

EUROPEAN UNION INVESTMENT IN THE BALTIC STATES: COMPARATIVE ANALYSIS

Janina Endriukaitienė¹, Vilma Linkevičiūtė², Valdemaras Makutėnas³, Lina Paliulienė⁴

¹Lecturer at Kaunas University of Applied Sciences, Lithuania, E-mail address: janina.endriukaitiene@go.kauko.lt

²Associate Professor at Kaunas University of Applied Sciences, Lithuania, E-mail address: vilma.linkeviciute@go.kauko.lt

³Associate Professor at Kaunas University of Applied Sciences, Lithuania, E-mail address: valdemaras.makutenas@go.kauko.lt

⁴Lecturer at Kaunas University of Applied Sciences, Lithuania, E-mail address: lina.paliuliene@go.kauko.lt

Received 10 02 2022; Accepted 18 02 2022

Abstract

The article analyses determinants of foreign investment based on EU Cohesion Policy instruments. The research problem outlines the determinants of attracting EU investment in the Baltic states. The aim of this article is to compare EU investment in the Baltic states. SPSS software has been used for statistical surveys. The model of multiple progression has been developed for identifying the influence of investment environment factors on EU investment in the Baltic states. This methodology may be applied in the countries that seek to attract EU investment. The research has found that the market size, average salary and tax burden have a major influence on EU investment.

Keywords: *The Cohesion Fund, foreign investment, EU investment, macroeconomic determinants, investment environment.*

JEL Codes: *E22, F21.*

Introduction

EU action is based on Article 174 of the Treaty on the Functioning of the European Union: “In order to promote its overall harmonious development, the Union shall develop and pursue its actions leading to the strengthening of its economic, social and territorial cohesion” (<https://eur-lex.europa.eu/>). The Cohesion Fund provides at least 50 per cent of the state investment in the majority of EU countries – otherwise these Member States would not have the financial capacity to make such investment.

The Cohesion Fund helps to achieve goals in the fields that are important for European citizens – regional aid aimed at adapting to globalisation challenge, job

creation for 420,000 people, EUR 1.1 million support to small and medium-sized enterprises (SMEs), solution to the problem of poverty in the cities. Investment in such areas as low carbon economy, sustainable urban development and regional cooperation have a significant added value from the Cohesion Fund.

The principle of thematic concentration is maintained in the Cohesion Fund Regulation and the most important priorities are as follows: innovation, digital economy and SMEs support which is provided by applying smart specialisation strategy; low carbon and circular economy in accordance with joint commitment to allocate 25 per cent of EU spending on

climate change policy targets (<https://www.esinvesticijos.lt>).

Foreign investment is one of the main forms of international capital movement. Foreign investment is an investment which establishes long-term relationships between the direct investor and investment enterprise, and which grants the direct investor a significant right to the enterprise management. One of the key conditions for the investment to be classified as foreign investment are different countries of origin of the investment enterprise and the investor (Šlėderytė, Montvilaitė, 2015).

Foreign investment is necessary to establish a long-term interest and new relationships, providing a particular economic, social, cultural, technological or other result which could be beneficial for personal and public goals (Danilevičienė, Lukšytė, 2017). In many countries, investment plays a vital role in economic growth because it attracts investors who develop economy and improve the quality of human resources (Simionescu, Naros, 2019). Shafiq et al (2021) state that investment is extremely significant for the economy of developing countries because it encourages economic growth. Foreign investment is beneficial for various sectors: education, public health, manufacturing industry; moreover, investment also creates more jobs. Many countries reform their tax policies by introducing tax advantages for investment and tax exemption for investors in order to attract foreign investment. According to Alfaro (20, 17), foreign investment is an essential part of economic growth and globalisation of finance because it attracts foreign capital, advanced technologies and improves management skills.

