



FOREIGN DIRECT INVESTMENT ATTRACTION IN THE BALTIC STATES

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Abstract. This paper considers the importance of macroeconomic factors as well as investment climate for foreign direct investment attraction in the Baltic states. It reviews some of the indicators for measuring the investment climate and their usefulness as indicators of strength of FDI attraction and uses the results of econometric analysis to consider relative importance of various macroeconomic factors. The results suggest that perceptions of corruption and fiscal policy are some of the more important drivers of FDI attraction. The paper also considers several measures that could improve foreign direct investment attraction in the Baltic States such as expanding the protection of property rights and improving the quality of infrastructure.

Keywords: foreign direct investment attraction, Baltic States, investment climate, corruption, fiscal policy, infrastructure, property rights.

JEL Classification: F21, F44.

Introduction

Investment or gross fixed capital formation is an important component of the gross domestic product and an important driver of the business cycle. One of the reasons for the importance of investment is its role in promoting economic growth. The link between economic growth and investment is part of many models of economic growth (see e.g. Mankiw *et al.* (1992) or De Long and Summers (1991)) who focus on equipment investment specifically).

In particular, there has been a debate in the literature on the relationship between foreign direct investment (FDI) and growth. The direction and magnitude of causality remain somewhat ambiguous with various studies finding contradicting results ranging from positive to negative (Alfaro *et al.* 2010). A meta-regression analysis applied to 880 estimates of the effect of FDI on economic growth from 108 empirical studies reveals a positive effect on growth overall, which is amplified when FDI interacts with financial development, trade and human capital (Doucouliagos *et al.* 2010). FDI may also have less quantifiable positive effects, most importantly

the transfer of new technologies and managerial skills to the recipient economy.

The effect of FDI is especially important in the transition economies such as the Baltic States. For example, FDI has been found to have an unambiguously positive effect on growth in Lithuania, even if some industries showed evidence of domestic companies being crowded out by foreign ones (Tvaronavičienė, Grybaitė 2007). It was also shown to enhance national wealth over the longer term (Tvaronavičienė, Kalašinskaitė 2010).

Another reason for the importance of investment is its role as the driver of the business cycles. For example, it has been shown that most of the variability of output and hours at business cycle frequencies in the US can be accounted for by shocks to the marginal efficiency of investment (Justiniano *et al.* 2010). Models that seek to establish the link between the state of the financial sector and the role of the real economy, often link the provision of credit to the dynamics and composition of investment (see e.g. Aghion *et al.* (2010) as well as Gertler and Kiyotaki (2010)) over the business cycle.

Foreign direct investment is also important, because it is the most stable component of inward capital flows into the economy. Stability of capital flows matters for the stability of the business cycle as well as for avoiding sudden current account reversals, which have a broadly negative effect on economic growth (Edwards 2004).

These two considerations: that investment, in particular foreign direct investment, can be important for economic growth and that it can be an important driver for the business cycle mean that the ability to effectively generate or attract investment in the economy of the country is the definitive factor creating favorable circumstances for overcoming economic crises, encouraging structural changes in the economy, and facilitating regional economic development and technological progress, which is the foundation for sustainable economic growth.

A decline in the investment activity, on the other hand, can create a negative feedback loop – lowering industrial production, increasing unemployment rate, which leads to a decline in disposable incomes and therefore private consumption as well as government revenues.

The object of the research is the measurement of investment climate in the Baltic States, the strength of the relationship between investment climate and the volume of foreign direct investment and specific measures to improve the investment climate in the Baltic States.

The goal of the research is to propose suggestions for the improvement in the investment climate in the Baltic States, based on available indicators of investment climate and macroeconomic data.

The research methods used in the paper include empirical literature review and statistical and econometric analysis.

Foreign direct investment in the Baltic States has been explored previously, for example, by Degutis and Tvaronavicienė (2006), who studied correlations between foreign direct investment and trade, labor costs, taxes, productivity and other macroeconomic determinants and found that lower taxes tend to increase FDI as does GDP growth. At the same time, there is also evidence that the scope of FDI incentives, often discussed as a policy measure in the Baltic States, has no linkages with FDI (Miskinis, Mikneviciute 2011).

