type: none"> • geographical location • availability of suitable workforce • existence of suppliers

Strategic objective	Economic determinants	Political determinants	Other determinants
Natural-resources-seeking FDI	<ul style="list-style-type: none"> • prices of raw materials compared to world markets • infrastructure • transportation costs • domestic investments 	<ul style="list-style-type: none"> • foreign investment's incentives • foreign investment's restrictions • sector-specific controls 	<ul style="list-style-type: none"> • existence and quality of raw materials
Strategic-assets-seeking FDI	<ul style="list-style-type: none"> • existence and quality of infrastructure • intensity of R&D activities 	<ul style="list-style-type: none"> • protection of immaterial property • foreign investment's incentives or restrictions in using the host country's resources • risk level • innovation policy 	<ul style="list-style-type: none"> • existence of patents, trade marks, etc.

Source: Modified and adapted by the author, based on Contractor, 1990, p. 35; Dunning, 1994, pp. 36, 40–41; Dunning, 1998b, p. 15–16; Oxelheim, 1993, p. 180; Petrochilos, 1989, p. 18; World Investment Report, 1998, p. 91.

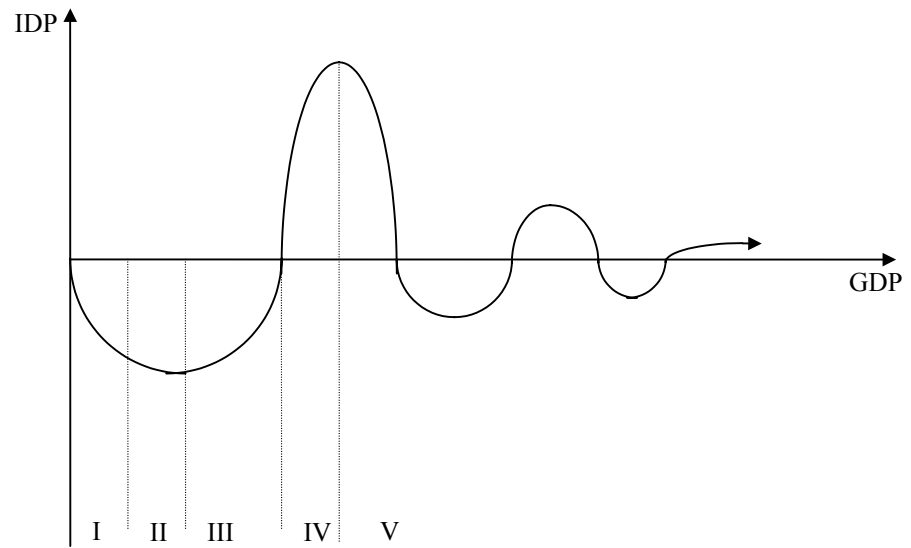


Figure 2.1 Motives and trends of foreign direct investments. (Narula, 1996, p. 22).

Stage	Investment flows	Motivation
Stage 1	small inward direct investments to the primary sector	natural-resources-seeking FDI
Stage 2	inward direct investment starts to rise, outward investment remains low or negligible	resource-seeking and market-seeking FDIs in developing countries
Stage 3	increase in outward direct investment	in developing countries resource- and market-seeking FDI, in industrial countries strategic-assets-seeking and market-seeking FDI
Stage 4	outward direct investment flows exceed or equal the inward investment flows	efficiency-seeking, market-seeking and strategic-assets-seeking FDI
Stage 5	outward and inward investments become more balanced	

Source: Dunning, 1981, pp. 37–39; Dunning *et al.*, 1996, p. 6; Narula, 1996, pp. 26–34; Narula *et al.*, 1998, p. 26.

investment development path (IDP) that is suggested by Narula (1996) and takes into account the size of the host country's GDP.

New markets and the rapidly changing economic environment of the Central and Eastern European transition countries have caught many economists' attention and several studies have attempted to study foreign direct investment determinants in these countries. It is not possible herein to introduce the results of all previous studies, therefore the emphasis is on presenting the main findings of those studies that have concentrated on analyzing foreign investors' different objectives.

Lankes and Venables (1996), and Lankes and Stern (1998) have noted that previous studies have shown predominance of market-seeking investors in the Central and Eastern European countries and factor-cost considerations have appeared to be of less importance for the majority of investments. A survey carried out by the EBRD (Lankes *et al.*, 1996) also showed predominance of market-seeking investments in these countries. At the same time, the authors pointed out that the type of FDIs varies significantly, depending on the host country's progress in the economic transition. They found that FDI projects in the transitionally more advanced countries were more likely to be export-oriented, more integrated into their foreign parent's multinational production process, and more likely to exploit the comparative advantage of the host economy. The results of a multinomial logistic regression analysis (Lankes *et al.*, 1998, p. 7) suggest that market-seeking investors are interested in making use of the first mover advantage, while efficiency-seeking investors postpone their projects until the risk level is acceptable to them.

A study by Meyer (1995) affirms that at the beginning of the transition process the local market of the Central and Eastern European countries was the primary motive for making foreign direct investments, whereas factor costs had only a secondary role in investing into those markets. Meyer suggests that effi-

ciency-seeking FDIs emerge only if the host country additionally offers an attractive local market. Marinov and Marinova (1999) and Pye (1997) have reached similar results: they say that the local market is the primary driving motive for investing into the Central European transition countries.

Éltető (1999) has found that two most important types of foreign investors in the Central and Eastern European countries are efficiency-seeking and market-seeking ones. The results of several other studies (Barrell *et al.*, 1999; Borsos-Torstila, 1998; Garibaldi *et al.*, 1999; Guimaraes *et al.*, 1997; Holland *et al.*, 1998a, 1998b; Reiljan, 1999; Wang *et al.*, 1995; Ziacik, 2000) have also shown the significance of the determinants that are important for these types of investors in explaining the flows of foreign investments into the transition countries. Due to the relative lack of natural resources and strategic assets, the other two types of foreign investors are not so important. However, it has to be taken into consideration that there are quite big discrepancies between different countries and sectors as regards the share of different types of foreign investors.

2.2. Investment climate in the Central and Eastern European transition countries

In attracting foreign direct investments, Estonia has both direct and indirect competitors. Its indirect competitors include the Scandinavian countries, the less developed EU countries, and the countries of Southeast Asia. Regarding the level of economic development or the geographical location or both of them, there are rather big differences between Estonia and the above-mentioned countries. For this reason, these countries will not be considered in the following analysis.

Estonia's major competitors in attracting FDI, however, can be divided into two groups. Due to their geographical location and a similar economic and political background, Latvia and Lithuania belong to the first group. The second group consists of other Central European and CIS transition countries. Com-

petition is especially tense between Estonia and those countries that are engaged in the EU enlargement process. The following sections will concentrate on analyzing FDI determinants in ten Central and Eastern European countries — viz. Bulgaria, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, the Slovak Republic, and Slovenia.

GDP, GDP *per capita* and GDP growth rate are important indicators for potential market-seeking investors because the potential of the target market(s) and profitability of different market entry modes can be evaluated by means of these variables. Larimo (1994, p. 5) and Oxelheim (1993, p. 182) have suggested that the potential of neighbouring markets should also be taken into account. Aggarwal (1997, p. 40) has found that in the presence of restrictions to FDIs, the relationships between the size and growth rate of the target market and foreign investments are weaker than in the case with no restrictions.

Most of the studies about possible FDI determinants have used one or more of the above-mentioned indicators in their analysis as independent variables. Several empirical researches (e.g. Culem, 1998; Guimaraes *et al.*, 1997; Lipsey, 1999; Loree *et al.*, 1995; Moore, 1993; Petrochilos, 1989; Scaperlanda *et al.*, 1969; Veugelers, 1991; Wang *et al.*, 1995; Wheeler *et al.*, 1992; Yu, 1990) have shown that GDP and GDP *per capita* are significant determinants of foreign direct investments both in developed and developing countries. While empirical research into the significance of GDP growth rate in determining FDI inflows has yielded quite varied results, it is believed that GDP growth rate has more significance in the developing countries where the initial level of earnings is low (see, for example, Determinants ... ,1992, pp. 22, 33). As the level of earnings in the transition countries is also relatively low, this variable may be a significant FDI determinant in the Central and Eastern European countries.