Assuming that foreign investment stimulates economic growth, it is important to increase foreign investment flows to the countries that raised less investment. For this reason, the theoretical analysis of foreign investment determinants has been conducted. Determinants of foreign investment is not a new topic in economic research. According to Camposo, Kinoshita (2008), determinants of

foreign investment may be classified into two groups. One group includes internal factors, e.g. the size of the enterprise, the intensity of research and experiments. The analysis of these factors helps to answer the question – what encourages the enterprise to invest abroad. Another group consists of external factors – the advantage of the host country: market size or labour cost. The analysis of external factors answers the question – what attracts foreign investment to the country. In scientific literature (Artige and Necolini, 2005; Campos and Kinoshita, 2008), external factors are defined firstly referring to comparative advantage of the host country. Enterprises decide to invest abroad in order to reduce production costs. The size of local market and relative cost of such production factors as labour cost, result in expected investment yield. Enterprises frequently invest abroad in order to acquire additional segments of the market. New market, its size, potential growth rates help to ensure profit level and expansion of activities (Egger, 2011).

Gholami, Lee, Heshmati (2006) state that the majority of governments think that foreign investment results in economic growth; therefore, they set the aim to attract greater investment as one of their main strategic objectives. The authors identify the main factors for attracting investment: gross domestic product, the country's infrastructure, the quality of human capital, low salaries, natural resources, political stability. However, the scholars emphasise that the latter factors are no longer significant due to the changes that have taken place because in the future new information and communication technologies will become the main investment attracting factor.

According to Blonigen (2005), the fundamental macroeconomic determinants, underlying investment flows to the country, include the country's economic situation (notably growth), exchange rate, market size, taxation, benefits, etc. Cheap currency of the country may lead to increase in foreign

investment, whereas expensive currency will act as a factor decreasing investment attractiveness. Tax advantages reduce production costs; therefore, many states use this factor in foreign investment attraction strategies.

After the research into determinants of foreign investment, Hoang, Bui (2015) found that market size, trade openness, quality infrastructure, human capital, labour productivity are the key macroeconomic determinants having a positive impact on investment inflows. Exchange rate policy, real interest rates, political risk and corruption also have an impact on investment flows. Cheap labour does not help to attract foreign investment because foreign investors are particularly interested in labour productivity and are willing to pay higher salaries in order to achieve higher labour productivity. These authors claim that although market size is one of the key determinants of attracting foreign investment, small countries, having small markets, may also attract investment. Political environment is crucial in this case. Political stability and corruption control are two key factors aimed at minimizing political risk and uncertainty for foreign investors. According to Belgibajeva and Plekhanov (2019), investment flows will be larger between the countries which control corruption successfully. Moreover, if corruption control improves in investing countries, investment flows from these countries increase rather than from those where corruption is more frequent. Thus, the aim to acquire higher investment from low corruption countries may further reinforce economic and political institutions that control corruption in the countries having a higher level of corruption.

To sum up the results of scientific research into macroeconomic determinants, resulting in investment flows to the country, it can be stated that many authors treat market

size as a crucial macroeconomic determinant. Furthermore, the level of country's openness, labour cost (average monthly salary), privatisation, foreign trade restrictions, policies to attract investment when countries stand out in relation to higher foreign trade openness and fewer investment restrictions are also classified as important macroeconomic determinants.

Connections with other countries are important for foreign investors. The Baltic states have a favourable geographical location because they are located in Central Europe; thus, they become a bridge between Western and Eastern countries. Furthermore, it is important for investors to easily access their subsidiary from abroad. Investors in manufacturing also emphasise the importance of infrastructure and logistics. Lithuania, Estonia and Latvia have a particularly well-developed logistics sector, ice-free ports provide a huge advantage in the field of transport operations and in trade with other maritime nations. Technological development of the country is of crucial importance for investors who are focused on IT sector. The Baltic states are in the growth phase with respect to information technologies (Lukoševičiūtė, Martinkutė-Kaulienė, 2016).

Attractive environment for investment in the Baltic states is influenced not only by a favourable geographical location, well-developed sector of logistics and information technologies, but also by economic growth, low production costs, attractive salaries. If to compare the Baltic states in relation to accrued foreign investment, based on per capita income (UNCTAD, 2020), Estonia significantly stands out: in 2019 foreign investment per capita index in Estonia was 2-3 times higher than in Latvia and Lithuania and represented EUR 18.5 thousand. In Latvia and Lithuania foreign investment per capita represented respectively EUR 8.5 thousand and EUR 6.7 thousand.

