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Competitiveness and crisis – the case of the Baltic States economies

Abstract: The article focuses on the relation between economic crisis and competitiveness of the economy. The Baltic States (Estonia, Latvia and Lithuania) experienced the biggest GDP contraction during the global crisis. Since then, identifying and assessing changes in the relative competitiveness as a consequence of the economic downturn has sparked much interest.

The selection of competitiveness measuring tools, which provide the basis for analysis, is of key importance to the conclusions formulated. Employing single macroeconomic variables suggests a much stronger influence of the crisis on competitiveness in comparison to the overall measures (Global Competitiveness Index or IMD Index). However, it is likely that the influence of recession on competitiveness – though certainly present and quite strong – was too short-lived to considerably affect the measures of competitiveness, which were constructed mainly on the basis of the perceptions and opinions of various social and business groups. The main channel through which the crisis undermined competitiveness was macroeconomic situation. It may be generally concluded that a short-term crisis, even if severe, does not have a negative influence on economic competitiveness as long as proper anti-crisis policy is implemented.
Keywords: Baltic States, competitiveness, development, economic crisis, Estonia, export, GDP, import, labor market, labor productivity, Latvia, Lithuania.
JEL codes: E50, E60, J30, J60, G01, H12, O11.

Introduction

The current economic crisis affected different aspects of global economy. Regions, countries, companies have been hit by dramatic and unprecedented events in financial markets and broader economy. A lot has been written about causes, symptoms and consequences of this crisis [cf. Shiller 2008; Taylor 2009; Mayes, Pringle & Taylor 2009; Gorton 2010; Roubini & Mihm 2010; Friedman & Posner 2011; Mundell 2011; Orłowski 2011]. This article aims at contributing to this broad and

multifaceted discussion by concentrating on the impact of the subprime crisis[1] on the competitiveness of economy.

The aim of the article is to identify and assess changes in the relative competitiveness of three Baltic States (Estonia, Latvia and Lithuania) in consequence of the global economic downturn started in 2007. Section 1 is devoted to a brief presentation of the general background for both the concept of competitiveness and the Baltic States economies as a subject of analysis (the emphasis is put on institutional arrangements resulting from ERM II and other assumptions concerning these economies). Section 2 examines the causes and symptoms of the global economic crisis and its channels of potential impact on Baltic States economies. Section 3 is devoted to the analysis of selected economic measures of competitiveness (e.g. GDP development, labor market changes, international trade development). The results of research conducted in Section 3 are then compared to those compiled in Section 4, which are derived from the dynamic analysis of descriptive competitiveness measures of the Baltic States in 2007–2010 (i.e. Global Competitiveness Index and IMD measure). The article closes with conclusions.

1. General background

Before attempting to assess impact of the crisis on competitiveness, we should clearly indicate what is meant by 'competitiveness' in this article. There is no unique definition of this term and the concept still seems to be elusive. Its understanding depends, among others, on the level of analysis (macro- level, mezzo- and micro- one). Taking into account different approaches toward competitiveness [cf. Fajnzylber 1988; Vet de 1993; Fanelli & Medhora 2002; Garelli 2006], we can broadly define it as the ability of an element of a general environment (a company, a cluster, a region, a country or a group of countries, etc.) to operate efficiently and productively in relation to other similar elements of this environment. The question of how to measure this ability remains still under investigation. The World Economic Forum [WEF 2007] uses the annual changes in GDP per capita as such measure, since "*country's competitiveness as the ability of a national economy to achieve sustained rates of economic growth, measured by the annual changes in GDP per capita*". The official OECD definition of a nation's competitiveness is as follows: *"the degree to which a country can, under free and fair market conditions, produce goods and services which meet the test of international markets, while simultaneously maintaining and expanding the real incomes of its people over the long term*" [Vet de 1993]. However, the statistical term

[1] The current financial and economic crisis in this article will be called subprime crisis in order to stress the common roots of the crisis and to avoid misinterpretation of its dating.

used by OECD states that *"competitiveness is a measure of a country's advantage or disadvantage in selling its products in international markets"*.

The assessment of a country's competitiveness can be conducted by means of two different approaches [Kowalski & Pietrzykowski 2010]. The first relates to the comparative dynamic analysis of economic indicators (uniform measures of performance), identified in economic literature as proxies of a country's competitiveness [cf. Fagerberg, Knell & Srholec 2004]. These indicators characterize changes in countries' GDP and living standard, foreign trade, labor market (costs and productivity) and prices. The second approach is based on the comparative dynamic analysis of composite competitiveness measures. These measures are created by using many quantitative (statistic data) and qualitative (perception of the economy and business environment) data which distinguish given economies and aggregate them into one measure of performance (e.g. *World Economic Forum* – WEF with *Global Competitiveness Index*, GCI and *International Institute for Management Development* – IMD).