The remainder of the paper is structured as follows. Section 1 reviews the available methods of measuring the factors that might affect the investment climate and to determine the main obstacles, which prevent the emergence of more favorable investment climate. In principle, all of the factors that affect the investment climate can become obstacles. Section 2 is based on the results of the econometric analysis, and considers macroeconomic factors, which affect the investment climate in Latvia and their influence on investment in neighboring economies. Section 3 suggests measures for improving investment climate with Latvia as a specific example.

1. Measures of investment climate

The factors affecting the investment climate in any country include but are not limited to: the stability of macroeconomic and political environment, policy actions to facilitate entrepreneurial activity, the quality of infrastructure in the country, taxation regime, the competitiveness of a country and the level of shadow economy in the state.

Considerable efforts by international organizations, the academic community and non-governmental organizations have been invested into measuring these factors across different countries on a comparable basis. Clearly, no single indicator has been successful in encompassing all of the factors at once. An examination of these indices is useful for two reasons. First, it can suggest which factors are more important for measuring the investment climate – those could be the factors measured by the indicator with the strongest observed relationship to investment. Second, it indirectly suggests which indicator has the most credibility in actually measuring its purported object of analysis.

It is also important to specify a group of countries for analysis. In order to isolate the importance of the investment climate as a driver of foreign direct investment, countries selected for comparison should have fairly similar rates of potential economic growth (indicating possible returns to capital investment), natural and human resource endowments and degrees of trade and financial integration. This paper therefore focuses on the Baltic countries.

1.1. Index of economic freedom

The index of economic freedom, compiled by the Heritage Foundation, covers ten freedoms grouped in four categories (The Heritage Foundation 2013):

- Rule of law, which includes property rights and freedom from corruption.
- Limited government, which includes fiscal freedom (a measure of tax burden imposed by the government) and government spending.
- Regulatory efficiency, including business freedom (a quantitative measure of the ability to start, operate, and close a business), labor freedom (analyzing legal and regulatory framework for the country's labor market), and monetary freedom (assessing price stability and the presence of price controls).
- Open markets, which includes trade freedom, investment freedom and financial freedom.

Table 1 shows the dynamics of the index of economic freedom for all three Baltic countries. One can see that all three countries have relatively high levels of economic freedom with Estonia, the highest ranked country of the three, ranking 13th in the world and Latvia, the lowest ranked country, ranking 55th (out of 185 countries). Interestingly, the economic freedom indicator appears to be relatively

constant for the three countries with Estonian and Latvian indices in 2013 being almost the same as they were in 2005 and Lithuanian index only marginally better.

Table 1. Index of economic freedom in the Baltic Countries
(Source: The Heritage Foundation 2013)

	2005	2006	2007	2008	2009	2010	2011	2012	2013
Estonia	75.2	74.9	78.0	77.9	76.4	74.7	75.2	73.2	75.3
Latvia	66.3	66.9	67.9	68.3	66.6	66.2	65.8	65.2	66.5
Lithuania	70.5	71.8	71.5	70.9	70.0	70.3	71.3	71.5	72.1

Note: A higher value denotes greater economic freedom with 100 being the maximum score.

The main reason for Latvian economic freedom indicator being consistently lower than Estonian and Lithuanian one is the lower score on the property rights component of the economic freedom indicator. Latvian court system, which is tasked with enforcement of property rights, is described as inefficient and subject to long delays. There is also weak enforcement for the protection of intellectual property rights (The Heritage Foundation 2013).

1.2. Corruption Perceptions Index

Corruption activity, by definition is hard to measure. One of the most authoritative attempts is the Corruption Perceptions Index (CPI), compiled by Transparency International which is focused on public perceptions of corruption in a given country. CPI is a composite index combining surveys and assessments of corruption compiled by a variety of institutions (Transparency International 2012).

Table 2. Corruption Perceptions Index in the Baltic Countries
(Source: Transparency International 2012)

	2005	2006	2007	2008	2009	2010	2011	2012
Estonia	6.4	6.7	6.5	6.6	6.6	6.5	6.4	6.4
Latvia	4.2	4.7	4.8	5.0	4.5	4.3	4.2	4.9
Lithuania	4.8	4.8	4.8	4.6	4.9	5.0	4.8	5.4

Notes: A higher value denotes greater freedom from corruption (cleaner governance) with 10 being the maximum score. In 2012 the scale was adjusted from 0 to a 100, however, results are given here on a comparable basis.