Estonia attracted the largest investment within the period of analysis; however, its GDP is the lowest (World Bank, 2020), but foreign investment per capita has been the highest in Estonia since 1995.

EU investment plays a crucial role in foreign investment. In 2010-2020, European Union financial assistance was a significant source of investment in the Baltic states representing approximately 4 per cent of GDP per annum in the countries. EU investment in the Baltic states was four times higher in comparison to payments made by the countries to the EU budget in the same period of time. EU investment was allocated to job creation.

In 2020, Lithuania ranked the second in Europe in terms of job creation for 1 million residents (15 jobs for 1 million residents, 4989 jobs in total), Latvia ranked 5th (11 jobs for 1 million residents), Estonia ranked 30th (1 job for 1 million residents). In 2020, in terms of the number of completed projects for 1 million residents, Latvia gained the highest position among the Baltic states (4th place in Europe, 22 projects for 1 million residents, the total number of completed projects – 43), Lithuania ranked 6th (19 projects for 1 million residents), Estonia ranked 15th (9 projects for 1 million residents). According to a new seven-year budget plan approved by the European Commission, EU investment in the Baltic states will further increase. The Baltic states will receive investment from the following European Structural and Investment Funds: the European Regional Development Fund, the European Social Fund, the Cohesion Fund, the European Agricultural Fund for Rural Development, the European Maritime and Fisheries Fund. The aim of all these funds is to invest in job creation, sustainable and strong economy, and sustainable and healthy environment. Moreover, the Baltic states will also receive investment from the EU Recovery Fund which is a temporary measure aimed at post-pandemic recovery of Europe (EY Building a better working world, 2021).

Market size is one of key factors distinguished in scientific research and is defined in relation to the population of each country. Therefore, Lithuanian market size is the biggest in relation to population and it is the smallest in Estonia. However, a general trend indicated that in 1995-2020 the population of the Baltic states had been decreasing. In 2020, the population of Estonia was 1.331 million (1.335 million in 2010), the population of Latvia was 1.902 million (2.142 million in 2010), the population of Lithuania was 2.779M (3.1 million in 2010) (Eurostat, 2020).

Rapid development of economy in Lithuania, Latvia, Estonia within the period of analysis enabled an increase in *monthly salary* and; hence, disposable income of residents; therefore, prudent growth of monthly salary was detectable in all three Baltic states in 1995-2020 (EY Building a better working world, 2021). Compared with 1995, monthly salary in Lithuania, Latvia, Estonia in 2020 increased almost tenfold: EUR 1381 in Lithuania in 2020 (EUR 139.0 in 1995), EUR 1213 in Latvia (EUR 127.0 in 1995), EUR 1489 in Estonia (EUR 151.8 in 1995). The highest salary is in Estonia between the countries under analysis. One of the reasons could be the fact that Estonia has more flexible labour market system and constantly improves it. The economic activity of Estonia is aimed at the most advanced fields (green energy production, development of higher-value added, etc.) that enables the country to increase its competitiveness annually and to encourage foreign investment.

EU investment also depends on the size of *tax burden* which is calculated as GDP percentage of production and import taxes. Tax burden is one of criteria in choosing a place for establishing and developing multinational organisations. Lower tax burden for foreign investors acts as an incentive to invest in that country. According to the European Commission (2019), in 2018, tax burden was the lowest in the Baltic states in comparison to the EU average.

In terms of tax burden criterion Lithuania ranked the 26th out of 28 EU states, Latvia – 24th, Estonia – 19th. In 1995-2020, tax burden was increasing in the Baltic states and the rate fluctuated at 30 per cent on average (Europos Komisija, 2019).

The analysis of selected macroeconomic determinants, influencing EU investment, shows that Estonia's position is the best. This country pursues coherent foreign investment promotion policy; thus, it manages to attract the biggest investment flows to the country's economy.

The aim of this article is to investigate the determinants of attracting EU investment in the Baltic states. SPSS software has been used for statistical surveys.