This article aims to analyze and assess the Baltic countries' competitiveness obtained by means of these two general methodological approaches. The emphasis is put on approaches elaborated by WEF and IMD and selected uniform performance measures.

The object of analysis conducted in this article – the Baltic States – are not identical, either in the structure of economy, extent of fiscal and external balances or in the internal policy tendencies[2]. However, they share a number of structural, institutional and policy features. These countries should be characterized as small, open and democratic economies. What is also crucial for these countries is history, which in their cases has significantly influenced the shape of their contemporary economies. Estonia, Latvia and Lithuania, as well as other Central and Eastern European Countries (CEEC) – have successfully passed the process of transition to democratic political systems with fully functioning market-based economies. This process has been reinforced for eight CEEC in 2004, after they joined the European Union [cf. Bulmer and Lequesne 2005; Buiter and Sibert 2006]. Therefore, the economic situation in CEE countries before the current crisis was strongly determined by the EU accession process (finalized in May 2004) and then preparation for the accession to the Economic and Monetary Union (EMU)[3]. This second stage – acces-

[2] Latvia stands out the most unfavourably in relation to the macroeconomic and socio-economic indicators.

[3] The accession process has strongly determined political and economic situation of CEEC due to a large number of formal and informal membership criteria, spelled out in the Treaty on European Union and agreed upon during European Council meetings. EU defines some basic membership criterion which is European identity, but also outlines in broad terms the procedure for applying for membership of the EU [cf. European Commission 1995; Bulmer & Lequesne 2005; Buiter & Sibert 2006].

sion to the EMU – has influenced the process of crisis spreading within the Baltic States economies. All three countries wanted to adopt the euro as soon as possible (which was natural as their national currencies were already tied to the euro with existing currency boards). When adopting the fixed exchange rate system (under the Exchange Rate Mechanism II, ERM II) and in fact abandoning an autonomous monetary policy, the Baltic countries have experienced huge and unanticipated capital inflow and then to a great extent all the negative consequences of the global crisis. Large imbalances in the Baltic economies accompanied by low interest rates (adopted from the euro zone in consequence of ERM II acceptance), credit booms[4] and then a very sharp decrease in economic activity in those countries revealed weaknesses of institutional arrangements of the euro area accession process in the face of the crisis [Nyberg 2009; Ingves 2010]. The Baltic States experienced the biggest GDP contraction during the global crisis[5] [IMF 2010], which is the main point that makes these countries interesting subjects of study.

2. The symptoms and the course of the crisis in Estonia, Latvia and Lithuania

Most of economists agree that the current crisis is a crisis of politics rather than a crisis of economics [cf. Taylor 2009; Mayes, Pringle and Taylor 2009; Gorton 2010; Friedman and Posner 2011; Szyszka 2011]. For this reason, we mainly concentrate on policy failures (of action or inaction), which lead to the monetary excesses as the main cause of the boom and the resulting bust[6]. The monetary excesses were the consequence of the policy failure – i.e. loose-fitting monetary policy in the US but also in the Euro Area. The Federal Reserve began to lower interest rates in 2001

[4] Increase in the lending activity in the Baltic countries was very fast. This process was much more intense in relation to the countries in question than in relation to other countries of the region. The value of loans in relation to GDP between 2004 and 2008 in the Baltic states increased more than twofold (from nearly 50% to 100% of GDP in Estonia and Latvia and from 25% to 60% in Lithuania). In addition, ERM II and the prospect of joining the euro zone quickly encouraged them to take on liabilities in the euro. The share of loans denominated in foreign currencies oscillated between 65% in Lithuania and nearly 90% in Latvia [NBP 2009, p. 53–56]. What is even more important, the fast increase in lending was not accompanied by a fast increase in deposits. For this reason, banks borrow money from abroad, which led to an increase in the external debt.

[5] According to IMF [2010] Latvia experienced the biggest GDP contraction in 2008–2009, which by accumulating data was –22.6%, Estonia came in the second place with –17.7%, and Lithuania's (–12.2% of GDP) contraction was only surpassed by Ukraine.

[6] This explanation of the crisis is very similar to the classical one, which states that financial crisis is caused by excesses that lead to a boom and an inevitable bust [cf. Fisher 1932, 1933; Kindleberger 1991a, 1991b, 1999; Minsky 1977, 1991, 1992].