GDP *per capita* is highest in the Central European transition countries, followed by the Baltic States, Romania and Bulgaria (see Figure 2.2). The level of GDP *per capita* was highest in the beginning of the transition period and is also highest now in Slovenia. It was lowest in Lithuania in 1992 and in Bulgaria in 1999. The disparity between the countries with the highest and lowest level of GDP *per capita* has decreased from 16.8 times to 6.6 times over these years. GDP *per capita* has grown in all the transition countries, the growth having been highest in Lithuania, Estonia and Latvia (7.7, 5.0 and 4.5 times, respectively) and slowest in Hungary (1.3 times). The real GDP growth rates are presented in Table 2.4.

Inflation increases the instability of economy and risk related to investments. Costs of raw materials, labour and rents can grow rapidly and this may decrease the rate of return (Austin 1990, p. 49). As an FDI determinant, inflation has a more important role in developing and transition countries than in stable developed economies. Unfortunately, empirical research has seldom used this variable in explaining FDI inflows.

Inflation was highest in Estonia in 1992 and in Romania in 1999, and lowest in Slovakia in 1992 and in Bulgaria in 1999 (see Table 2.5). The three Baltic States, who had a very high inflation at the beginning of the transition period, have made considerable efforts to stabilize their economies; now the inflation of these countries is comparable with that of the Central European transition countries. This means that the Baltic States have improved their competitiveness in attracting foreign direct investments.

The balance of payments and the general government balance make it possible to evaluate the overall stability of an economy. These indicators reflect the trends of the government's economic policy and can thus help forecast the development potential of an economy. Nevertheless it is not very often that the general government balance is used in empirical analysis. For example, Claessens *et al.* (1998) found this and

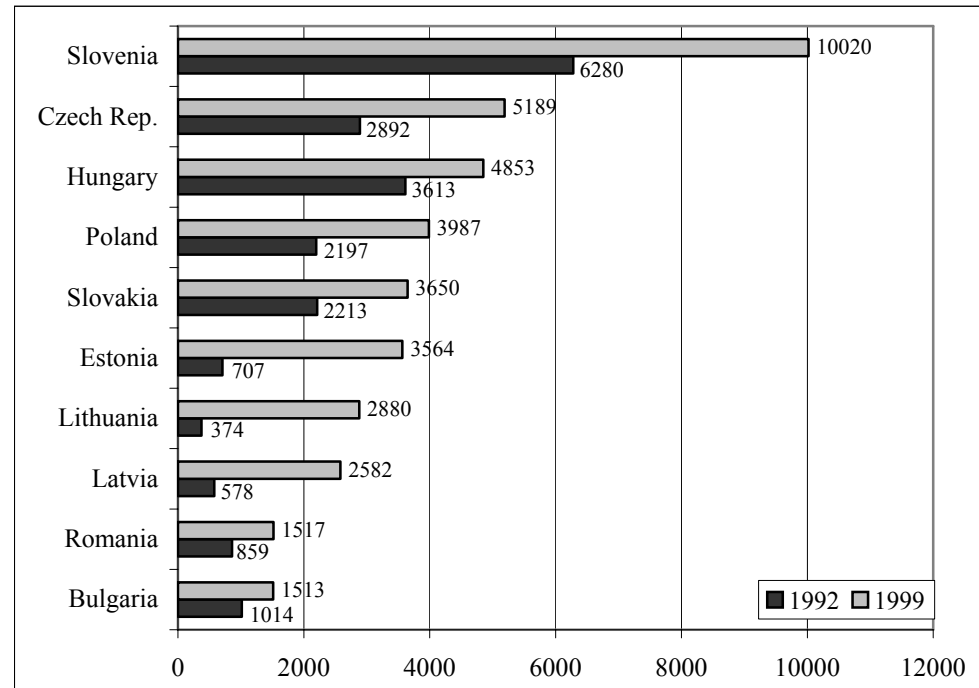


Figure 2.2. GDP *per capita* of selected transition economies in 1992 and 1999 (Transition Report, 2000, pp. 146–213).

Table 2.4

GDP growth in selected transition economies (%)

Country	1992	1993	1994	1995	1996	1997	1998	1999	2000*	2001*
Bulgaria	-7.3	-1.5	1.8	2.1	-10.9	-6.9	3.5	2.4	4.0	4.3
Czech Rep.	-0.5	0.1	2.2	5.9	4.8	-1.0	-2.2	-0.2	2.0	3.3
Estonia	-14.2	-9.0	-2.0	4.3	3.9	10.6	4.7	-1.1	5.0	5.4
Hungary	-3.1	-0.6	2.9	1.5	1.3	4.6	4.9	4.5	6.0	5.1
Latvia	-34.9	-14.9	0.6	-0.8	3.3	8.6	3.9	0.1	4.5	4.7
Lithuania	-21.3	-16.2	-9.8	3.3	4.7	7.3	5.1	-4.2	2.2	3.8
Poland	2.6	3.8	5.2	7.0	6.1	6.9	4.8	4.1	5.0	4.9
Romania	-8.8	1.5	3.9	7.1	3.9	-6.1	-5.4	-3.2	1.5	2.7
Slovakia	-6.5	-3.7	4.9	6.7	6.2	6.2	4.1	1.9	2.0	3.2
Slovenia	-5.5	2.8	5.3	4.1	3.5	4.6	3.8	4.9	5.1	4.2

* forecast.

Source: Transition Report, 2000, pp. 76, 146–213.

Table 2.5

Inflation in selected transition economies (%)

Country	1992	1993	1994	1995	1996	1997	1998	1999	2000*
Bulgaria	82.0	73.0	96.3	62.0	123.0	1082.0	22.2	0.7	7.0
Czech Rep.	11.1	20.8	10.0	9.1	8.8	8.5	10.7	2.1	3.9
Estonia	1076.0	89.8	47.7	29.0	23.1	11.2	8.2	3.3	3.8
Hungary	23.0	22.5	18.8	28.2	23.6	18.3	14.3	10.1	9.5
Latvia	951.0	109.0	35.9	25.0	17.6	8.4	4.7	2.4	2.9
Lithuania	1021.0	410.0	72.1	39.6	24.6	8.9	5.1	0.8	1.0
Poland	43.0	35.3	32.2	27.8	19.9	14.9	11.8	7.3	9.9
Romania	210.0	256.0	137.0	32.3	38.8	154.0	59.1	45.8	45.0
Slovakia	10.0	23.2	13.4	9.9	5.8	6.1	6.7	10.6	11.9
Slovenia	207.0	32.9	21.0	13.5	9.9	8.4	8.0	6.1	8.6

* forecast

Source: Transition Report, 2000, p. 67.

the transition countries this variable can have a noteworthy impact on capital flows. Most of the ten transition countries have problems with the general government balance (see Table 2.6). There are only a few countries among them (Estonia, Latvia, and Slovenia) whose revenues have exceeded expenditures in two years.

Several empirical studies (e.g. Liu *et al.*, 1997; Narula, 1994; Narula *et al.*, 1995) have revealed that the current account balance plays a significant role in explaining FDI inflows. Besides the current account balance, export and import indicators are also frequently used in explaining FDI inflows since they are indicative of openness of the market.

Most of the transition countries are experiencing a current account deficit (see Table 2.7). The only exception is Slovenia who has had a current account surplus in most of the years, but the rest of the countries have either moved from a current account surplus to a deficit or have had a deficit throughout the transition. This could be explained by both a decrease in competitiveness of their production in the new export markets, and the import of modern equipment and machinery needed for restructuring of enterprises and the whole economy. At the same time, the FDI inflow has helped to stabilize the balance of payments in several transition countries.