Methodology

The model of multiple linear regression (MLR) is frequently used in macroeconomic calculations and aims at assessing the impact of each variable individually, and at assessing their impact as a whole on the dependent variable, in this case, on EU investment in the country. The following, quantifiable, independent, scientifically based variables have been included in MLR model:

- 1) market size (population), units,
- 2) average monthly salary, EUR,
- 3) tax burden (GDP percentage of production and import taxes).

The sample of observations includes 18 observations (n=18). The number of observations has been chosen in accordance with the rule that the number of variables, included in the model, has to be 6-7 times lower than the number of observations.

In this research, each variable, included in regression model, is a subject to specific requirements:

1. Variable has to be quantifiable.

2. Variables should not be correlated with each other, especially on the basis of functional dependency.

The first requirement is assessed in the preliminary analysis of correlation matrix, the second one – in the assessment of multicollinearity's existence.

If variables correlate with each other, it is impossible to assess the individual impact of each of them on the dependable variable.

Based on the calculations of linear correlation coefficient, insignificant correlation coefficients are determined in accordance with Student's t-test and they are eliminated from correlation matrix. In the analysis of correlation relationship, correlation is statistically significant when the measured *p*-value (observational level of significance) is lower than the selected level of significance α .

The results are normally considered to be reliable when $\alpha = 0,05$ which means that there is less than 5 percent probability that calculated difference was merely a coincidence (Čekanavičius, Murauskas, 2014; Bekešienė, 2015).

Multicollinearity is determined following these methods:

- variance inflation factor (VIF),
- tolerance.

Variance inflation factor of variable X_j is calculated in the following way:

$$VIF_j = \frac{1}{1 - R_j^2} \quad (1)$$

If a condition $VIF_j > 4$ is valid, variable X_j is multicollinear (a strong correlation). Instead of VIF tolerance, which is an index expressed in terms of the latter, may be used. Tolerance of variable = $1/VF$. It is wrong when tolerance $< 0,25$. The problem of multicollinearity may be solved when one of related variables is eliminated.

It is also important to assess autocorrelation, i.e. to investigate if the variable is related to the preceding one, if remaining errors of different observations correlate. **Durbin-Watson (DW) test** is applicable for checking autocorrelation between variables. If Durbin-Watson test is between 1,5-2,5, it is assumed that autocorrelation is not present.

Research results

After MLR model for the impact of investment environment determinants on the

assessment of EU investment in **Lithuania** has been developed, it has been identified that two variables of the model (market size, tax burden) are statistically significant ($p < 0,05$), whereas average monthly salary is insignificant ($p = 0,969 > 0,05$) (see Table 1). Following the assessment of tolerance and variance inflation factor (VIF), it has been identified that two variables of the model (market size, average monthly salary) are over-multicollinear; therefore, it is impossible to assess the impact of each of them on EU investment in the country.

Table 1. The assessment of initial relationship between accumulated EU investment in Lithuania and the relevance of EU investment determinants

Estimator values of multiple linear regression model $EU\ investment = f(\text{market size, average monthly salary, tax burden})$						
$r = 0,987$ $r^2 = 0,974$ Adjusted $r^2 = 0,967$ Durbin-Watson test (1,736) F (49,133) p (0,000)						
Determinants	Coefficient b	Beta	Value of Student's-t test	p value	Tolerance	VIF
Constant	68015,172		4,951	0,000		
Market size	-0,021	-1,031	-5,122	0,000	0,054	18,601
Average monthly salary	0,189	0,008	0,040	0,969	0,061	16,463
Tax burden n=18	257,963	0,151	2,451	0,031	0,573	1,744

MLR model is the most appropriate for prediction only if all independent variables do not correlate with each other, and if merely they and dependent variable are dependence related. Therefore, statistically insignificant variable –

average monthly salary is eliminated from the model, then the variables of MLR model become statistically significant and do not correlate with each other. New multiple linear regression model with the following variables is developed (see Table 2).