(for fear of deflation caused by tech bubble's bursting) and kept them low for another five years. According to the Economist [2007], federal funds interest rates from 2001 to 2006 were much lower than they could have been if only the Fed had followed the type of policy from the previous twenty-year period of good economic performance. There is of course an important question how the decision of Fed caused global short-term interest rates to be lower than they should have been. In other words, what is the interaction among central banks in their monetary policy decisions. Taylor [2009] examined the interest rate decisions of the ECB from 2000 to 2006 and found out that the effect of federal funds rate was statistically significant. The economic effects of low interest rates have been amplified by other policy failures of both action and inaction [Taylor 2009; Acharya & Richardson 2009; Mayes, Pringle & Taylor 2009; Gorton 2010; Roubini & Mihm 2010; Friedman & Posner 2011], which were among others:

- reinforcement of the US government-sponsored enterprises (GSEs): Fannie Mae and Freddie Mac,
- introduction of the high-LTV (loan-to-value ratio) mortgages,
- global securitization of mortgage loans and lack of regulation and supervision of this process,
- deficiencies in financial regulation (e.g. introduction of mark-to-market accounting, treatment of securitization under Basel I, separation of central banking from supervision in some jurisdictions) and unquestioned reliance on ratings.

These policy failures can be perceived as the main causes of current financial and economic crisis (Figure 1) and they were reflected in some characteristic symptoms of this crisis. From the global perspective the main symptoms of the current financial crisis were:

- deflation of the subprime bubble in 2006–2007,
- dramatic increase in the interbank market interest rate (as a consequence of increase in uncertainty, visible especially after Lehman Brothers bankruptcy),
- decrease in foreign trade (progressive reduction of internationalization and danger of protectionism from advanced economies),
- investor panic (in the face of rising uncertainty over the security and valuation of assets),
- liquidity run and rising insolvency in the financial sector.

These symptoms of the crisis can be used as a basis for deriving potential channels of financial crisis impact on the Baltic States economies. This impact was transmitted mainly through the financial channel (capital flow and credit market tendencies).

The bankruptcies of American banks, especially Lehman Brothers, caused a dramatic increase in risk aversion, leading to a huge flight of capital from emerging economies. This proved how much Baltic economies and their financial sectors (especially banks in their lending activities) were dependent on foreign capital flow. A sudden flight of capital affected credit markets and deepened some nega-

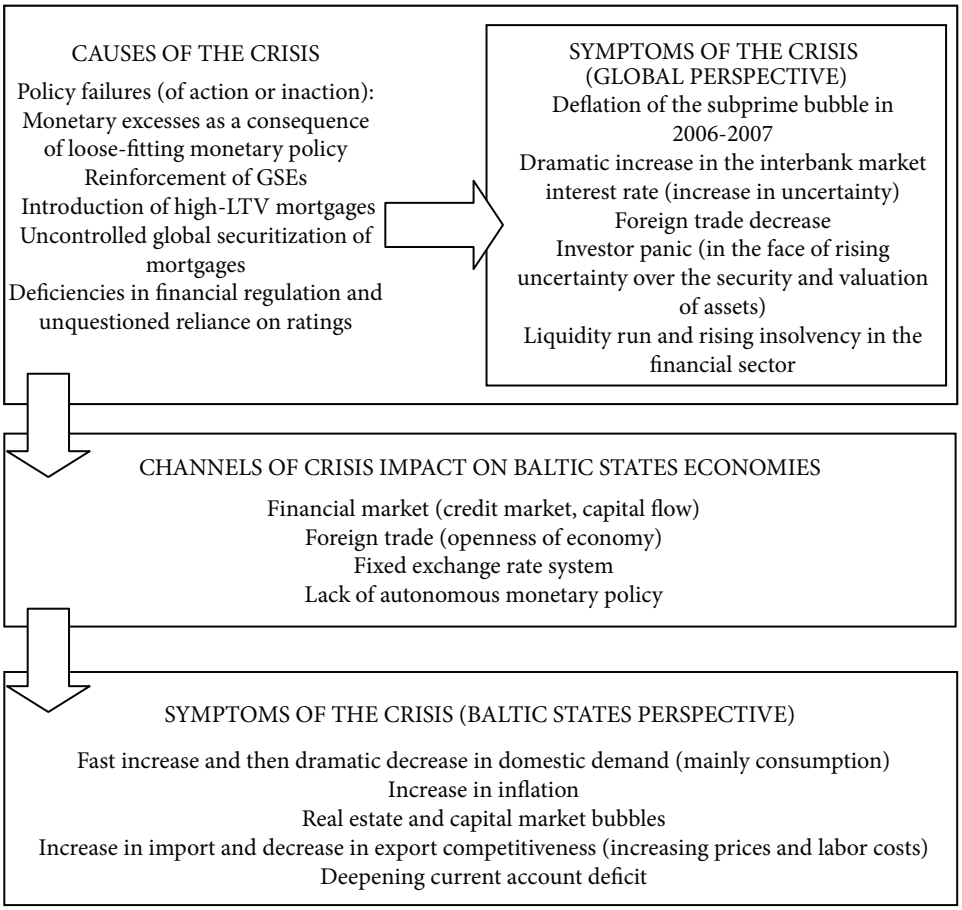

Figure 1. Financial crisis transmission from global level to the Baltic economies

tive trends in these economies – the so-called 'sudden stop' [Calvo 1998; Edwards 2005] (e.g. dramatic decrease in domestic demand, huge decrease in prices on real estate market). International trade was the second – less significant, albeit still important – channel of transmitting global crisis effects to the Baltic States. As small, open economies the three Baltic countries suffered from decreasing foreign trade volume much more than other less open economies of the region [cf. Goldstein 2007; Åslund 2009]. Moreover, all the three countries had also tied their currencies to the euro in ERM II with the aim of joining the EMU. As a result – they were not able to use monetary policy to restrict demand and then to mitigate and manage the crisis. The interest rate as a tool of monetary policy was limited to the aim of maintaining the fixed exchange rate.

