Formation of Foreign Direct Investment Policy: Case of Estonia

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The problems towards foreign direct investment (hereinafter FDI) have been the subject of debate from the 1980s. The benefits of FDI are obvious: it is one of the main sources of external finance, which is especially important for developing economies. It is highly important to attract foreign direct investments for countries with rapidly growing economies. In order to direct foreign investments into the problematic business areas or problematic regions, targeted FDI policy is essential. However, because the countries with growing economies usually seek to attract foreign capital by any means, uncontrolled foreign investment can bring more harm than benefit.

The aim of the article is to develop a complex-targeted FDI policy that would bring the greatest benefit to the state. The authors raise the question how to attract targeted FDI inflows.

When selecting a method for the formation of FDI policy, another problem arises: the methods based on correlation-regression analysis are frequently applied in the literature. This analysis is helpful in assessing relationships between individual factors; however, it does not allow determining the complex components of FDI policy. The authors assume that FDI policy is characterized by multi-criteria, therefore one of the qualitative multi-criteria methods – ANP – has been chosen for an empirical study because of the fact that, using this method, not only the effect of a criterion or sub-criterion but also the relationships between the sub-criterion are assessed. The criteria system is based on SWOT analysis. Four alternatives to current FDI policy are suggested which account for the threats and weaknesses that are characteristic of the Estonian economy. The following alternatives for FDI policy are proposed: FDI policy focused on the service sectors; FDI policy focused on the export promotion; FDI policy focused on R&D, and FDI policy focused on the manufacturing sectors. According to the research, FDI policy in Estonia is mostly influenced by its strengths and opportunities. The main weakness is the research and innovation system that may prevent from the attraction of FDI in knowledge-intensive sectors. A repeated synthesis highlighted Estonia's potential to successfully attract FDI and to exploit them in the knowledge-intensive services, high-tech and medium-tech sectors. The research results indicate that attracting FDI to the service sector would be the most effective policy that would bring a long-term positive impact on the country's economic development.

Keywords: investment promotion, Estonia, foreign investments, FDI policy, marketing activities.

Introduction

The movement of international capital is one of the most important economic phenomena. It has also become a source of external funding of new markets for international companies in the common market.

FDI flows have increased in both developed and developing countries. It is highly important to attract foreign direct investments for countries with rapidly growing economies. In order to promote country's economy and upgrade technologies, they need external resources and innovative technologies (Markusen, 2013).

As a result, the issue of targeted integration of foreign companies in the market, and the use of funds becomes as important as the attraction of FDI. On the one hand, this issue appears because global companies directly or indirectly affect the independence of the host country (Ginevicius & Simelyte, 2011a), on the other hand, because the governmental decisions of the host country accepting the investment have significant importance on the decision of international companies whether to invest or not (Ginevicius & Simelyte, 2011b).

FDI intensification policy assumed by the state and applicable measures enable the international companies to integrate into the local market as well as to expand production by using local labour force, land and capital (Simelyte, 2010; Tvaronaviciene *et al.,* 2008; Tvaronaviciene & Grybaite, 2007; Tvaronaviciene & Kalasinskaite, 2010; Brenkeviciute, 2010; Laskiene & Pekarskiene, 2011; Miskinis, 2010; Zilinske, 2010). However, the government of the country accepting the investment, which hopes for the positive impact of foreign capital, does not always give due consideration on the country's economic situation and the need for FDI. During the transitional period, the countries with growing economies usually seek to attract foreign capital by any means (Singh, 2005; Falla *et al.,* 2009).

Therefore, in order to direct foreign investments into the problematic business areas or problematic regions, targeted FDI policy is essential.

The aim of the article is to form a complex-targeted FDI policy, after the implementation of which future FDI would bring the greatest benefit to the state. The paper is written by applying the ***methods*** of expert assessment, SWOT analysis and ANP (*Analytic Network Process)*.

Methodological analysis of formation of foreign direct investment policy

In the foreign scientific literature (Wells & Wint, 1991; Velde, 2001; Rosenboim *et al.*, 2008; Matheson, 2009; Chun, 2012), the issue of formation of FDI policy has been investigated for decades. The Baltic countries have recently started to take interest in FDI policy. It can be explained by the fact that, after these countries regained their independence, multinational corporations (hereinafter MNC) have been attracted by privatization. The aim was to reduce public expenses as quickly as possible and to supplement the budget with the revenues obtained from privatization. This phase has come to an end and today the question naturally rises by what means the foreign capital may be attracted, and what business sectors should be promoted? Since the lack of methods and models for formation targeted FDI policy is felt.