Table 2. The assessment of relationship between accumulated EU investment in Lithuania and the relevance of EU investment determinants

Estimator values of multiple linear regression model $EU\ investment = f(\text{market size, tax burden})$						
$r = 0,987$ $r^2 = 0,974$ Adjusted $r^2 = 0,97$ $d_u(1,696) < d(1,739) < 4 - d_u(2,465)$ $F_{\text{statistics}}(242,308) > F_{\text{critical}}(3,1599)$ $p = 0,000 < 0,05$						
Determinants	Coefficient b	Beta	Value of Student's-t test	p value	Tolerance	VIF
Constant	68547,023		21,619	0,000		
Market size	-0,021	-1,038	-21,198	0,000	0,838	1,194
Tax burden n=18	260,321	0,152	3,112	0,008	0,838	1,194

Following the analysis of data provided in Table 2, it has been identified that EU investment in Lithuania is substantially related to market size and tax burden on the basis of positive linear dependence which is indicated by the coefficient of multiple correlation ($r=0,987$). The coefficient of determination ($r^2=0,974$) shows that 97,4 per cent of EU investment variation in Lithuania is determined by the variation of market size and tax burden, and 2,6 per cent – by other non-assessed independent variables. Student's t and Fisher's tests contradict the hypothesis that coefficients (b) equal to zero, Durbin-Watson test indicates that autocorrelation is absent; thus, the model is appropriate for linear regression analysis.

Following the data provided in Table 2, it is possible to write the following regression equation:

$$EU \text{ investment} = 68547,023 - 0,021Market_size + 260,321Tax_burden$$

Calculated regression coefficients (b) indicate an increase (decrease) in EU investment when factor x_j increases by one unit, whereas other factors are fixed. This equation shows that in the case of fixed tax burden EU investment would decrease by EUR 0.021 million if the population of Lithuania increased by a unit. If GDP from production and import taxes (tax burden index) increased by one percent, EU investment would increase by EUR 260.3 million when population is fixed.

Thus, calculated regression coefficients reject research hypotheses – 1) *if market size increases, EU investment in the country*

increases; 2) if tax burden increases, EU investment in the country decreases.

Local markets were decreasing in Lithuania within the period of research. One of the major reasons of this trend is increased level of emigration from Lithuania. Correlation analysis shows a very strong inverse relationship between market size and EU investment when decreasing internal market (population) in the country makes a positive impact on EU investment attracted to the country. Therefore, it may be stated that direct relationship between market size and EU investment in the country does not exist.

Following the analysis of tax burden in Lithuania, it has been identified that tax burden had been decreasing until 2004 when the country entered the European Union, then tax burden started increasing. Decreasing tax burden is one of conditions attracting more foreign investors to the country. However, the results of analysis indicate that increasing tax burden in Lithuania makes a positive impact on EU investment in the country.

After MLR model for the impact of investment environment determinants on the assessment of EU investment in **Latvia** has been developed, it has been identified that two variables of the model (market size, average monthly salary) are statistically significant ($p<0,05$), whereas tax burden is insignificant ($p=0,797>0,05$) (see Table 3).

Following the assessment of tolerance and variance inflation factor (VIF), it has been identified that there is a strong correlation between two variables of the model (market size, average monthly salary).

Table 3. The assessment of initial relationship between accumulated EU investment in Latvia and the relevance of EU investment determinants

Estimator values of multiple linear regression model $EU\ investment = f(\text{market size, average monthly salary, tax burden})$						
$r = 0,994$ $r^2 = 0,989$ Adjusted $r^2 = 0,986$ Durbin-Watson test (1,966) F (345,773) p (0,000)						
Determinants	Coefficient b	Beta	Value of Student's-t test	p value	Tolerance	VIF
Constant	20260,275		3,429	0,005		
Market size	-0,009	-0,330	-3,699	0,003	0,120	8,335
Average monthly salary	10,775	0,680	7,662	0,000	0,121	8,269
Tax burden n=18	-4,103	-0,008	-0,263	0,797	0,954	1,049

After reduction of insignificant variable – *tax burden* has been carried out, remaining variables of MLR model become statistically insignificant and do not correlate with each

other. New MLR model with the following variables is developed (see Table 4).