The current recession hit the Baltic States in a very rapid and severe manner. It was the result of numerous factors combined:

- the countries' competitiveness was undermined by the large wage increases,
- the strong demand in the domestic markets led to a waning interest in production for export,
- overproduction and high prices in the property market led to a sharp decline in construction in the face of the crisis (with growing unemployment as a result),
- global crisis means that demand for Baltic countries' export goods declined,
- dramatic decline in foreign capital inflows as a result of foreign investors panic,
- slowdown in lending activity combined with a high share of loans in private consumption financing (decrease of consumption as a result).

The crisis affected the Baltic countries in different ways. It led to a dramatic fall of GDP in these countries, budget deficits and their budget debt soared in an unprecedented way (especially for Estonia), as did the outflow of currency. Real wages diminished, unemployment rose and property prices fell down while the asset price bubble burst. All these tendencies are imprinted in the Baltic States competitiveness.

3. Impact of crisis on the competitiveness of the Baltic States – analysis of the uniform performance measures

3.1. GDP and GDP per capita growth as the most comprehensive measures of competitiveness

The most comprehensive measures of changes in competitiveness in an economic context are GDP (Figure 2) and GDP per capita (Figure 3) dynamics. The years 2004–2006 were a period of a worldwide acceleration in economic growth. In 2006, the global economy grew by 5.4%, while emerging economies grew even faster than the global one. The economic growth rate in the Baltic States remained high and stable from 2004 to 2007 (cf. Figure 2) Latvia had the highest average of the GDP growth rate for this period (9.95% per year), when compared to Estonia's and Lithuania's level, which was 8.2% per year. However, one could observe the real GDP decrease in 2007 in relation to Estonia and Latvia and then a substantial decrease in GDP in 2008 in all the countries in question. In 2009 they all recorded a double-digit decrease in real GDP. Latvian GDP dropped by approximately 14 percentage points (from –3.3% in 2008 to –17.7% in 2009), Estonian GDP dropped in 2009 by approximately 10 percentage points (from –3.7% in 2008 to –14.3% in 2009), and Lithuanian by approximately 18 percentage points (from 2.9% in 2008 to –14.7% in 2009).

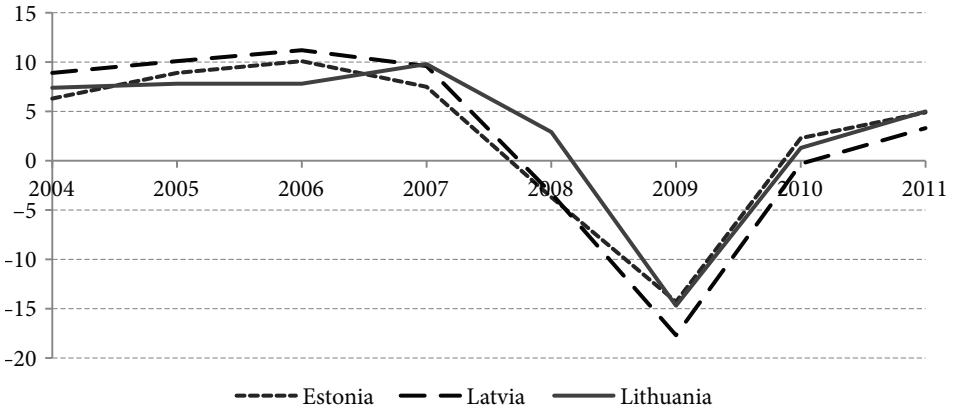

Figure 2. GDP growth in the Baltic States in 2004–2011 (%, year-to-year)
Source: Own calculation based on Eurostat database 2011

So, Lithuania went through the worst correction of GDP in the face of the subprime crisis. One can note that after the two-year long GDP decrease, with 2009 proving particularly severe for all the three countries, the Baltic economies achieved a positive growth rate in 2010, and they have even better forecasts for 2011. Taking into account the severity of the crisis, it needs to be stressed that the period of negative GDP growth rate was really short, and lasted only two years.

According to EUROSTAT data, the underlying causes of such a great economic decline in all of the three Baltic countries were low domestic demand and dramatic fall in fixed private capital formation. Significantly lower domestic demand in 2008 and 2009 (domestic demand was the main source of economic growth till 2007) was a consequence of the decrease in household consumption, stemmed from both the decline in disposable income and restrictions in banking lending conditions.