The scientists (Wei & Andressa-O'Callaghan, 2008; Torrissi *et al.,* 2008; Pradhan, 2008; Lim, 2008; Miyagiwa & Ohno, 2009; Irsova & Havrenek, 2013), dealing with foreign direct investments, most frequently apply correlation-regression analysis. Unfortunately, the relationship between individual factors and already applicable FDI policy can only be determined regardless of the uncertainty and volatility of the situation. In addition, the application of correlation-regression analysis cannot determine the significance of individual FDI incentives, or in other words, the weight on the entire FDI policy. On the other hand, it can be useful in identifying the individual factors that determine the attraction of FDI and their impact on economic growth. This analysis can be used only as a supporting instrument in formation of FDI policy.

Popular statistical methods (Lim, 2008; Irsova & Havranek, 2013) and expert assessment (Figeuroa & Wood, 2004; Charlton & Davis, 2007; Lim, 2008; Pradhan, 2008; Kersyte, 2010) are used in the investigation of foreign direct investments and their policy.

Irsova and Havrenek (2013), investigating cross-border competitive FDI policy, use script methods, which allow taking into account the uncertainty and volatility of the situation. These methods as well as the Rosenbaum-Rubin method are used for forecasting and can contribute to the methodology of formation of FDI policy.

Miyagiwa and Ohno (2009), analyzing the influence of tax policies on the attraction of FDI, integrate the Markov perfect equilibrium, Cournot-Bernard models and probability theory. It evaluates the long-term and short-term support as well as the business environment, which is measured by the costs needed to start a business, by tax rates and government expenditure for the support of FDI. Harrod-Domar growth model is used in the analysis of foreign capital inflows as well as the benefit of FDI (Chudnovsky *et al.,* 2006). However, these methods also do not provide an opportunity to choose measures and form a comprehensive FDI policy. In practice, governments diversify FDI policy. Thus, the assumption might be aroused that FDI policy consists of different policy components that bear different significance in the entire FDI policy.

One of the best proposed alternatives or some of the best alternatives can be identified by applying qualitative multi-criteria decision-making methods based on specialists' (experts') opinion. For example, qualitative ANP and AHP (*analytic hierarchy process*) methods are widely used in making strategic decisions (Neira *et al.,* 2009; Ergu *et al.,* 2011; Petrillo *et al.,* 2012). Wind and Saaty (1980) use the AHP method in the development and evaluation of a comprehensive marketing strategy.

Kersyte (2010) also suggests using the multi-criteria AHP method in choosing between the alternatives of the strategic investment projects.

While developing the USA energy independence policy, Figeuroa and Wood (2004) apply ANP method and integrate BOCR analysis, which forms the basis for determining the sub-criteria. ANP method is also adapted to the assessment of investment risk and decision making (Ergu *et al.,* 2011). For the composition of criteria system, Azimi *et al.*, (2011) have chosen the SWOT analysis, which is integrated in ANP, and the final ranking is determined by the multi-criteria TOPSIS (*Technique for Order of Preference by Similarity to Ideal Solution*) method. To sum up, the presumption can be made that it is appropriate to apply a multi-criteria decision-making method in formation of FDI policy.

Research methodology

In their empirical study, the authors apply ANP method, which enables to assess not only external but also internal relationships of the components of the same criterion. ANP method is applied at the following stages (Milani *et al.,* 2013):

Stage one. Composition of criteria system (Figure 1), identification of sub-criteria and presentation of alternatives. The criteria system of FDI policy is composed on the basis of SWOT analysis. This structure (Formula 1) is widely used in foreign literature (Dagdeviren & Yuksel, 2011; Babaesmailli *et al.,* 2012; Chena *et al.,* 2012; Sevkli *et al.,* 2012) for making strategic decisions.

$$W = \begin{array}{l} \text{Goal} \\ \text{SWOT criteria} \\ \text{SWOT subcriteria} \\ \text{Alternatives} \end{array} \begin{bmatrix} 0 & 0 & 0 & 0 \\ \widetilde{w}_1 & \widetilde{W}_2 & 0 & 0 \\ 0 & \widetilde{W}_3 & 0 & 0 \\ 0 & 0 & \widetilde{W}_4 & I \end{bmatrix} \quad (1)$$

here $\widetilde{w}_1$ – vector, indicating the impact of the aim on choosing FDI policy; $\widetilde{w}_2$ – matrix, showing the interdependence between the SWOT criteria; $\widetilde{W}_3$ – matrix, showing the impact of SWOT criterion on each SWOT sub-criteria; $\widetilde{W}_4$ – matrix, showing the impact of the SWOT sub-criteria on each alternative; I – identity matrix.