The volume of exports expresses the competitiveness of an economy and is in this sense a possible determinant of FDI flows. At the same time, FDIs are accompanied by transfer of capital, technology, and/or know-how, which can positively impact on the exports. In the case of imports, it has to be considered that exports (i.e. imports from the host country's side) and foreign investments are alternative methods for entering the foreign markets. Export is usually used in the first phase of foreign expansion and is in the later phases frequently replaced by foreign investments. At the same time, FDIs often induce import of machinery, raw materials and semi-manufactured goods.

Table 2.6

General government balance in selected transition economies (% of GDP)

Country	1992	1993	1994	1995	1996	1997	1998	1999	2000*
Bulgaria	-2.9	-8.7	-3.9	-5.7	-10.4	-2.4	0.9	-0.9	-1.5
Czech Rep.	-3.1	0.5	-1.1	-1.4	-0.9	-1.7	-2.0	-3.3	-4.2
Estonia	-0.3	-0.7	1.3	-1.3	-1.9	2.2	-0.3	-4.6	-1.2
Hungary	-7.2	-6.6	-8.4	-6.7	-5.0	-6.6	-5.6	-5.6	-3.6
Latvia	-0.8	0.6	-4.4	-3.9	-1.8	0.3	-0.8	-4.2	-2.7
Lithuania	0.5	-5.3	-4.8	-4.5	-4.5	-1.8	-5.8	-8.6	-3.3
Poland	-4.9	-2.4	-2.2	-3.1	-3.3	-3.1	-3.2	-3.3	-3.0
Romania	-4.6	-0.4	-2.2	-2.5	-3.9	-4.6	-5.0	-3.5	-4.0
Slovakia	-11.9	-6.0	-1.5	0.4	-1.3	-5.2	-5.0	-3.6	-3.3
Slovenia	0.3	0.6	-0.2	-0.3	-0.2	-1.7	-1.4	-0.9	-1.0

* forecast

Source: Transition Report ,1999, p. 77; Transition Report, 2000, p. 68.

Table 2.7

Current account balance in selected transition economies (% of GDP)

Country	1992	1993	1994	1995	1996	1997	1998	1999	2000*
Bulgaria	-4.2	-10.1	-0.3	-0.2	0.2	4.2	-0.5	-5.5	-5.5
Czech Rep.	-1.0	1.3	-1.9	-2.6	-7.4	-6.1	-2.4	-2.0	-3.5
Estonia	3.3	1.3	-7.3	-4.4	-9.1	-12.2	-9.2	-5.7	-6.9
Hungary	0.9	-9.0	-9.4	-5.6	-3.7	-2.1	-4.9	-4.2	-3.4
Latvia	1.7	19.1	5.5	-0.4	-5.4	-6.1	-10.7	-10.3	-9.9
Lithuania	10.6	-3.2	-2.2	-10.2	-9.2	-10.2	-12.1	-11.2	-6.0
Poland	1.1	-0.7	0.7	4.5	-1.0	-3.2	-4.4	-7.6	-7.1
Romania	-8.0	-4.5	-1.4	-6.3	-8.9	-6.8	-7.0	-3.8	-4.9
Slovakia	N/A	-4.7	4.6	2.1	-10.6	-9.6	-9.7	-5.5	-3.3
Slovenia	7.4	1.5	4.0	-0.5	0.2	0.1	-0.8	-3.9	-2.6

Source: Transition Report, 1999, p. 78; Transition Report, 2000, p. 71.

Consequently, it is impossible to make reliable suggestions about the role of export and import in determining FDI flows.

Import tariffs are usually set in order to give a competitive edge to the local producers. In this sense these could serve as FDI determinants (Brouthers *et al.*, 1996, p. 3). Foreign direct investments are made only in the case when entry to the host country's market through export activities is altogether inhibited or there is a significant decrease in the rate of return (Blomström *et al.*, 1997, p. 3; Petrochilos, 1989, p. 13; Raff *et al.*, 1998, p. 169). However, in addition to tariffs the size of the host country's potential market should also be taken into account when estimating the attractiveness of the host country's market (Ragazzi, 1973, p. 490).

Empirical research into how import tariffs influence foreign direct investments have given contradictory results. Studies by Culem (1988), Petrochilos (1989), and Singh and Jun (1995, 1996) show tariffs to be statistically significant FDI determinants. On the other hand, Kumar (1987), Moore (1993), Sara *et al.* (1995), Veugelers (1991) and Wheeler *et al.* (1992) have suggested that tariffs are not significant in determining foreign capital movements. However, Neven *et al.* (1996) and Wang *et al.* (1995) have reached the conclusion that the impact of tariffs on FDI flows varies in case of home and host countries.

Table 2.8 reviews the share of tariff revenues in the imports of ten Central and Eastern European transition countries. It can be seen that the foreign trade policies of these countries are rather different: while Hungary and Poland have protected their local markets by means of significant tariffs, Estonia and Lithuania have had practically free trade. However, in Hungary and Poland the share of tariff revenues has decreased in the last years and is now comparable with that of the other transition countries.

Table 2.8

Tariff revenues in selected transition economies (% of imports)

Country	1992	1993	1994	1995	1996	1997	1998	1999
Bulgaria	4.5	7.2	7.6	7.3	4.6	4.8	5.5	2.8
Czech Rep.	N/A	3.5	3.5	2.6	2.6	1.7	1.5	1.2
Estonia	N/A	0.9	0.9	0.2	0.0	0.0	0.0	0.0
Hungary	11.8	12.0	12.6	12.9	9.6	4.0	2.6	2.4
Latvia	2.8	2.9	3.2	1.8	1.5	1.4	1.1	0.9
Lithuania	N/A	1.1	3.2	1.4	1.2	1.3	1.1	N/A
Poland	14.6	15.0	12.0	9.6	7.4	5.6	4.0	3.4
Romania	4.9	6.6	6.0	4.9	4.2	4.0	5.9	5.5
Slovakia	2.6	2.3	3.4	3.3	2.9	3.3	2.6	2.7
Slovenia	6.7	7.3	7.0	7.1	6.2	4.0	2.9	2.6

Source: Transition Report, 2000, pp. 146–213.

Changes in **the exchange rate** impact on different aspects of investment decisions. The extent of this impact on FDI flows depends on the target market of production and the share of imported resources in production inputs (Dewenter, 1995, p. 407; Liu *et al.*, 1997, pp. 316–317). Empirical research of the relationships between FDIs and the exchange rate has given contradictory results. For example, the studies by Dewenter (1995), Grosse *et al.* (1996), Jun (1994), Liu *et al.* (1997), UNCTAD (Explaining ..., 1993) and Wang *et al.* (1995) found them to be a statistically significant FDI determinant. On the other hand, research by Tu *et al.* (1995) showed that both the stability of exchange rate and liberalization of the exchange regime were insignificant. However, in case of the transition or developing countries the exchange rate is indicative of the overall stability of the economy.

The Czech Republic, Estonia, Hungary, Latvia, Poland, and Slovakia have had a rather stable exchange rate throughout the transition years (see Table 2.9). Lithuania had some problems

at the beginning of the transition process but fixed its exchange rate in 1994. Thus, some of the transition countries under discussion have (or have had) a relatively lower exchange rate risk which can have been their competitive advantage in attracting FDI flows.

Table 2.9

Annual change in average USD exchange rate in selected transition economies (%)

Country	1992	1993	1994	1995	1996	1997	1998	1999
Bulgaria	27.8	21.7	92.9	24.1	165.7	840.5	5.1	4.3
Czech Rep.	-4.1	3.2	-1.4	-7.6	1.9	17.0	1.9	6.2
Estonia	N/A	9.1	-1.5	-11.5	4.3	15.8	1.4	4.3
Hungary	5.6	16.5	14.2	19.6	21.4	22.4	14.8	10.6
Latvia	N/A	0.0	-16.4	-5.4	3.8	5.5	1.7	0.0
Lithuania	360.5	-97.6	-7.0	0.0	0.0	0.0	0.0	0.0
Poland	28.3	28.6	27.8	4.3	12.5	22.2	6.1	14.3
Romania	305.3	146.8	117.8	54.6	46.0	113.2	11.5	72.8
Slovakia	-4.1	8.8	3.9	-7.2	3.4	9.5	4.8	17.6
Slovenia	194.6	39.2	13.8	-8.0	14.3	17.9	4.0	9.5

Source: Author's calculations on the basis of Transition Report, 2000, pp. 146–213.