Table 2 shows the evolution of corruption perceptions in the three Baltic countries. The highest ranking country is, again, Estonia, which ranked 32nd out of 174 countries considered in 2012, while Latvia has the lowest ranking – 54th in 2012. The dynamics of Latvian indicator are also worrisome exhibiting sharp decline from 2008 to 2011, which had reversed almost all of the progress achieved from 2005 to 2008. This is compensated somewhat by the improved value achieved in 2012. One possible

explanation for this may be the fact that the index relies on perceptions and it is possible that policy actions to mitigate the crisis in Latvia in 2008–2009 worsened corruption perceptions.

1.3. Ease of Doing Business Index

The objective of the World Bank Doing Business reports is to assess regulations affecting domestic firms in 185 economies and to rank the economies in ten areas of business regulation. The ten areas include: starting a business, dealing with construction permits, getting electricity, registering property, getting credit, protecting investors, paying taxes, trading across borders, enforcing contracts, and resolving insolvency (World Bank 2013).

For historical analysis, however, this paper uses the Ease of Doing Business Index also compiled by the World Bank, which averages the country's percentile rankings on ten topics covered in the World Bank's Doing Business reports. The ranking on each topic, in turn, is the simple average of the percentile rankings on its component indicators.

Because the coverage of the World Bank Doing Business report has been constantly expanded (increasing both the numbers of topics underlying the averaging of the Ease of Doing Business Index as well as the number of countries), it is not possible to present a comparable time series for the entire period. One can focus, instead on year-on-year changes in the index, which are reported on a comparable basis in almost every report from 2007 onwards.

Table 3. Change and Imputed Absolute Level¹ of Ease of Doing Business Index in the Baltic Countries (Source: World Bank 2013, author's calculations)

		2007	2008	2009	2010	2011	2012	2013
Estonia	Change	0	0	-4	-2	0	-6	-2
	Imputed Absolute Level	7	7	11	13	13	19	21
Latvia	Change	7	2	-3	3	3	10	-4
	Imputed Absolute Level	36	34	37	34	31	21	25
Lithua-nia	Change	-1	-10	0	-1	3	-2	-1
	Imputed Absolute Level	36	26	26	27	24	26	27

With the above mentioned caveats in mind, Table 3 has to be interpreted quite carefully. For example, in the case of Estonia it appears that only negative changes in the Ease of

¹ Imputed absolute level is computed by using the 2013 ranking available in the latest World Bank Doing Business report and extrapolating the changes in the ranking backwards.

Doing Business index have happened from 2007 to 2013, however, the reason for that is not that business environment had worsened in Estonia, but rather that more countries and more topics were covered in every year, which may have resulted in some countries achieving higher scores than they would previously have achieved. The impact of this change on foreign direct investment on Estonia can be ambiguous.

1.4. Comparative analysis of the indicators

A comparative analysis of the previously discussed indicators as measures of investment climate is not trivial, because of the uncertainty of how they affect investment decisions. For example, it is not clear whether there will be a lag between improved reading of a particular indicator and an increase in FDI. To the extent that FDI decisions are driven by perceptions informed by these indicators, there could be a lag while investors learn about recently released indicators. On the other hand, if the indicators are accurate, one might assume that they reflect reality, which is already known to investors, in which case there would be no lag. This paper takes the second view.

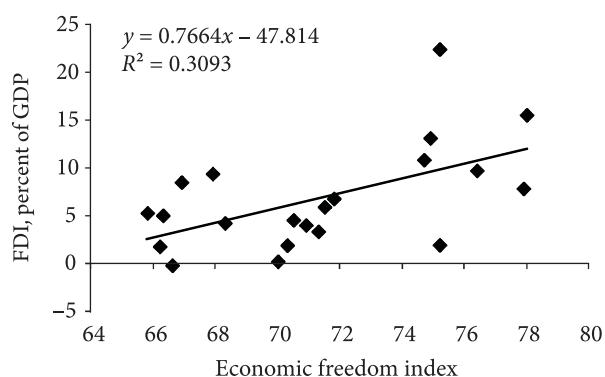
Another issue is whether the level or the changes of the indicators should be considered together with the level or changes in FDI. This paper considers net level of FDI as a ratio to GDP as the appropriate variable, in order to abstract from the effects of the business cycle. The last available observation point is 2011.