Zero values in the matrix mean that there is no relationship between the elements. In addition, each zero value can be replaced by matrix in the supermatrix if in the criterion group there are internal relationships between the elements or between two criteria groups (Shiu & Lin, 2012). SWOT analysis highlights unique characteristics of Estonia for formation of FDI policy. On its basis, the criteria system consists of four groups: the country's strengths, weaknesses, opportunities and threats. The aim is to create the most suitable FDI policy for the object in question.

Stage two. Identification of index significance through pair-wise comparison and the calculation of priority vector. ANP method is based on the matrix of pair-wise comparison. The 1-9 point scale (Table 1) is used for the pair-wise comparison, where 1 refers to the two factors of equal importance and 9 refers to the other factor of full importance (Saaty, 1980). The elements are evaluated in respect of the aim, and later, sub-criteria are assessed in respect of the aim and with each other by applying the comparative method in each group.

Table 1

Explanation of the pair-wise comparison scale (source: Saaty 1980)

Intensity of importance	Definition	Explanation
1	Equal importance	Two activities contribute equally to the objective;
3	Moderate importance	Experience and judgment slightly favour one over another;
5	Strong importance	Experience and judgment strongly favour one over another;
7	Very strong demonstrated importance	An activity is favoured very strongly over another; its dominance demonstrated in practice;
9	Extreme importance	The evidence favouring one activity over another is of the highest possible order of affirmation;
2,4,6,8	For compromise between the above values	Sometimes one needs to interpolate a compromise judgment numerically because there is no good word to describe it.

The significance of each factor is determined in accordance with the results of expert assessment (Sevkli *et al.,* 2012), i. e. – domination in respect of another. Coefficient a_{ij} signifies the importance of the component *i* (in the row) against the component *j* (in the column).

$$a_{ij} = \frac{w_i}{w_j} \quad (2)$$

After the pair-wise comparisons, the priority vectors *w* are calculated, the matrix A (3) and (4) is formed.

$$A \cdot w = \lambda_{\max} \cdot w \quad (3)$$

$$A = \begin{bmatrix} W_1/W_1 & ... & W_1/W_n \\ ... & ... & ... \\ W_n/W_1 & ... & W_n/W_n \end{bmatrix} = \begin{bmatrix} 1 & ... & a_{1n} \\ ... & ... & ... \\ 1/a_n & ... & 1 \end{bmatrix} \quad (4)$$

Where *A* – pair-wise comparison matrix; $\lambda_{\max}$ – vector of the maximum matrix *A*; *w* – eigenvector.

Stage three. The compatibility index *CI* (5) and compatibility ratio *CR* (6) are calculated, which describe the validity of the model.

$$CI = (\lambda_{\max} - n)/(n-1) \quad (5)$$

$$CR = \frac{CI}{RI} = \frac{(\lambda_{\max} - n)/(n-1)}{RI} \quad (6)$$

RI – Average index of random size based on the size of the matrix; *n* – number of factors (Saaty, 2005).

When the value of compatibility ratio *CR* is lower than 0,1, the matrix is compatible. If matrix compatibility test fails, the incompatible elements should be identified and reviewed, otherwise the final results will be unreliable (Ergu *et al.,* 2011).

Stage four. Development of supermatrix, whose conception is similar to the Markov chain process (Sevkli *et al.,* 2012). The weights in the supermatrix show the interactions in the system.

Stage five – selection of alternatives. The following four alternatives are proposed for the formation of a comprehensive FDI policy: FDI policy focused on the R&D (*Research and Development*) sector; FDI policy focused on the service sectors; FDI policy focused on the manufacturing sectors; FDI policy focused on the attraction of multinational corporations, whose investment motive is export. The proposed criteria system is universal; therefore the number of alternatives may change depending on the situation.

In order to make the final decision, the following five synthesis methods are applied (Lee *et al.,* 2009): additive (7), probabilistic additive (8) subtractive (9), multiplicative (10), and multiplicative method of raising priorities to power (11).