The importance of **labour costs** in choosing a host country for FDIs has decreased in the last years. Instead of this, foreign investors are more interested in availability of skilled labour (Oxelheim, 1993, p. 182). Although the level of labour costs is significant, additionally the effectiveness of labour force is also taken into account (Thoman, 1973, p. 73; Veugelers, 1991, p. 368; World Investment ..., 1998, p. 108). Both the possibility to lower labour costs and availability of skilled labour are among the most important FDI determinants for efficiency-seeking foreign investors in choosing a host country.

At the same time, the impact of these factors is not so important for market-seeking investors. Of course, considering that the average wage also reflects earnings and thus has an impact on the size of the potential market, the wage rate can be a significant FDI determinant also in the case of market-seeking foreign investors.

Empirical studies on labour costs as an FDI determinant have yielded varied/controversial results. For example, Dasgupta *et al.* (1995), Holland *et al.* (1998a, 1998b), Liu *et al.* (1997), Tu *et al.* (1995) and Wang *et al.* (1995) found that labour costs are a significant FDI determinant in the developing and Central and Eastern European transition countries. But analyses by Barrell *et al.* (1999), Guimaraes *et al.* (1997), Loree *et al.* (1995), Mariotti *et al.* (1995), Moore (1993) and Veugelers (1991) have, on the contrary, shown that labour costs are insignificant in determining foreign investment inflows.

Table 2.10 reviews the changes in average wage that have taken place during seven years. Note that in addition to changes in wage these figures also reflect changes in the exchange rate. The average wage was lowest in the Baltic States and highest in Slovenia at the beginning of the period. Slovenia has maintained its position as a transition country with the highest average wage, whereas Bulgaria has the lowest average wage now. The average wage has grown most rapidly in Latvia, Lithuania and Estonia (7.2, 6.0 and 5.8 times, respectively) and most slowly in Hungary (1.2 times).

In addition to the average wage, changes in labour productivity should also be taken into account (see Table 2.11). There are two countries — Hungary and Poland — where no decrease in labour productivity occurred between 1992 and 1999. This can be explained by the earlier start of the transformation processes. Those countries, whose restructuring started later, experienced several drawbacks in labour productivity during the period.

Table 2.10

Average wage in selected transition economies (USD)

Country	1992	1993	1994	1995	1996	1997	1998	1999
Bulgaria	87.7	116.9	91.5	113.1	79.4	76.3	106.5	107.3
Czech Rep.	164.3	199.6	239.5	307.8	356.4	337.3	362.1	366.0
Estonia	56.0	83.0	130.7	186.2	234.3	256.9	293.1	324.3
Hungary	282.2	295.2	316.8	309.5	307.0	306.7	316.0	326.6
Latvia	34.0	79.0	119.0	161.0	183.5	211.8	225.9	246.2
Lithuania	47.0	47.0	91.0	163.3	193.5	202.3	288.1	280.8
Poland	213.0	215.7	231.3	285.5	323.8	324.9	355.2	429.9
Romania	82.6	103.1	109.8	138.3	138.4	121.8	153.0	127.7
Slovakia	160.6	175.3	196.4	241.9	266.0	274.4	283.9	260.9
Slovenia	627.9	666.1	734.6	945.0	953.9	901.2	943.7	952.9

Source: Business Central Europe, 2001.

Table 2.11

Change in labour productivity in manufacturing industry of selected transition economies (%)

Country	1992	1993	1994	1995	1996	1997	1998	1999
Bulgaria	7.9	2.3	9.9	-3.3	N/A	-4.3	12.3	-2.8
Czech Rep.	26.3	-1.0	8.7	11.2	12.0	0.7	3.4	-2.5
Estonia	-30.3	-5.1	0.9	3.7	8.2	-1.0	9.6	-10.9
Hungary	3.9	16.4	14.8	10.5	4.3	9.3	7.4	9.5
Latvia	-28.0	-26.7	2.7	10.5	7.4	2.5	11.0	-2.7
Lithuania	N/A	-23.1	-11.1	14.1	6.5	2.4	8.0	N/A
Poland	12.5	13.8	13.0	6.5	9.1	11.6	4.3	9.1
Romania	-10.0	10.4	8.6	16.3	N/A	5.6	-14.9	N/A
Slovakia	7.3	-1.1	9.0	4.0	2.5	3.8	7.8	2.6
Slovenia	N/A	N/A	-10.5	-3.9	4.0	2.7	5.4	5.7

Source: Transition Report, 2000, pp. 146–213.

When analyzing the host country's investment climate, foreign investors usually take into account the level and changes in **interest rates**. Among other things, these reflect the costs of additional capital that is needed for further expansion in the host country's market. The results of the empirical studies by Culem (1988) and Wang *et al.* (1995) have shown the importance of interest rates in determining FDI inflows. At the same time, a study by Liu *et al.* (1997) came to a conclusion that differences between the home and host country's interest rates are not significant FDI determinants.

Alongside with interest rates, the volume of **domestic investments** is sometimes also analyzed. Usually foreign investors have less information about the host country's market than local investors, which increases the risk related to investments. To decrease the instability, foreign investors sometimes use domestic investments as a signal about a favourable investment climate (Johnson, 1997, p. 5). Nevertheless, this variable is not very often used in empirical analyses as a determinant of FDI flows. However, a study by UNCTAD (Explaining ..., 1993) showed that the share of domestic investments in GDP was a significant FDI determinant in the developed countries.

Percentage of investments in the GDP increased in all the countries under discussion during the period 1992–1999 (see Table 2.13). The level of investments was lowest in Latvia in 1992 and in Bulgaria in 1998. At the same time, this level was highest in Slovakia both in 1992 and 1998. The level of investments depends on many factors, one of them being FDI flows.

Besides domestic investments, **previous FDI flows** are also often used when analyzing the attractiveness of a potential host country for foreign direct investments. Empirical researches has supported this. For example, Singh and Jun (1995, 1996), Tu *et al.* (1995) and Wheeler *et al.* (1992) found this variable to be a significant determinant of FDI inflows.

Table 2.13

Investment rate in selected transition economies (% of GDP)

Country	1992	1993	1994	1995	1996	1997	1998	1999
Bulgaria	16.2	13.0	13.8	15.7	8.4	11.4	14.7	16.4
Czech Rep.	28.5	26.6	29.5	34.0	36.6	35.1	33.6	32.6
Estonia	21.0	24.4	27.0	26.0	27.8	30.9	29.4	25.4
Hungary	19.9	18.9	20.1	20.0	21.4	22.2	23.2	N/A
Latvia	11.2	13.8	14.9	15.1	18.1	18.7	20.1	N/A
Lithuania	23.0	23.1	23.1	23.0	23.0	24.4	24.3	22.5
Poland	15.8	14.9	18.0	18.7	20.9	23.6	25.3	N/A
Romania	19.2	17.9	20.3	24.3	24.7	21.5	21.4	20.2
Slovakia	32.9	32.7	29.4	27.4	36.9	38.6	40.8	N/A
Slovenia	18.4	18.8	19.8	21.4	22.6	23.5	24.6	26.9

Source: Transition Report, 2000, pp. 146–213.

As it can be seen from Table 2.14, there are quite significant differences in FDI inflows to the Central and Eastern European transition countries. Hungary, the Czech Republic and Estonia have been the most successful ones in attracting foreign investments. At the same time, cumulative investments to Bulgaria are more than 6 times lower than to Hungary.