Table 4. The assessment of relationship between accumulated EU investment in Latvia and the relevance of EU investment determinants

Estimator values of multiple linear regression model $EU\ investment = f(\text{market size, average monthly salary})$						
$r = 0,994$ $r^2 = 0,987$ Adjusted $r^2 = 0,987$ $d_u(1,535) < d(1,963) < 4 - d_u(2,465)$ $F_{\text{statistics}}(558,62) > F_{\text{critical}}(3,5546)$ $p=0,000 < 0,05$						
Determinants	Coefficient b	Beta	Value of Student's-t test	p value	Tolerance	VIF
Constant	20017,881		3,560	0,003		
Market size	-0,009	-0,328	-3,830	0,002	0,321	3,267
Average monthly salary n=18	10,780	0,681	7,957	0,000	0,321	3,267

Following the analysis of data provided in Table 4, it has been identified that EU investment in Latvia is substantially related to market size and average monthly salary on the basis of positive linear dependence ($r=0,994$). The coefficient of determination ($r^2=0,987$) shows that 98,7 per cent of EU investment variation in Latvia may be explained by the influence of market size and average monthly salary. Statistics of Fisher's test ($(F_{\text{statistics}}(558,62) > F_{\text{critical}}(3,5546)$ ($p=0,000 < 0,05$)) indicate that correlation relationship between variables is significant and the model is appropriate for linear regression analysis.

The significance of obtained results is checked calculating the value of Student's t-test. The selected determinants are significant in Latvian research because $t_{\text{observational}} > t_{\text{critical}}$. Durbin-Watson (DW) test indicates that autocorrelation of remaining errors is insignificant.

Following the data provided in Table 4, it is possible to write the following regression equation:

$$EU\ investment = 20017,881 - 0,009Market_size + 10,78Average_monthly_salary$$

Regression equation shows that if Latvian population increases by one unit, EU investment in the country would decrease by EUR 0.009 million when average monthly salary is stable. If average monthly salary increased by EUR 1, EU investment would increase by EUR 10.78 million when population is fixed.

The population was decreasing in Latvia and Lithuania within the research period. Correlation analysis shows an inverse relationship between market size and EU investment when decreasing internal market (population) in the country makes a positive impact on EU investment attracted to the country. Therefore, it may be stated that direct relationship between market size and EU investment in the country does not exist.

Average monthly salary in Latvia within research period was annually increasing; however, it is still significantly lower than in developed EU countries. Such conditions attract

more foreign investment. The results of analysis show that if average monthly salary increases in the country, more EU investment is attracted to the country.

Thus, calculated regression coefficients reject research hypothesis – *if market size increases, EU investment in the country increases.*

Variable – *tax burden* is insignificant in Latvian MLR model; thus, it is eliminated from the model. Therefore, there is no possibility to reject the second hypothesis – *if tax burden increases, EU investment in the country decreases.*

After MLR model for the impact of investment environment determinants on the assessment of EU investment in **Estonia** has been developed, it has been identified that all variables of the model are statistically significant ($p < 0,05$) and do not correlate with each other. (see Table 5).

Table 5. The assessment of relationship between accumulated EU investment in Estonia and the relevance of EU investment determinants

Estimator values of multiple linear regression model $EU\ investment = f(\text{market size, average monthly salary, tax burden})$						
$r = 0,991$ $r^2 = 0,982$ Adjusted $r^2 = 0,978$ $d_u(1,696) < d(1,750) < 4 - d_u(2,304)$ $F_{statistics}(220,985) > F_{critical}(3,1599)$ $p = 0,000 < 0,05$						
Determinants	Coefficient b	Beta	Value of Student's-t test	P value	Tolerance	VIF
Constant	5932,189		1,558	0,145		
Market size	0,001	0,099	2,928	0,038	0,826	1,211
Average monthly salary	19,860	1,000	23,481	0,000	0,816	1,225
Tax burden n=18	-338,530	-0,118	-3,004	0,011	0,962	1,039

Following the analysis of data provided in Table 5, it has been identified that EU investment in Estonia is substantially related to market size, average monthly salary and tax burden on the basis of positive linear dependence indicated by multiple correlation coefficient ($r = 0,991$). The coefficient of

determination ($r^2 = 0,982$) shows that 98,2 per cent of EU investment variation in Estonia may be explained by the influence of market size, average monthly salary and tax burden. Statistics of Fisher's test ($(F_{statistics}(220,985) > F_{critical}(3,1599))$ ($p = 0,000 < 0,05$)) and Durbin-

Watson (DW) test indicate that the model is appropriate for linear regression analysis.