The synthesis of additive methods is calculated in accordance with the following formula:

$$P_i = sS_i + oO_i + w[(1/W_i)_n] + t[(1/T_i)_n] \quad (7)$$

For probabilistic additive methods:

$$P_i = sS_i + oO_i + w(1-W_i) + t(1-T_i) \quad (8)$$

For subtractive method:

$$P_i = sS_i + oO_i - wW_i - tT_i \quad (9)$$

For multiplicative method of raising priorities to power:

$$P_i = S_i^s O_i^o [(1/W_i)_n]^w [(1/T_i)_n]^t \quad (10)$$

For multiplicative method:

$$P_i = S_i O_i / W_i T_i \quad (11)$$

where S_i, O_i, W_i, T_i – results of each alternative *i* synthesis in respect of each criterion, *s, o, w, t* – weights of normalized SWOT criteria.

Case analysis and interpretation of the results

By setting the criteria, which are referred to in defining the effectiveness of FDI policy and significance of indices, the expert assessment is carried out. The expert group consists of the researchers from the Baltic countries and representatives from the investment promotion agencies (Table 2). After the expert assessment, the matrix compatibility indices are calculated, the compatibility of expert opinions is determined and the significance of indices as well as their weights are calculated. Recommendations for FDI policy are presented in the case of Estonia.

Table 2

Description of criteria and sub-criteria in Estonia's case (compiled by the authors)

Criterion	Component of the criterion	Description
Strengths	Business environment	Favourable tax system, low levels of corruption, flexible labour regulation system, easy business start-up procedures;
	People	Highly qualified, low-cost and highly motivated labour force, modern, tolerant and open-minded;
	Macroeconomic stability	Rapidly growing economy, the country that is the least affected by the international crisis among the Baltic countries, satisfactory management of public finances, adoption of the euro during the critical period;
	Infrastructure	Well-developed infrastructure in Tallinn, satisfactory connections with the Scandinavian countries, Russia and the Baltic countries;
	Knowledge - based economy	The 12th place in the world according to the development of innovations, most of investors are attracted to ICT (*Information and Communication Technologies*) and financial sectors, the 6th place in the world according to the Internet speed level, 36 % of companies install innovations. R&D promotion strategy is being implemented, 6 technological valleys are under operation;
	International competitiveness	Image program is formed, the investment promotion measures are developed, the companies with famous brands are attracted;
Weaknesses	Market	The smallest market among the Baltic countries;
	Labour force	Small population limits the opportunities to find highly-qualified employees, increasing emigration and declining population, low labour productivity;
	Research and Innovation System	R&D strategy is focused exclusively on the public sector and foreign capital. Only 20 %t of scientists with a PhD in applied sciences, the traditional business sectors do not use the services of research institutions for the installation of innovations, low level of business licence registration;
	State regulation	Strict environmental regulation requires large investments;
	Dependence on the Scandinavian region	Particularly high dependence in the financial sector;
Opportunities	Promotion of science-and-innovation-intensive sectors	Cooperation between educational institutions and enterprises, takeover of technologies, clusterisation, development of technological centres and improvement of quality;
	Specialised services sector	IT, ICT, finance, tourism sectors;
	Promotion of export	The export of goods and services with high added-value;
	Addressing labour market problems	Students are encouraged to choose specialties associated with the targeted sectors of the country, migration is facilitated for professionals from third countries, emigrated citizens are encouraged to return;
	Increasing the productivity of traditional sectors	Amalgamation and acquisition of enterprises, modernization of technological systems, raising the employees' qualification or retraining of employees;
Threats	Competition regarding FDI	Competition growth in the ICT and financial services sector from rapidly developing countries, expenditure growth by reducing competition in individual sectors;
	Growing shortages of labour force	Narrow specialization will increase shortages of employees in other sectors;
	Dependency on foreign capital	Technological dependency and the country's growth dependency on FDI as a source of external financing, the emergence of new interest groups, MNC influence on governmental decisions. Entrenchment of foreign capital monopolies;
	Regional dependency	Regional specialization of FDI policy (in the Scandinavian countries) determines a high level of economic dependency on the economic situation of investors' country
	Decline in the competitiveness of traditional business branches	Narrow sectoral specialization and lack of labour force reduce the productivity and competitiveness of traditional business branches, as well as growth of the business branch.

The results (Figure 1) convey that in the case of Estonia, the most significant criteria for the development of FDI policy are strengths and opportunities. The conclusion can be drawn that the formation of FDI policy should focus on the opportunities criteria. The takeover of the international technological leadership as well as the promotion of science-and-innovation-intensive sectors are distinguished from the latter criteria. The core strength – knowledge economy – supposedly has the greatest influence on it. However, the two weaknesses – the research and innovation system and the labour force – may prevent from implementing these possibilities.