One possible FDI determinant in the transition countries is the **share of the private sector in an economy**. It shows the speed and extent of the reforms that have taken place in these countries. This variable is specific to those transition countries that are moving from a centrally planned economy to a market economy and because of this it is not often used in empirical analysis. As could be seen from Figure 2.3, the starting position in 1992 varied to a large extent between the countries — some of them (Hungary and Poland) had already then a private sector that yielded 40% and more of the GDP. Differences between the countries have remained — in 1999

Table 2.14

Foreign direct investment per capita in selected transition economies (USD)

Country	1992	1993	1994	1995	1996	1997	1998	1999	Cumulated FDI
Bulgaria	1	1	12	11	13	61	65	94	258
Czech Rep.	97	55	84	248	139	126	247	497	1493
Estonia	54	107	144	136	103	184	407	211	1346
Hungary	143	228	112	436	195	206	191	192	1703
Latvia	11	17	86	72	153	167	113	150	769
Lithuania	3	8	8	20	41	96	251	132	559
Poland	18	45	49	95	117	129	132	194	779
Romania	4	4	15	19	12	54	90	43	241
Slovakia	19	32	46	36	47	38	117	60	395
Slovenia	57	56	64	88	93	161	83	45	647

Source: World Investment Report, 1998, pp. 364–365; World Investment Report, 2000, pp. 286–287.

the share of the private sector in the GDP was highest in Hungary and the Czech Republic (80%) and lowest in Slovenia (50%).

In addition to the private sector's share in the GDP, several other indicators are used in analyzing the speed of the transformation processes taking place in Central and Eastern Europe. Several institutions are calculating indexes that express success in the transition process, economic or political risk or other aspects of transition. Several previous studies — for example, Grosse *et al.* (1996), Guimaraes *et al.* (1997), Holland *et al.* (1998a, 1998b), Loree *et al.* (1995), Petrochilos (1989), Singh and Jun (1995, 1996) and Yu (1990) — have found political risk to be a statistically significant FDI determinant. Liu *et al.* (1997) and Wheeler *et al.* (1992), on the contrary, have found it to be insignificant.

The above short review of the most important components of investment climate in ten Central and Eastern European transition countries revealed rather big differences in speed, extent and success of transformation from a centrally planned to a market economy between the countries surveyed. The analysis also provided some suggestions about the possible impact of different variables on FDI inflows. However, the need for further analysis is evident.

2.3. Investment climate in Estonia – results of the foreign investors' surveys

Estonia has been one of the most successful countries in attracting foreign direct investments during the transition period. The next sections will concentrate on analyzing the investment climate of Estonia. At first, the results of four foreign investors' surveys are presented. To study the changes in foreign investors' evaluations and differences between foreign investors with different motives, average results for each year and for each group of investors are presented. In the final

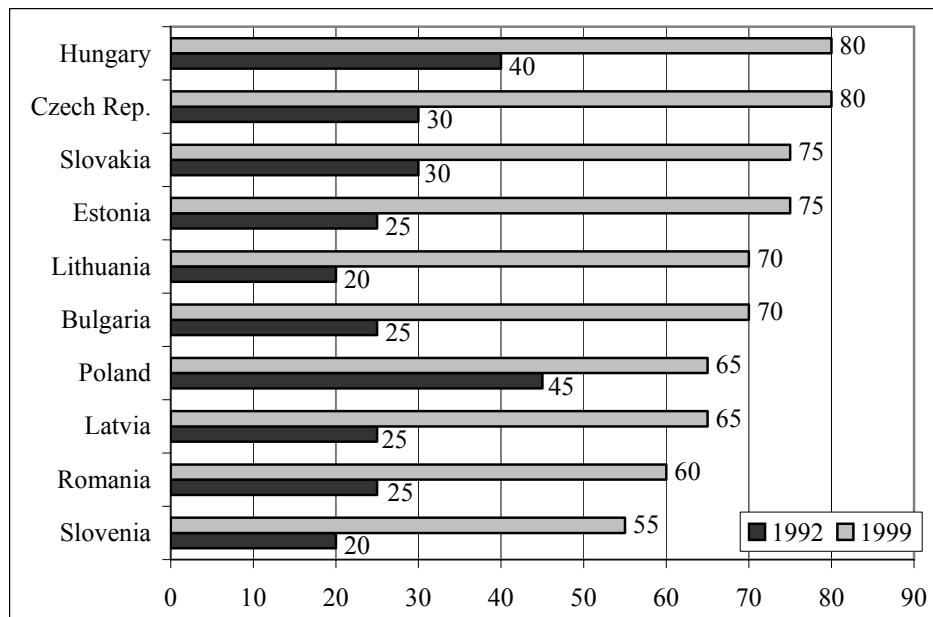


Figure 2.3. Private sector's share in the GDP (%) of ten transition countries in 1992 and 1999 (Transition Report, 2000, pp. 146–213).

section, the principal component and multinomial logistic regression analysis are used for analyzing FDI determinants of different groups of foreign investors in Estonia.

In 1997–2000 the Estonian Investment Agency and the Faculty of Economics and Business Administration of the University of Tartu carried out four surveys of foreign investors. 80–100 responses were received each year and all the biggest investors have been included in the sample. The major objective of the surveys was to find how foreign investors evaluate Estonia as a host country for foreign direct investments. Firms were asked to answer questions concerning investment motivation, changes in the investment climate, government policies, technology transfer, and export activities.

If we take into account, on the one hand, the motives of foreign direct investments presented in the theoretical part of the paper, and on the other, determinants of different types of foreign investors presented in Table 2.3, the need to analyze different types of investors separately will become evident. Thus, considering the field of activities, export performance, and several other factors, the firms have been divided into four different groups — market-seeking investors, efficiency-seeking investors, natural-resources-seeking investors, and strategic-assets-seeking investors. Figure 2.4 presents an overview of the share of foreign investors with different motivations in the sample.

Different groups of foreign investors in the sample have the following characteristics:

- 1) Market-seeking investors are orientated towards servicing Estonian and also Latvian, Lithuanian, Russian and Ukrainian markets. The share of export in the turnover is relatively small, or they do not export at all. Some of these investments have been made into Estonia in order to decrease the economic and political risks in servicing East European markets.

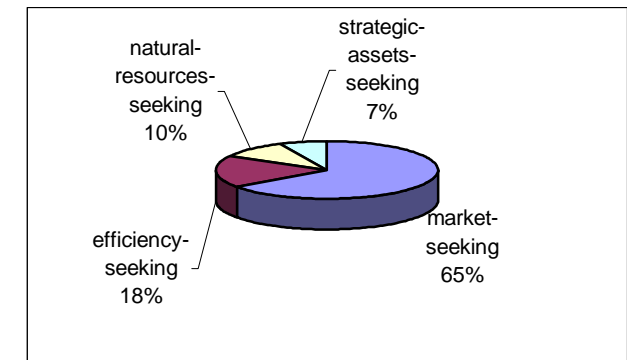


Figure 2.4. Share of foreign investors with different motives in the sample (%) (the author's calculations are based on the surveys "Foreign Investor '97" ... "Foreign Investor '00").

- 2) The main aim of efficiency-seeking investors is to use comparatively low production costs and qualified labour for servicing the parent companies' home market and/or other European developed countries' markets. A small part of their production could be marketed in Estonia or in the markets of other Central and East European transition countries. Since the production costs have been increasing and there is a lack of qualified labour, Estonia is no longer a very attractive host country for this type of foreign investors.
- 3) Estonia has few natural resources; hence the share of natural-resources-seeking investors is quite small. Most of these investments are made into enterprises dealing with buying up and processing wood. A large part of the production of these firms is exported to the developed countries of Europe.
- 4) There are also some firms which could be classified as strategic-assets-seeking ones. These are foreign investors who have mostly been interested in acquiring the knowledge base and networks of infrastructure enterprises and almost all of these investments are related to privatization.

Foreign investors' evaluations of the different motivational factors' impact on the initial decision to invest into Estonia are presented in Table 2.15. The highest rating has been given to possibilities for market growth — this indicates the market-seeking nature of the investments that have been made to Estonia thus far. In the case of Estonia, which is a small market, it has to be taken into account that many investors define the market as including not only Estonia but also the other Baltic States and/or Northwest Russia. It is interesting to note that the importance of entry to the Estonian market has decreased in the last two years.