Figure 3 shows data on the tendencies in GDP per capita, which can be perceived as an imperfect measure of economic welfare[7]. In order to assess the impact of the crisis on competitiveness, GDP per capita has been presented as a percentage change in reference to the level in 2004 (the year of the EU accession for the three analyzed countries). In all three countries the tendencies in GDP per capita growth were positive and similar in relation to the value of changes. According to Eurostat data, the highest GDP per capita in 2004 was recorded in Estonia (7,600 euro), then Lithuania (5,600 euro) and Latvia (5,100 euro). After few years of stable increase, the highest recorded value of GDP per capita was 9,900 euro for Estonia in 2007, 7,600 euro for Lithuania in 2008 and 6,900 euro for Latvia in 2007. Although the

[7] GDP per capita is not a complete measure of economic welfare, because the GDP value does not include for example unpaid household work or negative effects of economic activity, like environmental degradation.

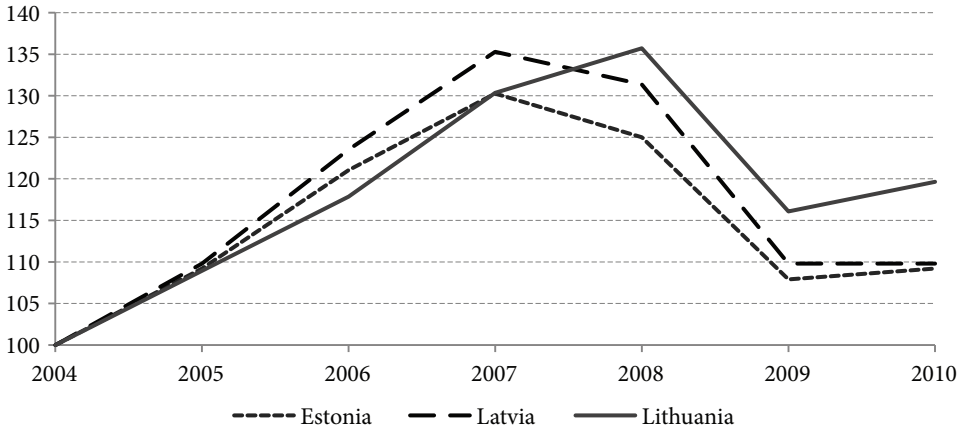

Figure 3. GDP per capita growth in the Baltic States in 2004–2010 (2004 = 100)
Source: Own calculation based on Eurostat database 2011

increase in GDP per capita was substantial and totaled approximately 30–35% for the period 2004–2007 (2004–2008 for Lithuania).

It needs to be stressed that there are still strong discrepancies between European emerging markets and European developed countries (e.g. Denmark – 39,900 euro in 2008, Finland – 32,900 euro in 2008, Germany – 29,300 euro in 2008). Estonia, Latvia and Lithuania still seem to be poor by the standards of the advanced industrialized world.

The impact of the crisis on the Baltic States competitiveness measured by GDP and GDP per capita growth was extremely severe. However, it needs to be highlighted that – thanks to the consistent policy of crisis management and support from the IMF and the European Commission – tendencies in both GDP and GDP per capita improved fast, just after two years of the crisis outbreak. Thus, it is highly probable that the impact of the crisis on overall competitiveness of the Baltic States was not as severe as we may expect while analyzing GDP and GDP per capita tendencies (cf. Section 4).

3.2. Tendencies in prices and labor market

The tendencies in GDP growth mentioned in Section 3.1 were accompanied by growing inflation (measured by HICP, cf. Figure 4). While Latvia had a high level of inflation for the whole period before the crisis (the level was above 6.0% per each year), the HICP growth rate rose in all of the Baltic States in 2007 and reached its peak in 2008, which was 15.3% (Latvia), 11.1% (Lithuania) and 10.6% (Estonia). This inflation growth was mainly demand-driven [NBP 2007]. However, it should be stressed that the process of disinflation started very rapidly (in mid–2008) and