In any case, the significance of threats criteria group is greater than of weaknesses, among which the threat of foreign capital is very evident.

In the case of Estonia, almost even distribution among FDI policy focused on the production, export and services is observed. The orientation of investments towards knowledge-intensive sectors and high technologies should be a priority. In the evaluation of alternatives in respect of strengths (Table 3), the attraction of investments to R&D

and exports would bring the same benefits; however, in respect of opportunities (Table 4), FDI policy focused on R&D is second after the exports.

For Estonia, the biggest threats would be the implementation of FDI policy (Table 5) focused only on manufacturing sectors. The biggest threat is the lack of specialization sector. Estonia may lack the targeted qualified labour force. This could be avoided by focusing on certain sectors, later – in order to maintain the desired level of the labour force, by encouraging students to choose specialties associated with the targeted sectors of the country, facilitating migration for professionals from third countries and encouraging emigrated citizens to return.

However, by developing the service sectors, such as finance, Estonia becomes dependent on one region, i. e. the Scandinavian foreign capital. In case of crisis in the Scandinavian countries, Estonian economy would suffer huge losses. Because of the decline of FDI in manufacturing sectors, the threat of digression or total decay of traditional business branches would appear.
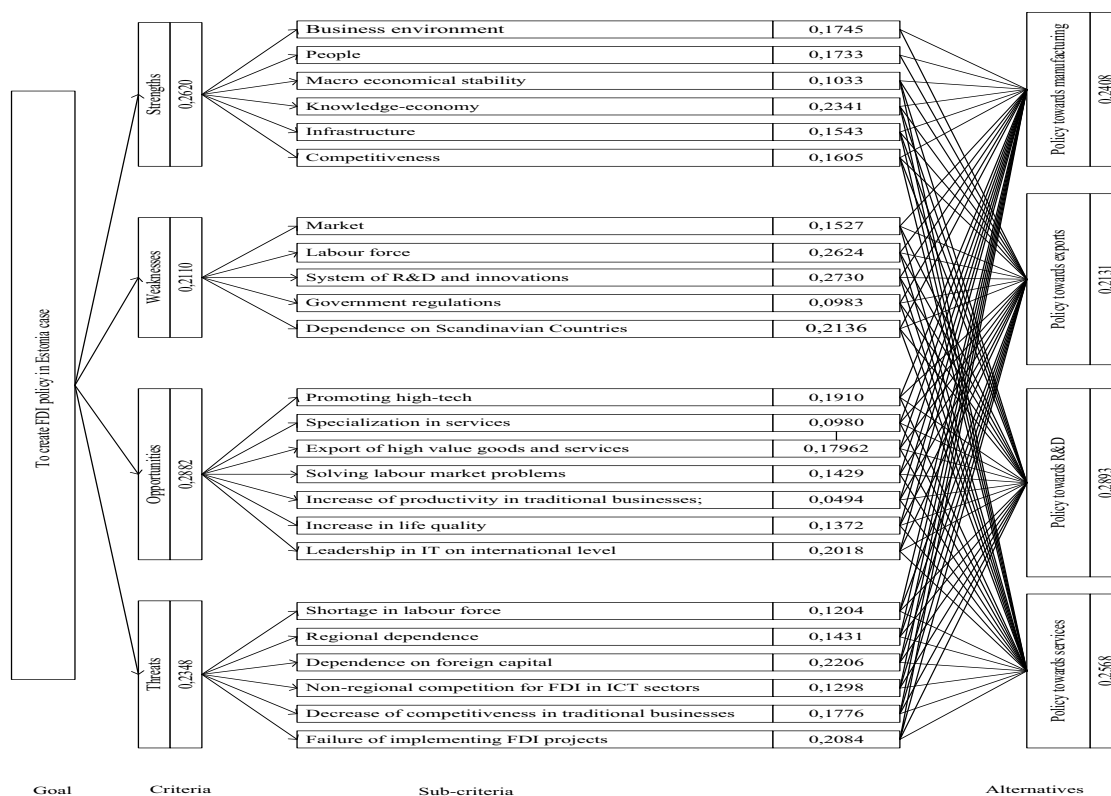
Figure 1. Weights of criteria and subcriteria in SWOT analysis in respect of FDI policy: Estonia's case (compiled by the authors)

Table 3

Pair-wise comparison and priorities determination considering strengths (compiled by the authors)