Table 2.15

**Factors that have influenced the initial decision
to invest into Estonia**

(1 – no influence at all ..., 5 – a very strong influence)

	1997	1998	1999	2000
Possibilities for market growth	3.84	3.76	3.60	3.86
Convertibility of the currency	3.45	3.40	3.60	3.72
Political stability	3.23	3.41	3.41	3.63
Free movement of capital	3.34	3.50	3.60	3.61
Rapid economic reforms	3.24	3.39	3.24	3.41
Production costs	2.37	3.28	3.27	3.36
Entry to the Estonian market	3.70	3.92	3.46	3.20
Following competitors	2.55	2.80	2.71	2.69
Prospects of joining the EU	2.02	2.09	2.04	2.69
Potential of the CEEC market			2.46	2.60
Potential of CIS markets	3.04	2.94	2.56	2.57

Source: The author's calculations are based on the surveys "Foreign Investor '97" ..., "Foreign Investor '00".

The importance of the following four indicators — convertibility of the Estonian currency, political stability, free movement

of capital, and rapid economic reforms — shows that foreign investors are interested in economic and political stability, favourable operating conditions and speed of the transformation process. In combination with the interest in entering new growing markets, the relative success of Estonia in attracting foreign direct investment inflows can be explained as follows: the investors have looked for such countries which, having a relatively low risk level, have at the same time a good geographical location for servicing several other markets.

The biggest change has occurred in the evaluation of the importance of production costs when making the initial decision to invest into Estonia. There are at least two possible explanations. Firstly, the share of efficiency-seeking investors may have increased. Secondly, as the stability in most Central and Eastern European transition countries has grown, the importance of production costs in locating affiliates may have increased. Of course, there can be a simultaneous effect of both reasons.

Access to the European Union appears to be one of the least motivating factors for foreign investors in investing in Estonia. This is not surprising if we take into account the fact that most of the foreign direct investments into Estonia have been made by enterprises of EU member states who already have production facilities and sales representatives in those markets. Besides that, export of some products to the EU market is complicated due to the non-tariff barriers. Finally, the relatively low importance of future EU membership as an FDI determinant in Estonia could also be explained by reasoning that those investors who are interested in the locational advantage of Estonia have not yet invested.

The potential of both the CEEC and CIS markets is evaluated as the least important factor influencing investment decisions. In the case of the CIS markets, the explanation derives from the fact that Russia has imposed discriminative tariffs on Estonian products and therefore Estonian goods have no competitive edge in the CIS markets. It is not easy to compete in the

Central European markets either — the most important disadvantage of Estonian products in these markets seems to be their high price, which comes from the high transportation costs.

Table 2.16 gives an overview of the main factors that have influenced the decision to invest into Estonia, bearing in mind the strategic objectives of foreign investors. As expected, the most important determinants for market-seeking investors are entry to the Estonian market and prospective market growth. At the same time, for other types of foreign investors entry to the Estonian market has only moderate influence or no influence at all.

Production costs have had a strong influence on the investment decisions in the case of efficiency- and natural-resources-seeking investments. Free movement of capital is the second important determinant for efficiency-seeking foreign investments. The importance of this factor can be explained by the need to repatriate profits earned in Estonia, and free movement of capital has made investing into Estonia relatively less complicated than into several other Central and Eastern European transition countries.

Convertibility of the Estonian currency is the most significant FDI determinant for strategic-assets-seeking investors, whereas natural-resources-seeking investors have considered this the second important determinant in investing here. Estonia has a currency board system and its exchange rate policy has been stable throughout the whole transition period. Both economic and political stability and the exchange rate system influence the credibility and convertibility of the currency. In addition to stability, the fixed exchange rate has created a relative advantage to those investors who produce in Estonia and export their production.

As expected, the potential of the CIS and CEE markets is quite insignificant in the case of market-seeking investors. Irrelevance of this determinant for both efficiency-, natural-re-

Table 2.16

Factors that have influenced the initial decision to invest into Estonia

(1 – no influence at all ..., 5 – a very strong influence)

	Market-seeking	Efficiency-seeking	Natural-resources-seeking	Strategic-assets-seeking
Entry to the Estonian market	4.15	2.74	2.45	2.88
Market potential of the CIS countries	2.94	2.89	2.25	2.25
Market potential of the CEE countries	2.57	2.46	2.50	2.33
Prospects of Estonia joining the EU	2.17	2.26	2.15	1.88
Possibilities for market growth	4.12	3.22	2.60	3.44
Political stability	3.40	3.34	3.58	3.31
Competitors' activities	2.89	2.32	2.16	2.56
Production costs	2.68	3.79	4.11	3.00
Rapid economic reforms	3.31	3.32	3.11	3.63
Free movement of capital	3.38	3.89	3.37	3.63
Convertibility of the Estonian currency	3.45	3.47	3.83	3.79

Source: The author's calculations are based on the surveys "Foreign Investor '97"..., "Foreign Investor '00".

sources-, and strategic-assets-seeking investors can be explained by the fact that these firms have targeted their production to the European and other developed countries.

Foreign investors were also asked to evaluate the role of different resources in choosing Estonia as the host country for their investments (see Tables 2.17 and 2.18). According to the surveys, the availability of skilled labour is the most important resource in choosing this country as host for one's investments. As 83% of the respondents are interested in servicing the local market or increasing the efficiency, this result was expected.

Table 2.17

**Resources that have influenced the initial decision
to invest into Estonia**

(1 – no influence at all ... 5 – a very strong influence)

	1997	1998	1999	2000
Estonian workforce	3.48	3.77	3.96	3.95
System of communications	3.13	3.43	3.35	3.25
Estonia's banking sector	3.26	3.20	3.34	3.03
Estonian ports	3.16	2.92	3.12	2.77
Availability of the required raw materials	2.69	2.69	2.49	2.65
Internal transport network	2.77	2.83	3.13	2.46

Source: The author's calculations are based on the surveys "Foreign Investor '97" ..., "Foreign Investor '00".

Availability of the required raw materials and an internal transport network got the lowest ratings. One of Estonia's shortcomings is that the country's natural resources are quite limited, which is why the importance of other factors — for instance, labour costs — is higher. Taking this into consideration, one can expect that most of the investments coming into Estonia would use relatively skilled and cheap labour and

would rely heavily on Estonia's developed physical and economic infrastructure. Many foreign firms (mainly Finnish and Swedish) relocate to Estonia this part of their production process that requires skilled or semi-skilled labour, and ship semi-finished products back to the home production base for completion. However, the size of Estonia sets limits here — due to the small body of the local workforce, a lack of skilled labour is experienced in some professions. Thus, Estonia's competitiveness in attracting FDIs has decreased.

The evaluations of foreign investors with different strategic objectives tend to be somewhat different (see Table 2.18). As expected, the most important determinant for market-seeking and efficiency-seeking investors was labour. In the case of resource-seeking foreign investors the influence of the availability of raw materials on the investment decision was very strong. On the other hand, the local resources had only a moderate influence on the strategic-assets-seeking investors. There were no significant differences between the evaluations of the banking sector and the communication system.

As the investment climate keeps changing all the time and especially rapid changes have taken place in the Central and Eastern European transition countries, it is interesting to know, how the foreign investors evaluate the changes that have taken place since they entered the Estonian market. As could be seen from Table 2.19, there have been significant changes for the better in Estonia's political stability, economic environment, and prospects to join the European Union.

At the same time, the share of investors who considered changes in the possibilities for market growth positive, has decreased dramatically. One can explain this by the fact that most of the enterprises have been restructured and the whole economy has stabilized — thus the growth of the market has slowed down and the rate of returns has decreased. Since similar processes are taking place in all the Central and Eastern European transition countries who are Estonia's direct competitors in attracting FDIs, Estonia's competitiveness has not de-

Table 2.18

**Resources that influenced the initial decision
to invest into Estonia**

(1 – no influence at all ..., 5 – a very strong influence)

	Market- seeking	Efficiency- seeking	Natural- resources- seeking	Strategic- assets- seeking
Labour	3.72	4.16	3.84	3.19
Availability of the required raw materials	2.32	2.84	4.60	2.31
Banking sector	3.28	3.05	3.16	3.19
System of communications	3.33	3.37	3.16	3.00
Internal transport network	2.73	3.18	2.84	2.63
Estonian ports	2.85	3.35	3.55	2.88

Source: The author's calculations are based on the surveys "Foreign Investor '97" ..., "Foreign Investor '00".

creased considerably. Of course, comparing the attractiveness of Estonia and Russia, the latter has gained significant advantages in recent years and as soon as the risk level in Russia decreases, a significant increase in FDI flows is expected.