Figure 1 presents simple scatter plots of foreign direct investment in percent of GDP together with an estimated linear trend and the coefficient of determination (R^2). It shows that there is a definite relationship between all of the indicators of the investment climate considered in this paper and the amount of foreign direct investment. Higher levels of economic freedom index and corruption perceptions index (corresponding to perceptions of lower corruption) are associated with higher levels of foreign direct investment relative to the size of economy.

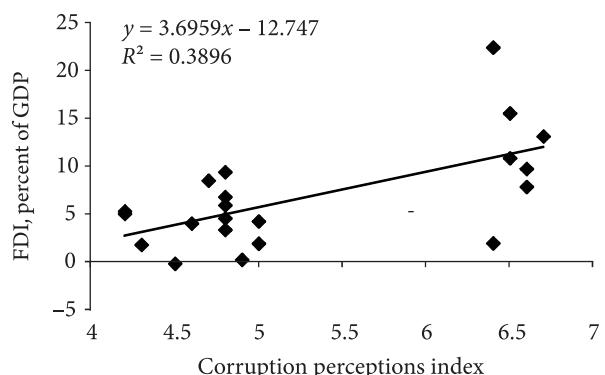
The strongest relationship appears to be in Figure 1b suggesting that a unit increase in corruption perceptions index (corresponding to a rise of 10–20 positions in the ranking), would correspond to an additional 3.7 percent in foreign direct investment. Note, however, that this relationship should be interpreted cautiously, because of relatively little variability in corruption perceptions index over time.

Figure 1a shows that a unit increase in the Economic Freedom index is associated with an additional 0.76 percent of GDP in foreign direct investment. The World Bank Doing Business rank (implied) explains a slightly higher share of variation in FDI, and suggests that increasing country's position in the ranking of all the countries by one, is associated with about 0.22 percent increase in FDI as percent of GDP (Fig. 1c).

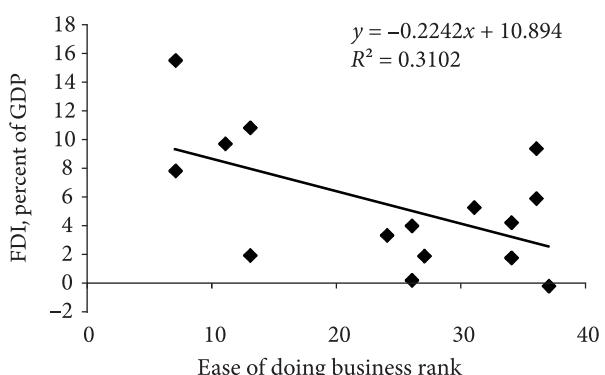
Overall it is possible to conclude that the indicators of the investment climate considered in this paper are informative about foreign direct investment decisions. The country, which consistently emerges as the lowest among its peers on all three indicators is Latvia, while Estonia, on the other hand, is consistently first. Among specific reasons for lower performance one can mention lower amount of protection for property rights, higher perception of corruption and several components of World Bank Doing Business rankings – specifically those regarding dealing with construction permits, obtaining electricity and protecting investors.



a) Economic Freedom Index



b) Corruption Perceptions Index



c) World Bank Doing Business rank

Fig. 1. Relationship between Investment Climate Indicators and FDI as percent of GDP (Source: World Bank data, author's calculations)

2. Analysis of macroeconomic determinants of foreign direct investment

Previous attempts at empirical analysis on which macroeconomic or institutional variables have the largest role in attracting foreign direct investment specifically to the Baltic countries have focused on several indicators such as taxes, wages, and GDP growth (Degutis, Tvaronavičienė 2006). However, they were also conducted during the time when all three of the Baltic countries were experiencing a boom and it is important to reconsider the evidence in the light of new data emerging on the macroeconomic and FDI outcomes of the Baltic economies in the aftermath of the crisis.

Evidence from the analysis of other countries suggests that large regional markets, preferential policies and good infrastructure have a positive effect (Cheng, Kwan 2000). Among macroeconomic factors – higher levels of GDP, higher GDP growth rates, greater openness to international trade and more business-friendly environment have been shown to have a positive influence (Mottaleb, Kalirajan 2010).