	A1 Policy focused on manufacturing	A2 Policy focused on export	A3 Policy focused on R&D	A4 Policy focused on services	Priority	Rank
A1 Policy focused on manufacturing	1.0	1/2	1/4	1/2	0,115	4
A2 Policy focused on export	2.0	1.0	1.0	2.0	0,327	1,2
A3 Policy focused on R&D	4.0	1.0	1.0	1.0	0,327	1,2
A4 Policy focused on services	2.0	0.5	1.0	1.0	0,231	3

Table 4

Pair-wise comparison and priorities determination considering opportunities (compiled by the authors)

	A1 Policy focused on manufacturing	A2 Policy focused on export	A3 Policy focused on R&D	A4 Policy focused on services	Priority	Rank
A1 Policy focused on manufacturing	1.0	1.0	1/2	1/2	0,176	4
A2 Policy focused on export	1.0	1.0	1.0	2.0	0,298	1
A3 Policy focused on R&D	2.0	1.0	1.0	1.0	0,281	2
A4 Policy focused on services	2.0	1/2	1.0	1.0	0,245	3

Table 5

Pair-wise comparison and priorities determination considering threats (compiled by the authors)

	A1 Policy focused on manufacturing	A2 Policy focused on export	A3 Policy focused on R&D	A4 Policy focused on services	Priority	Rank
A1 Policy focused on manufacturing	1.0	2	2	1.0	0,340	1
A2 Policy focused on export	1/2	1.0	1/2	1/2	0,140	4
A3 Policy focused on R&D	1/2	2.0	1.0	1.0	0,239	3
A4 Policy focused on services	1.0	2.0	1.0	1.0	0,281	2

In addition, a strong knowledge-based economy promotes the cooperation of scientific institutions and enterprises, clusterization and development of technology centres and also improves their quality.

Knowledge-based economy– as the utilization of Estonian strength – may serve to attract FDI to the sectors of high and medium technologies.

On the basis of initial results, Estonia should appoint (Table 6) 30,9 % of investments to FDI focused on the attraction of R&D sectors, 24 % – to FDI focused on the export, 23,7 % – to FDI focused on the services and 21,3 % – to the manufacturing sectors in order to attract qualitative FDI and to maintain the long-term positive impact.

Table 6

Synthesis (compiled by the authors)

FDI policy type (alternative)	Normalized	Idealized	Raw	Rank
A1 Policy focused on manufacturing	0,2126	0,6861	0,0540	4
A2 Policy focused on export	0,2402	0,7752	0,0610	2
A3 Policy focused on R&D	0,3099	1,0000	0,0786	1
A4 Policy focused on services	0,2372	0,7655	0,0602	3

After the performance of synthesis for making the final decision, the evaluations show that the alternatives have shifted. Therefore, after the recalculation of the significances of the FDI policy, it can be observed that even 28,93 % of allocations should be appointed to the incentives to attract FDI focused on R&D, 25,68 % should be appointed to FDI focused on the services, 24,08 % - to FDI focused on the manufacture, and 21,31 % – to FDI focused on the export. Although, after the repeated synthesis (Table 7), FDI ranks are shifted. The alternative distribution suggests that Estonia might to achieve a long-term positive impact of FDI on the economic development by directing FDI to the knowledge-intensive services, high-tech and medium-tech sectors.

Table 7

Final synthesis of priorities of alternatives (compiled by the authors)

Synthesis method / Alternative	Additive	Probabilistic additive	Subtractive	Multiplicative method of raising priorities to power	Multipli-cative	Initial synthesis	Average
	Priority	Priority	Priority	Priority	Priority	Priority	Priority
Policy focused on R&D	0,3674	0,5982	0,0162	0,2292	8,4779	0,3099	1,6665
Rank	**1**	**1**	**3**	**3**	**1**	**1**	**1**
Policy focused on export	0,1839	0,4319	0,0251	0,2420	0,5000	0,2372	0,2700
Rank	4	4	2	1	4	3	4
Policy focused on services	0,3160	0,5647	-0,0125	0,2417	4,3151	0,2402	0,9442
Rank	2	2	4	2	2	2	2
A4 Policy focused on manufacturing	0,2321	0,4870	0,1061	0,2280	1	0,2126	0,3776
Rank	3	3	1	4	3	4	3

The following priority sectors can be distinguished from the target sectors: electronics, software, business services, and ICT. These sectors require highly skilled labour force. The products of all sectors can be exported. Thus, FDI policy proposed to Estonia would serve its purpose. The distribution of the specific incentives is given. SWOT analysis conducted during the research and identified integrated components of FDI policy demonstrate that Estonia has a high potential to attract export-oriented MNC, which tend to invest in high-tech and medium-tech sectors.