Over half of the foreign investors hold the opinion that there has been a change for the worse in production costs. As the production costs have increased, such a result was expected. In addition to this, about 40% of the investors have seen negative developments in relationships with Russia, which has worsened the possibilities for servicing the CIS markets with Estonian production.

There have also been changes in resources, and the physical and economic infrastructures. The foreign investors' evaluations

Table 2.19

Changes in the Estonian investment climate (% of respondents)

	Change for the worse				Unchanged				Change for the better			
	1997	1998	1999	2000	1997	1998	1999	2000	1997	1998	1999	2000
Eastern market perspective	28.3	30.5	46.0	38.2	60.4	54.2	47.6	48.3	11.3	15.3	6.3	13.5
Prospects of Estonia's accession to the EU	11.1	9.5	0.0	2.2	55.6	39.7	46.9	19.1	33.3	50.8	53.1	78.7
Possibilities for market growth	5.5	6.3	21.9	21.3	20.0	32.8	28.1	37.1	74.5	60.9	50.0	41.6
Political stability	9.3	6.3	0.0	6.6	42.6	42.9	32.8	31.9	48.1	50.8	67.2	61.5
Estonia's liberal economic environment	5.5	3.2	7.8	9.9	49.1	44.4	31.3	28.6	45.5	52.4	60.9	61.5
Attitude towards foreign investors	7.4	6.2	12.7	9.9	38.9	40.0	27.0	40.7	53.7	53.8	60.3	49.5
Production costs			60.7	52.8			27.9	39.3			11.5	7.9

Source: The author's calculations are based on the surveys "Foreign Investor '97" ..., "Foreign Investor '00".

Table 2.20

Changes in the Estonian investment climate (% of respondents)

	Change for the worse				Unchanged				Change for the better			
	1997	1998	1999	2000	1997	1998	1999	2000	1997	1998	1999	2000
Workforce	11.1	6.3	15.9	21.1	51.9	42.9	44.4	50.0	37.0	50.8	39.7	28.9
Availability of raw materials	9.8	20.7	15.5	13.4	56.9	58.6	51.7	62.2	33.3	20.7	32.8	24.4
Banking sector	0.0	9.5	9.4	3.3	21.8	28.6	14.1	15.4	78.2	61.9	76.6	81.3
System of communications	1.8	4.7	1.5	0.0	30.9	21.9	7.7	7.6	67.3	73.4	90.8	92.4
Transport networks	10.9	11.3	6.3	6.5	65.5	61.3	39.7	56.5	23.6	27.4	54.0	37.0
Estonian ports	1.9	5.1	3.2	3.4	66.7	59.3	35.5	47.2	31.5	35.6	61.3	49.4

Source: The author's calculations are based on the surveys "Foreign Investor '97" ..., "Foreign Investor '00".

of the changes are presented in Table 2.20. As could be seen, the share of foreign investors who have seen improvements in the banking sector and communication system have increased considerably. The share of those respondents who evaluated changes in physical infrastructure — the internal transportation network and Estonian ports — has increased. At the same time, availability of suitable workforce and some raw materials has decreased and this is reflected in the evaluations.

Finally, the investors were asked to evaluate the impact of possible changes on the investment climate of Estonia. These results are presented in Table 2.21. Most of the foreign investors have the opinion that reduction in the rate of company's income tax and introduction of the euro would have a positive impact on the Estonian investment climate. At the same time, application of additional import tariffs and devaluation of the Estonian kroon are seen by most investors as negative developments.

An overview of the results of the foreign investors' surveys showed that foreign direct investments in Estonia are mostly orientated towards servicing the local market (and sometimes also neighbouring markets) or increasing the efficiency of production processes. Importance of several FDI determinants in influencing the initial decision to invest into Estonia varied in case of different groups of foreign investors and in different years. An econometric analysis of FDI determinants in Estonia is performed in the following section.

2.4. Analysis of FDI determinants in Estonia

The results of the foreign investors' surveys are also going to be used in this section. Some of the firms replied yearly; therefore the sample comprises 199 different firms. Since some of the firms failed to answer all the questions, the overall number of valid cases is 185. As in the previous section, the investors were divided into four groups (the shares of each group of investors are presented in Figure 2.4).

Table 2.21

Possible changes in the Estonian investment climate (% of respondents)

	Change for the worse				No change				Change for the better			
	1997	1998	1999	2000	1997	1998	1999	2000	1997	1998	1999	2000
Application of import tariffs	59.3	65.0	50.0		25.9	26.7	43.8		14.8	8.3	6.3	
Application of additional import tariffs				62.2				28.9				8.89
Reduction in the rate of company income tax	0.0	1.5	1.5		13.0	20.0	12.3		87.0	78.5	86.2	
Revaluation of the Estonian kroon	32.7	39.3			40.8	37.7			26.5	23.0		
Devaluation of the Estonian kroon	53.1	60.7	71.9	78.3	36.7	26.2	15.6	14.1	10.2	13.1	12.5	7.61
Introduction of the euro			1.5	2.22			38.5	43.3			60.0	54.4

Source: The author's calculations based on surveys "Foreign Investor '97" ..., "Foreign Investor '00".

In the previous section, the FDI determinants were grouped by means of principal component analysis. The five principal components describe 64.5% of the variation of the initial indicators.

The principal components can be characterized as complex indicators, the substance of which is to be explained by finding correlation coefficients between the preliminary indicators. The principal components are statistically independent of one another, therefore multicollinearity between them is eliminated. The interpretation of the five principal components is as follows (r expresses linear correlation between the initial indicator and component):

C_1 – stability and progress of the transformation process

Initial indicator	r
free movement of capital	0.800
rapid economic reforms	0.780
convertibility of the Estonian currency	0.765
political stability	0.656

Component C_1 accounts for 19.6% of the variation of the initial indicators. Several transition countries have set barriers to the movement of foreign investments. At the same time, Estonian foreign investment policy has been fully liberal, which could be one reason for Estonia's success in attracting FDI flows. Foreign capital has actively participated in the privatization and restructuring of enterprises and this has accelerated the process of transformation into a market economy. Due to lack of local capital, the economic reforms would have slowed down without foreign capital.

A successful monetary reform and convertibility of the Estonian currency have delivered positive signals to foreign investors about stability of Estonia's economy. Estonia has a currency board system and its exchange rate policy has been stable throughout all the transition years. Both the country's economic and political stability and the exchange rate system have influenced the credibility and convertibility of the cur-

rency. In addition to stability, devaluation of the currency at the moment when the exchange rate was being fixed created a relative advantage to those enterprises that produce in Estonia and export their production.

No radical changes in government policies have occurred during the transition years and all the governments have favoured the inflow of FDIs to Estonia. All these factors have impacted on foreign investors' opinions about political stability in Estonia. Thus, considering all the above-mentioned facts, it can be said that the principal component that consists of indicators expressing free movement of capital, rapid economic reforms, convertibility of the Estonian currency, and political stability, characterizes the stability and progress of the transformation process.

C_2 – attractiveness of the Estonian market

Initial indicator	r
entry to the Estonian market	0.803
possibilities for market growth	0.755
production costs	-0.642
availability of the required raw materials	-0.565

Component C_2 accounts for 14.7% of the variation of the initial indicators. This principal component consists of indicators that characterize the attractiveness of the Estonian market, namely, entry to the Estonian market, possibilities for market growth, production costs, and availability of the required raw materials.