This paper follows the results of Gaidamovič (2013) and considers ten possible determinants of foreign direct investment:

- general government debt (in millions of lats);
- real GDP per capita (in 2000 constant prices);
- annual inflation (year-on-year percentage change in the consumer price index);
- unemployment level (the ratio of persons seeking jobs to the total number of economically active persons);
- growth of industrial output (percentage change in the output volume index);
- the CPI-based real effective exchange rate;
- a weighted average of interest rates on long-term loans in lats;
- the level of exports;
- the growth rate of gross capital formation (year-on-year growth);
- production and import taxes less subsidies in percent of GDP.

One can see, intuitively, how some of these possible determinants are reflected in some of the indicators of the investment climate previously considered. For example, general government debt and the level of taxes less subsidies as a percent of GDP correspond to the fiscal freedom subcomponent of the index of economic freedom. Similarly, annual inflation is captured in the monetary freedom component of the index.

Other factors, such as real GDP per capita have been shown to be important in previous analyses for other countries and have strong theoretical reasons to be included – e.g. the weighted average of interest rates on long-term loans

proxies local cost of capital, while the level of exports can be used as a proxy for the degree of trade integration.

In Gaidamovič (2013) various combinations of the explanatory variables have been considered for candidate models and evaluated according to several criteria, such as the presence of heteroskedasticity (using the Breusch-Pagan test), autocorrelation (Durbin-Watson test statistic), and multicollinearity (using variance inflation factor). Among all the candidates, the best model (in the sense of the criteria above) for Latvian foreign direct investment data, isolated only three factors as significant determinants of foreign direct investment in Latvia: real GDP per capita, inflation and taxes less subsidies as percent of GDP (with the latter consistent with the results of (Degutis, Tvaronavičienė 2006)). The results of the regression analysis are summarized in Table 4.

Table 4. A Model of Determinants of Foreign Direct Investment for Latvia (Source: Gaidamovič 2013)

Variable	Coefficient (t-statistic)	Diagnostics	
Real GDP per capita, LVL	9.491 (11.549)	Adjusted R-squared	0.845
Consumer price inflation, percent	-86.874 (-2.904)	Durbin-Watson test statistic	1.974
Taxes on production and imports, less subsidies, percent of GDP	-726.611 (-7.491)	F-statistic (p-value)	93.50 (0.00)
Intercept	4604.681 (3.523)		

The coefficients of the model have the theoretically expected signs. Foreign direct investment is positively related to the level of real GDP per capita and negatively related to inflation and the size of the tax burden. However, the model considered by Gaidamovič (2013) has been estimated using only the data from Latvia.

This paper extends the analysis by considering whether the factors represented by these variables have some explanatory power when Estonia and Lithuania are considered in addition to Latvia. Departing from the model, in order to use more internationally comparable data, this paper uses fiscal balance instead of taxes less subsidies as percent of GDP to measure fiscal freedom and the growth rate of real GDP per capita rather than the level.

Figure 2a shows that foreign direct investment is positively related to the growth rate of real GDP per capita with 1 percentage point of additional growth associated with a higher level of FDI by 0.1 percentage points. Inflation, on the other hand, appears to have almost no relationship to FDI, when a broader sample of the Baltic countries is considered (Figure 2b). Finally, fiscal balance appears to have the strongest link with FDI among all the indicators considered in this paper, with every 1 percentage point increase in fiscal balance increasing FDI by 1.2 percentage

points. This suggests that indicators of fiscal freedom may play a particularly important role in the Baltic countries.

3. Proposals for improving investment climate

The results of the analysis of both investment climate indicators compiled by institutions as well as the macroeconomic indicators allow formulating several proposals for improving investment climate in Latvia.

First, a measure with broad applicability to all countries, would be for *parliaments to ensure stronger protection of property rights, in particular intellectual property rights*. A specific step to that effect would be a reform and strengthening of the judiciary, including by providing more resources to the justice system. This would shorten the time necessary to enforce contracts and ensure speedy resolution of disputes.

Second, in a measure most relevant for Latvia *the Corruption Prevention and Combating Bureau (or a similar authority in Lithuania or Estonia) should strengthen measures against corruption*, which would help to better enforce property rights and improve Latvia's performance on the corruption perceptions index. Apart from strengthening the capacity of the Bureau directly, two other measures should be directed towards that goal: *the bureaucratic burden on foreign investors should be minimized*, because it creates additional opportunities for corruption, and *the salaries of civil servants should be made competitive to the salaries of those in the private sector*, because the disparity in wages creates incentives for corruption.