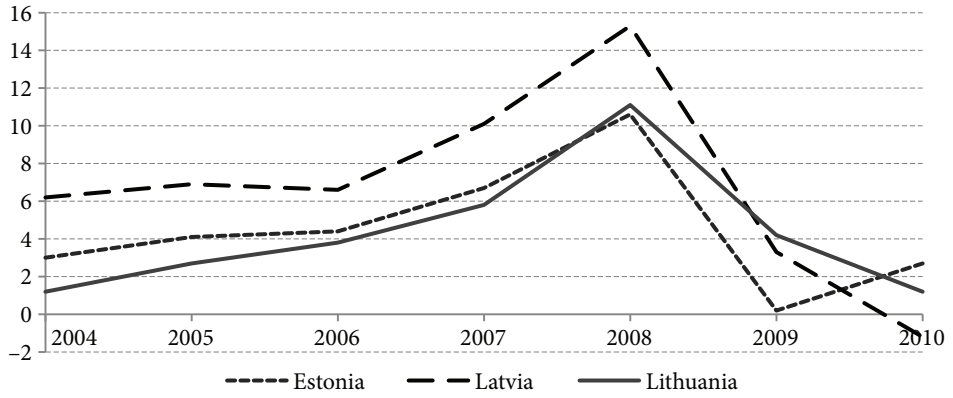

Figure 4. Inflation growth in three Baltic States in 2004–2010 (HICP, %, year-to-year)
Source: Own calculation based on Eurostat database 2011

all the three countries recorded a considerable fall in prices in 2009. In January 2009 the inflation measured by HICP amounted to 0.2% (Estonia), 3.3% (Latvia) and 4.2% (Lithuania) on a year-to-year basis. The decrease in inflation can be explained mainly by decreases in prices of food, housing (electricity, gas and heating) and fuels. Additionally, core inflation also experienced a significant downfall in all the three countries. The decrease in core inflation was the consequence of a consistent crisis management policy in the Baltic States. The crisis management tools include, among others, increased downward flexibility of wages and prices. While analyzing the impact of the crisis on competitiveness, one may argue that such a short period of growing inflation could not be reflected in the worsening of overall competitiveness of these economies (cf. Section 4).

It is also interesting to analyze what the labor market reaction to the crisis situation was. Labor market tendencies, statistics especially regarding productivity and costs are important in the context of competitiveness of the economy[8]. The employment growth rate in three Baltic States is given in Figure 5. One can easily divide the whole period 2004–2010 into two separated periods of a positive employment growth rate (2004–2008) and a negative one (2008–2010). However, it needs to be underlined that the dynamics of employment growth rate decreased in Estonia and Latvia between 2006 and 2007 and then in all the countries between 2007 and 2008. 2009 was the year of the most severe fall in employment in the Baltic countries and the reduction in employment accounted for –13.2% (Latvia), –10.0% (Estonia) and –6.8% (Lithuania). The rising unemployment problem can be perceived as one of the factors affecting competitiveness of the economy [cf. Krugman 1994; Smolny

[8] Labor market efficiency is one of twelve pillars of competitiveness according to the World Economic Forum methodology.

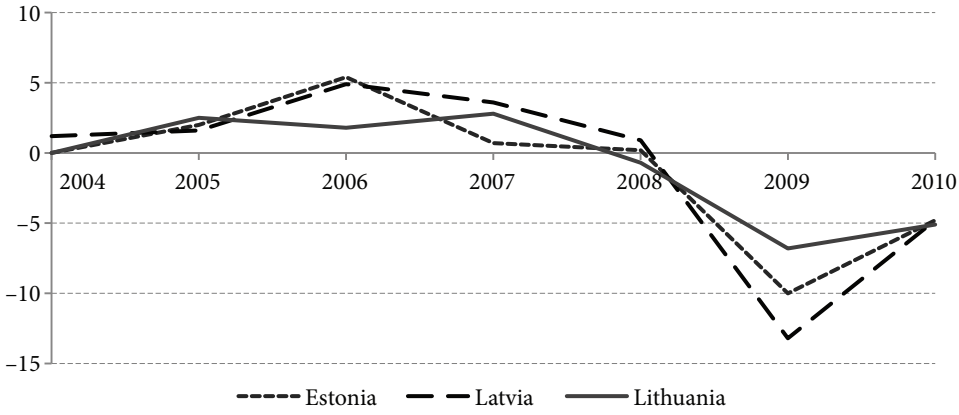

Figure 5. Employment growth in the Baltic States in 2004–2010 (year-to-year)
Source: Own calculation based on Eurostat database 2011

2009; Pina 2011]. The thesis is particularly justified in the case of permanent unemployment growth. However, all the three cases under study concern short-term occurrences. It is thus possible that it was not fully demonstrated by the deterioration of economic competitiveness.

From the point of view of competitiveness of the economy, it is also important to determine how the crisis affected real costs of labor. Relevant empirical data for Estonia, Latvia and Lithuania are shown in Figure 6. From 2004 to 2009 the tendencies in real labor costs were changeable, with short periods of growing and declining costs. A distinct drop in the real labor costs growth rate in 2010 (reaching –9.5% in Lithuania, –8.2% in Latvia and –6.6 in Estonia) may be perceived as one of the elements allowing the Baltic States to quickly recover from the crisis.