By successfully developing a knowledge-based economy, Estonia creates opportunities for the development of high-tech and medium high-tech sectors as well as knowledge-intensive sectors. It can be stated that formation of targeted FDI policy for Estonia results in the overlap of alternatives. For example, FDI policy focused on R&D and FDI policy focused on services across the entire integrated FDI policy are equally supported. It is obvious that Estonia has the opportunity to develop knowledge-intensive services.

Conclusions

The issue of direct investment has been intensively analysed since the sixties. At that time, only positive impact of FDI on the state has been perceived. Over time, the foreign literature brought up the issue of attraction of FDI. However, this issue is not particularly examined by the Baltic investigators, the reasons for FDI promotion are being determined and the benefit of foreign capital is being examined in one way or another. One may notice the lack of analysis how to use strengths and weaknesses of its own country and how to develop targeted FDI policy which would provide a long-term benefits for the economic development. The authors raise the question how to attract targeted FDI inflows.

When selecting a method for the formation of FDI policy, another problem arises: the methods based on correlation-regression analysis are frequently applied in the literature. This analysis is helpful in assessing the relationships between the individual factors; however, it does not allow determining the complex components of FDI policy. The authors assume that FDI policy is characterised by multi-criteria, therefore one of the qualitative multi-criteria methods – ANP – has been chosen for an empirical study. It was chosen because of the

fact that, using this method, not only the effect of a criterion or sub-criterion but also the relationships between the sub-criterion are assessed. The criteria system is based on SWOT analysis. The authors propose the following alternatives for FDI policy: FDI policy focused on the service sectors; FDI policy focused on the export promotion; FDI policy focused on R&D and FDI policy focused on the manufacturing sectors.

The research results show that the formation of Estonian FDI policy is mostly influenced by its strengths and opportunities. One of the main weaknesses is the research and innovation system, which may prevent from the attraction of FDI in knowledge-intensive sectors. However, a repeated synthesis highlighted Estonia's potential to successfully attract FDI and to exploit them in the knowledge-intensive services, high-tech and medium-tech sectors. That would bring a long-term positive impact of FDI on the economic development. The proportions of each alternative have been determined and integrated in the common FDI policy by applying the multi-criteria method, i. e. ANP: 25,68 % of allocations should be appointed to FDI focused on the export, 21,31 % – to services. FDI in manufacturing sectors should comprise 24,08 %, and the innovation sectors should attract 28,93 % of all FDI.

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Tiesioginių užsienio investicijų politikos formavimas: Estijos atvejis

Santrauka

Tarptautinio kapitalo judėjimas yra vienas svarbiausių ekonominių reiškinių ir tarptautinių kompanijų naujų rinkų išorinio finansavimo šaltinių. Tiesioginių užsienio investicijų (TUI) svarba nagrinėjama jau nuo praėjusio amžiaus aštuntojo dešimtmečio. Tuomet įžvelgtas tik teigiamas TUI poveikis valstybei. Laikui bėgant, užsienio literatūroje iškeliama tikslingo TUI pritraukimo problema. Tačiau šis klausimas Baltijos šalių tyrėjų darbuose iki šiol dar nėra pakankamai nagrinėjamas. Dažniausiai analizuojamos tiesioginės užsienio investicijas skatinančios priežastys bei aiškinamasi dėl vienų ar kitų užsienio kapitalo naudos aspektų. Todėl vis dar pasigendama analizės, kaip išnaudoti savo šalies privalumus ir trukumus ir suformuoti tikslingą tiesioginių užsienio investicijų politiką, kuri duotų ilgalaikę naudą šalies ekonomikos plėtrai.

TUI nauda yra neabejotina, nes tai yra vienas šalies išorės finansavimo šaltinių, kuris yra ypač aktualus kylančios ekonomikos ar pereinamojo laikotarpio valstybėms. Svarbia tampa ne tik TUI pritraukimo, bet ir tikslingo užsienio kompanijų integravimosi į rinką bei lėšų panaudojimo problema. Tačiau beatodairiškai pritraukti užsienio kapitalą yra pavojinga, nes tai, šaliai šeimininkei, gali duoti daugiau žalos negu naudos. Todėl straipsnyje gvildenama tikslingo užsienio kapitalo pritraukimo problema Estijos atveju. Analizuojama, kokia turėtų buti šios šalies tiesioginių užsienio investicijų politika ir kokios tiesioginės užsienio investicijos Estijai butų naudingiausios.