The significance of obtained results is checked calculating the value of Student's t-test. The selected determinants are significant in Estonian research because $t_{\text{observational}} > t_{\text{critical}}$.

Following the data provided in Table 5, it is possible to write the following regression equation:

$$EU \text{ investment} = 5932,189 + 0,001Market_size + 19,86Average_monthly_salary - 338,53Tax_burden$$

Regression equation shows that if Estonian population increased by one unit, EU investment in the country would decrease by EUR 0.001 million when other determinants are fixed. If average monthly salary increased by EUR 1, EU investment would increase by EUR 19.86 million when other determinants are fixed. If tax burden increased by one percent, EU investment would decrease by EUR 338.53 million when other determinants are fixed.

The population was decreasing in Estonia as well as in other Baltic states within research period. Correlation analysis shows a direct relationship between market size and EU investment when increasing internal market (population) in the country makes a positive impact on EU investment attracted to the country. Thus, the first research hypothesis – *if market size increases, EU investment in the country increases* cannot be rejected. Estonia has the smallest population among three Baltic states; however, there is the biggest accumulated EU investment per capita.

Average monthly salary in Estonia within research period was annually increasing; however, as well as in other Baltic states, it is still significantly lower than in developed EU countries. Such conditions attract more foreign investment. The results of analysis show that if average monthly salary increases in the country, more EU investment is attracted to the country.

Following the analysis of tax burden in Estonia, it has been identified that tax burden in the country as well as in Lithuania and Latvia

had been decreasing until 2004. After the country had entered the European Union, tax burden started increasing, but Estonian tax system is clearer and simpler, legal regulation is more stable which results in increasing EU investment. Decreasing tax burden is one of conditions attracting more foreign investors to the country. The results of analysis indicate that increasing tax burden in Estonia makes a negative impact on EU investment in the country. Thus, the second hypothesis – *if tax burden increases, EU investment in the country decreases* cannot be rejected.

Conclusion

Different interrelated factors have impact on the volume of foreign investment. The essential macroeconomic determinant, influencing the attraction of foreign investment, includes gross domestic product and market size. Furthermore, the factors, which result in bigger openness of foreign trade, lower tax burden and attractive labour cost, have also been identified.

Estonia stands out from the Baltic states in relation to investment environment and major macroeconomic determinants resulting in foreign investment in the country because it is able to attract the biggest flows of foreign investment to its economy on the basis of coherent promotion of foreign investment policy. Foreign investment per capita in the Baltic states is the biggest in Estonia.

Results of multiple linear regression models, assessing selected macroeconomic determinants that make impact on attracting EU investment, differ. In Lithuania, EU investment is determined by market size and tax burden: inverse dependency has been identified between population and EU investment; direct dependency has been identified between tax burden and EU investment. In Latvia EU investment is determined by market size and average annual salary: if the market increased, EU investment would decrease; if the average

monthly salary increased, EU investment would also increase. In Estonia EU investment is determined by all three selected macroeconomic determinants (market size, average annual salary, tax burden): there is a

direct dependency between the first two variables and EU investment, whereas inverse dependency exists between tax burden and EU investment.

The article was supported by the project No. 2020CE16BAT099 "Information on the EU Cohesion policy and its impact on quality of life of the citizens". The project is implemented by Kaunas University of Applied Sciences. The European Commission. The financial assistance provided by the European Union.