The above indicators 'entry to the Estonian market' and 'possibilities for market growth' serve to characterize the attractiveness of the local market — when foreign investors evaluate a market's potential, both the number of potential customers and their income level are important. In terms of potential customers the Estonian market is small. At the same time, the income level is much higher than in Russia and a bit higher than in the other Baltic countries. Moreover, foreign investors from Fin-

land and Sweden (the most important investors in Estonia), being Estonia's close neighbours, appear to have more information about Estonia than about Latvia or Lithuania.

Production costs are lower in Estonia than in the Central European transition countries but this advantage is cancelled by transportation costs in the servicing markets of the developed Western European countries. At the same time, Estonia has higher production costs than Latvia, Lithuania and Russia and hence has no significant advantages in production costs in the servicing markets of the Scandinavian countries. Taking into account these facts, the high level of production costs decreases the attractiveness of Estonia in the eyes of foreign investors. Furthermore, Estonia has only few natural resources, therefore the effect of this indicator is as expected — unavailability of the required raw materials will also make the country less attractive.

C_3 – infrastructure

Initial indicator	r
internal transportation network	0.855
Estonian ports	0.743
communication system	0.564
banking sector	0.555

Component C_3 accounts for 13.7% of the variation of the initial indicators. This principal component consists of the indicators that characterize the Estonian physical and financial infrastructures — these indicators are the country's internal transportation network, its ports, communication system, and the banking sector.

All the indicators have a positive impact on the overall level of development of the infrastructure. Estonia's internal transportation network is not as developed as that of the developed countries, but the differences with several other Central and East European transition countries are not great. Both the Estonian ports and the communication system have developed rapidly during the past decade and now the communication

system is comparable with those of the developed countries. Estonia's banking sector underwent a crisis at the beginning of the 1990s but has stabilized and developed fast after that.

C_4 – labour

Initial indicator	r
labour	0.892

Component C_4 accounts for 8.5% of the variation of the initial indicators. This principal component consists of only one indicator — labour. There are two important aspects that are related to competitiveness in terms of labour — these are the availability and cost of labour. Its well qualified and relatively inexpensive labour used to be one of Estonia's advantages in the early 1990s. But due to the fact that there are less than 1.5 million inhabitants in Estonia, the country is now experiencing a lack of qualified labour. Labour costs have also risen and thus Estonia still has a relative advantage in comparison to Finland and Sweden, but compared to the other Baltic countries and Russia, it has a disadvantage.

C_5 – potential of the neighbouring markets

Initial indicator	r
potential of the CIS market	0.862
prospects of Estonia joining the EU	0.488

Component C_5 accounts for 8.0% of the variation of the initial indicators. This principal component consists of indicators that characterize the potential of Estonia's neighbouring markets — these indicators are the potential of the CIS markets and the prospects of Estonia joining the EU. There are several barriers to Estonian production in these markets; hence the potential of these markets is not fully exploited. Removal of the Russian double tariffs and the European Union's tariffs and non-tariff barriers would increase Estonia's attractiveness for foreign investors.

All the above-mentioned principal components are going to be used as independent variables in the multinomial logistic re-

gression. The type of foreign investor (TFI) is a dependent variable and strategic-assets-seeking investors (TFI_j) are set to the base category. The model has the following form:

$$\log \left(\frac{P(TFI_i)}{P(TFI_j)} \right) = B_{i0} + B_{i1}C_1 + B_{i2}C_2 + B_{i3}C_3 + B_{i4}C_4 + B_{i5}C_5 + u_i$$

where

TFI_i – denotes the type of foreign investor,

TFI_j – strategic-assets-seeking foreign investors,

C_i – the generalized component,

B_{ij} – the coefficient,

u_i – the disturbance term.

Hypotheses about the impact of each of the above-mentioned principal components on each group of foreign investors as compared to the strategic-assets-seeking investors are presented in Table 2.22.

Table 2.22

Expected impact of the principal components as compared to strategic-assets-seeking investors

	Market-seeking	Efficiency-seeking	Natural-resources-seeking
C_1	low	moderate	moderate
C_2	high	low	low
C_3	low	moderate	moderate
C_4	moderate	moderate	low
C_5	high	high	moderate

The results of the multinomial logistic regression analysis are presented in Table 2.23. Coefficients for stability and progress of the transformation process and infrastructure are not signi-

ificantly different from 0 in all three logits. This could be explained by the fact that these factors are equally important for all types of investors who are investing in Estonia.

Table 2.23

Results of the multinomial logistic regression analysis

	Market-seeking	Efficiency-seeking	Natural-resources-seeking
Int.	2.550** (0,408)	1.63** (0.60)	-1.49* (0.70)
C ₁	-0.360 (0,348)	-0.79 (0.85)	-6.4E-02 (0.72)
C ₂	1.132** (0.396)	-0.05 (0.36)	-2.60** (0.96)
C ₃	0.289 (0.338)	0.37 (0.384)	0.49 (0.83)
C ₄	0.573* (0.326)	1.012** (0.373)	-0.34 (0.85)
C ₅	0.913** (0.338)	0.930** (0.373)	1.28** (0.69)

Notes:

** – 5% level of significance;

* – 10% level of significance; standard errors in parentheses. The reference group is foreign investors with a strategic-assets-seeking motive.

Log Likelihood = -128.596; Chi-square = 113.420

The number of observations is 185.

Attractiveness of the local market, the potential of the neighbouring markets, and labour are more likely to increase the flow of market-seeking FDIs than strategic-assets-seeking investments. The principal components of labour and the potential of the neighbouring markets are significantly different from 0 in the case of efficiency-seeking foreign investors — this means that the higher these components are, the higher the odds of getting efficiency-seeking investments as compared to

strategic-assets-seeking ones. Attractiveness of the Estonian market decreases and the potential of the neighbouring markets increases the flows of natural-resources-seeking foreign investments as compared to strategic-assets-seeking investors. In conclusion, it could be said that the results accord to both theoretical understandings and the expected significance of determinants that are presented in Table 2.22.

Conclusions

The main aim of this chapter was to analyze the determinants of FDIs in Estonia. The chapter started with a short review of the earlier work in this field. As a result, the need for distinguishing between four different types of foreign investors was emphasized. These are:

- 1) market-seeking,
- 2) efficiency-seeking,
- 3) natural-resources-seeking and
- 4) strategic-assets-seeking foreign investors. The main economic, political, and other host country determinants of each group of investors were presented and the results of the previous empirical research were discussed in the theoretical part of the paper.

The next section concentrated on the analysis of the FDI climate in ten Central and Eastern European transition countries. The changes in several indicators of investment climate were analyzed and possible competitive advantages of different countries were discussed.

Data of four foreign investors' surveys that were carried out during the period 1997–2000 were used in the next two sections. Analysis of the data suggested that about 65% of the foreign investors in Estonia tend to have a market-seeking nature, the share of other types of foreign investors being considerably lower. In addition, it has to be mentioned that the foreign investors' evaluations of the significance of several

possible FDI determinants varied between different groups of investors and for different years.

Finally, an econometric analysis was carried out for analyzing determinants that influence different groups of foreign investors in Estonia. As a result of a principal component analysis, five principal components of determinants of foreign direct investments were found. Subsequently, the impact of each principal component on the four types of investors was discussed.

The results of the multinomial logistic regression analysis suggest that attractiveness of the Estonian market is likely to increase the flows of market-seeking and decreasing flows of natural-resources-seeking investors as compared to strategic-assets-seeking investors. The potential of the neighbouring markets is more important for all types of investors other than strategic-assets-seeking ones. Labour is a significant determinant in the case of market- and efficiency-seeking investors. Other principal components — stability and progress of transformation and infrastructure — were not significantly different from 0. Thus, there are no significant differences in the impact of these factors on the decisions taken by different groups of foreign investors.

It has to be considered that the above results have several limitations. Firstly, only the type of the foreign investor has been taken into account, whereas the size of the enterprise and the economic sector should also be considered. Moreover, the analysis covers only a small range of FDI determinants and the nature of the data sets some limits to the methods of analysis.

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