Parenkant tiesioginių užsienio investicijų politikai formuoti metodą, išryškėja dar viena problema: literatūroje dažniausiai taikomi metodai grįsti koreliacine-regresine analize. Remiantis koreliacine-regresine analize galima įvertinti atskirų veiksnių ryšius, tačiau neįmanoma nustatyti kompleksinės TUI politikos dedamųjų. Daroma prielaida, kad tiesioginių užsienio investicijų politikai būdingas daugiakriteriškumas, todėl empiriniam tyrimui atlikti pasirinktas vienas iš kokybinių daugiakriterių metodų – ANP.

ANP metodas pasirinktas todėl, kad, naudojant šį metodą, įvertinamas ne tik kriterijų ar subkriterijų poveikis, bet ir subkriterijų tarpusavio sąryšiai. Be to, ANP metodas sudaro galimybę įvertinti ne tik išorinius, bet ir vidinius to paties kriterijaus dedamųjų sąryšius. ANP metodas pritaikomas penkiais etapais. Pirmajame etape konstruojama kriterijų sistema, indentifikuojami subkriterijai ir pateikiamos alternatyvos. TUI politikos kriterijų sistema sudaroma SSGG analizės pagrindu. Kriterijų sistemą sudaro keturios grupės: šalies stiprybės, silpnybės, galimybės ir grėsmės. SSGG analize išryškinamos Estijos unikalios savybės TUI politikai formuoti. *Tyrimo tikslas* – sukurti nagrinėjamam objektui tinkamiausią tiesioginių užsienio investicijų politiką. Antrajame etape, porinio palyginimo metodu, nustatomas rodiklių reikšmingumas ir apskaičiuojami prioritetiniai vektoriai bei ekspertinio vertinimo rezultatais nustatomas kiekvieno faktoriaus reikšmingumas. Trečiajame etape apskaičiuojamas suderinamumo indeksas bei suderinamumo koeficientas, kuris nusako modelio pagrįstumą. Ketvirtajame etape sudaromos supermatricos, kurių svoriai parodo tarpusavio sąveiką sistemoje. Penktajame etape – parenkamos alternatyvos. Kompleksinei tiesioginių užsienio investicijų politikai formuoti siūlomos keturios alternatyvos: TUI politika, orientuota į MTEP sektorius; TUI politika, orientuota į paslaugų sektorius; TUI politika, orientuota į gamybinius sektorius; TUI politika, orientuota pritraukti daugianacionalines koorporacijas, kurių investavimo motyvas – eksportas. Galutiniam sprendimui priimti naudojami penki sintezės metodai: adityvus, tikimybinis adityvus, subtraktyvus, multiplikatyvus ir multikatyvus prioritetų kėlimo laipsniu metodas.

Nustatant kriterijus atliekamas ekspertinis vertinimas. Ekspertų grupę sudaro tyrėjai iš Baltijos šalių ir investicijų skatinimo agentūrų atstovai. Atlikus ekspertinį vertinimą, apskaičiuojami matricų suderinamumo indeksai, nustatomas ekspertų nuomonių suderinamumas bei apskaičiuojamas rodiklių reikšmingumas ir jų svoriai bei pateikiamos tiesioginių užsienio investicijų politikos rekomendacijos Estijos atveju.

Analizės rezultatai įrodo, kad Estijos tiesioginių užsienio investicijų politikos formavimui didžiausią įtaką turi jos stiprybės ir galimybės. Sprendžiant iš alternatyvų išsidėstymo, galima daryti išvadą, jog Estija, nukreipdama TUI į žinioms imlius paslaugų, aukštųjų ir vidutiniškai aukštų technologijų sektorius, pasiektų ilgalaikį teigiamą TUI poveikį ekonomikos plėtrai. Iš tikslinių sektorių galima išskirti prioritetinius elektronikos, programinės įrangos, verslo paslaugų bei IRT sektorius, kurie reikalauja aukštos kvalifikacijos darbo jėgos. Visų šių sektorių produktai gali buti eksportuojami. Todėl siūloma TUI politika Estijai pasiteisintų. Tyrimo metu atlikta SSGG analizė bei nustatytos integruotos TUI politikos dedamosios įrodo, kad Estija turi aukštą potencialą pritraukti į eksportą orientuotas MNC, investuojančias į aukštųjų ir vidutinių technologijų sektorius. Tuo pagrindu daroma išvada, kad Estija turi galimybių plėtoti žiniomis imlias paslaugas.