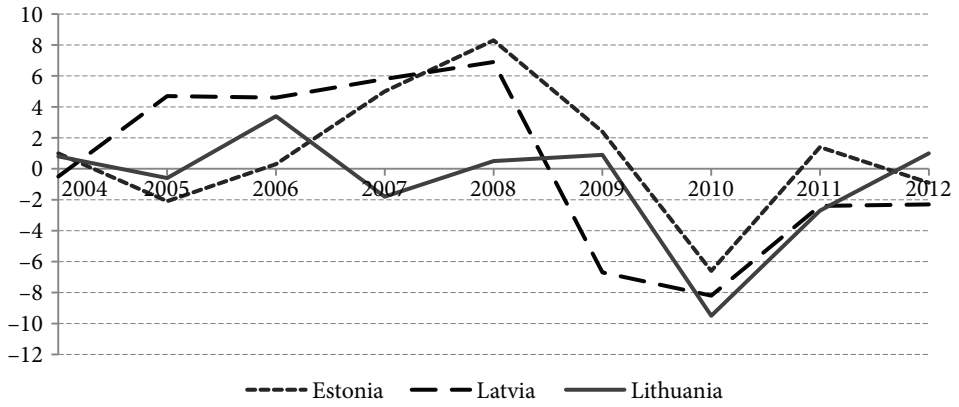

Figure 6. Real unit labor costs growth in the Baltic States in 2004–2012 (year-to-year)
Source: Own calculation based on Eurostat database 2011

Prognostic data also suggest that no fast growth of real labor costs is expected in 2011 and 2012, which – if the efficiency remained unchanged – could undermine the region's competitiveness. Therefore, the economic crisis does not seem to have a negative influence on real unit labor costs, and in the next step it was not demonstrated at all by the deterioration of economic competitiveness. What is more, this economic variable was a tool successfully used in the process of crisis management and restoring competitiveness.

Another variable describing the labor market, which is of key importance for economic competitiveness, is labor productivity. According to data presented in Figure 7, the 2004–2010 period was characterized by a relatively stable growth of this factor (about 3.5 percentage points each year), with only occasional disruptions of that trend. Both disruptions may be perceived as the result of the subprime crisis and occurred in Estonia (in 2008) and Lithuania (in 2009). What is particularly significant in the context of the analysis, the drop in labor productivity, though severe (especially in Estonia where labor productivity fell below the 2004 level), might not have affected the broadly defined realm of competitiveness, due to its briefness.

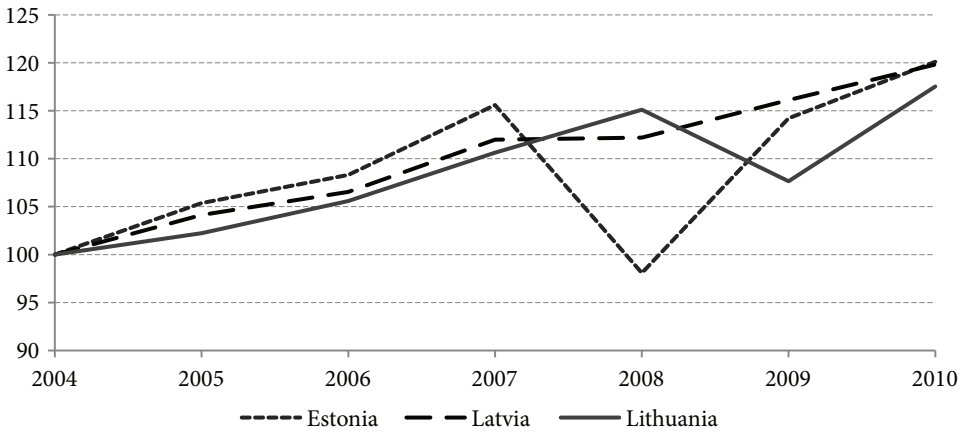

Figure 7. Labor productivity in three Baltic States (2004 = 100)
Source: Own calculation based on Eurostat database 2011

3.3. External trade and competitiveness

All three economies in question may be regarded as relatively small and open. Therefore, another vital aspect of the assessment of their competitiveness is country's position in the field of international trade. Competitiveness has been expressed through two variables: export as percent of GDP (Figure 8) and trend in export/import ratio (Figure 9).