References

- Alfaro, L. (2017). Gains from Foreign Direct Investment: Macro and Micro Approaches. *World Bank Economic Review*, vol. 30, 2-15. <https://doi.org/10.1093/wber/lhw007>
- An official site of the European Union (2022). <https://eur-lex.europa.eu/> [2022 01 19].
- Artige, L., Nicolini, R. (2005). Evidence in the Determinants of Foreign Direct Investment: the Case of Three European Regions. CREPP Working paper. <http://hdl.handle.net/10261/1769> [2022 01 10].
- Bekešienė, S. (2015). Duomenų analizės SPSS pagrindai. Mokomoji knyga. Vilnius: Generolo Jono Žemaičio Lietuvos karo akademija.
- Belgibayeva, A., Plekhanov, A. (2019). Does corruption matter for sources of foreign direct investment? *Review of World Economics* 155, 487-510.
- Blonigen, B. A. (2005). A Review of the Empirical Literature on FDI Determinants. *Atlantic Economic Journal* 33, 383-403.
- Campos, F. N., Kinoshita, Y. (2008). Foreign Direct Investment and Structural Reforms: Evidence from Eastern Europe and Latin America. *IMF Staff*, 57 (2), 326-365.
- Čekanavičius, V., Murauskas, G. (2010). Taikomoji regresinė analizė taikomuosiuose tyrimuose. Vilnius: VU leidykla. <https://doi.10.3846/mla.2017.1017>
- Danilevičienė, I., Lukšytė, V. (2017). Tiesioginių užsienio investicijų įtakos šalies ekonomikos konkurencingumui vertinimas. *Verslas XXI amžiuje*, 2017 9(2), p.183-196.
- Egger, P., Radulescu, D. M. (2011). Labor Taxation and Foreign Direct Investment. *The Scandinavian Journal of Economics*, vol. 113 (3), p. 603-636. <https://doi.org/10.1111/j.1467-9442.2011.01653.x>
- Europos Komisija. Europos semestro teminės informacijos suvestinė. Apmokestinimas (2019). https://ec.europa.eu/info/sites/default/files/file_import/european-semester_thematic-factsheet_taxation_lt_0.pdf [2022 01 19].
- Eurostat (2020). http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search_da-tabase [2022 01 19].
- Gholami, R.; Lee, S.Y.T.; Heshmati, A. (2006). The Causal Relationship Between Information and Communication Technology and Direct Foreign Investment. *Journal World Economy*, 29 (1), p. 43-62. <https://doi.org/10.1111/j.1467-9701.2006.00757.x>
- Hoang, H.H., Bui, D.H. (2015). Determinants of foreign direct investment in ASEAN: A panel approach. *Management Science Letters*, 5(2), 213-222.
- EY Building a better working world (2001). https://www.ey.com/en_gl [2022 01 17].
- Lukoševičiūtė, G., Martinkutė-Kaulienė, R. (2016). Tiesioginių užsienio investicijų įtakos Baltijos šalių ekonominei raidai vertinimas. *Verslas XXI amžiuje*, 8(2), p. 212-220. <https://doi.org/10.3846/mla.2016.897>
- Shafiqas, M.N., Hua, L., Bhatti, M.A., Gillani, R. (2021). Impact of Taxation on Foreign Direct Investment: Empirical Evidence from Pakistan. *Pakistan Journal of Humanities and Social Sciences*, 9(1), 10-18. <https://doi.org/10.52131/pjhss.2021.0901.0108>
- Simionescu, M., Naros, M.S. (2019). The Role of Foreign Direct Investment in Human Capital Formation for a Competitive Labour Market. *Management Research and Practice*, 11(1), 5-14.

Šlėderytė, A., Montvilaitė, K. (2015). Tiesioginių užsienio investicijų ir jų pritraukimą lemiančių veiksnių tyrimas Europos Sąjungos šalyse konvergencijos aspektu. Studijos šiuolaikinėje visuomenėje. Mokslo darbai, Nr. 6(1), p.258-272.

The World Bank. (2020). <https://datatopics.worldbank.org/world-development-indicators/> [2022 01 19].

United Nations Conference on Trade and Development (UNCTAD). (2020). <https://unctad.org/statistics> [2022 01 19]

2021–2027 m. laikotarpio ES sanglaudos politikos Europos regioninės plėtros ir Sanglaudos fondų reglamento pasiūlymas. (2021). <https://www.esinvesticijos.lt/lt/dokumentai/2021-2027-m-laikotarpio-es-sanglaudos-politikos-europos-region> [2022 01 25]