Third, *governments of the Baltic countries should take measures to improve infrastructure as a matter of priority*. Special attention should be paid to transportation and energy infrastructure, because investors have to be able to quickly and effectively ensure necessary supplies for their companies and be able to deliver it to the market. A higher quality of infrastructure lowers the expenses of companies, facilitates the growth of exports and provides comparative advantages for the country as a destination for FDI.

Fourth, *governments should continue to maintain a prudent fiscal policy targeted towards a balanced budget or a slight surplus, while at the same time ensuring that fiscal drag from potentially necessary fiscal consolidation does not lower economic growth*. In order to maximize economic freedom, governments should also seek to reform the tax system, making it more transparent and lowering the costs of compliance.

Conclusions

The focus of this paper is on the analysis of investment climate in the Baltic countries and the determinants of foreign direct investment. The paper reviewed several indicators of measuring investment climate: the index of economic

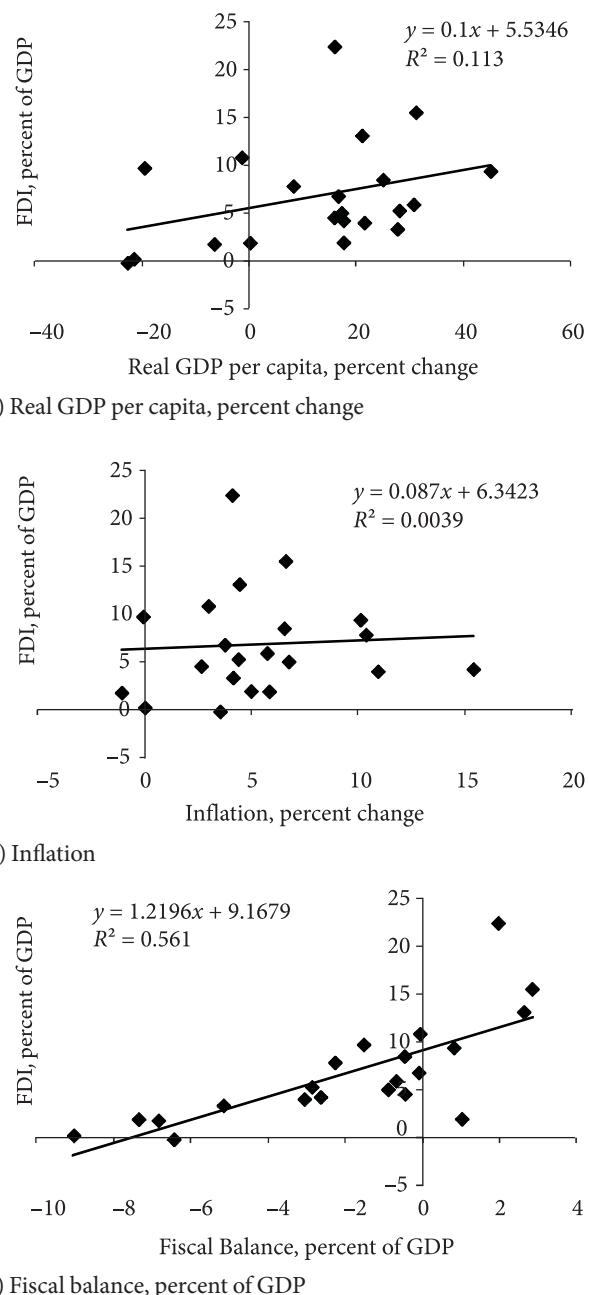


Fig. 2. Macroeconomic Determinants of FDI (Source: World Bank, author's calculations)

freedom, corruption perceptions index and ease of doing business rating. The corruption perceptions indicator had the strongest relationship with foreign direct investment (accounting for approximately 39 percent of the sample variation), while the other two indicators were broadly similar (accounting for around 30 percent of the variation). Among macroeconomic determinants of foreign direct investment, the strongest relationship with FDI is observed for the fiscal balance, while the growth rate of real GDP per capita and inflation have much lower amount of explained in-sample variation.

Some of the main obstacles for the development of favorable investment climate in Latvia include, low level of protection of property rights, including intellectual property rights, high perception of corruption, and the relatively weakly developed infrastructure.

This paper suggests that tackling these obstacles by legislative and executive actions should be a matter of priority for government policy.

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