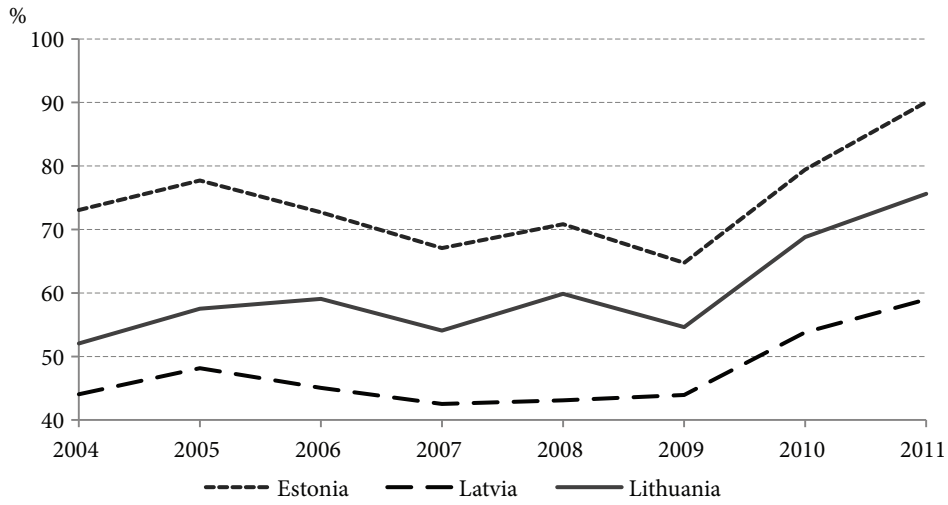

Figure 8. Export of goods and services in Baltic states as % of GDP
Source: Own calculation based on Eurostat database 2011

The country which had the highest trade exposure was Estonia (export accounted for 73.1% of its GDP in 2004 and 90.1% in 2011). In other countries the channel of international trade seemed less material in transferring the financial crisis (export accounted for 52.1% of GDP in 2004 and 75.6% of GDP in 2011 in Lithuania and 44% of GDP in 2004 and 59% of GDP in 2011 in Latvia). In 2004–2009 (thus

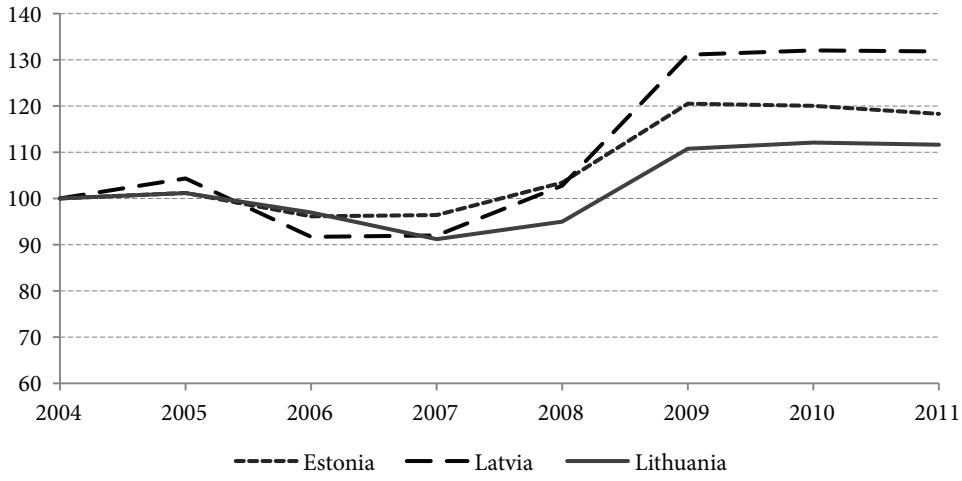

Figure 9. Ratio of export to import of the Baltic countries in 2004–2011 (2004 = 100)
Source: Own calculation based on Eurostat database 2011

also in the period of recession), the value of the discussed index remained relatively stable in all those countries (with extremes amounting to respectively 67.1% and 77.7% for Estonia, 42.5% and 48.2% for Latvia and 54.1% and 59.9% for Lithuania). However, it should be emphasized that this stability was due, among other factors, to a strong drop in GDP during the recession. On the other hand, the significant growth of the index in 2010 and 2011 (in all three cases the increase in 2011 was above 30 percentage points in relation to the 2010 level) resulted from the higher growth of export than of GDP.

The ratio of exports to imports (Figure 9) illustrates the competitive ability of the Baltic countries (and Estonian, Latvian and Lithuanian companies) to compete at home and on global markets. One may conclude that economic crisis in the Baltic States gave some benefits, since the external trade balance has improved. The ratio of exports to imports increased in all the three countries by approximately 10% (Lithuania), 20% (Estonia) and 30% (Latvia) in relation to the 2004 level. There were several reasons for such improvement: export markets recovered and the Baltic countries became more competitive mostly because of decreasing salaries, heavy decrease in domestic demand which, in turn, influenced import downward trend in 2008 and 2009.

The analysis of uniform performance measures in three Baltic states during the economic downturn creates a foundation for the conclusion that the crisis affected these economies in a similar way. All the three countries had sufficiently balanced budgets and low public debts before the crisis (which was a consequence of the euro adoption process). Additionally, ERM II rules made it really hard (or even impossible) to use exchange rate as a tool of crisis management policy. Similar features of the Baltic countries economies, as well as institutional arrangement in the euro adoption process and the manner in which the crisis affected these economies, caused application of a similar crisis management policy. The fundamental tool of this policy in all three cases was increased downward flexibility of wages (decrease of wages by 15–20% in the public sector) and prices.

4. The impact of the crisis on the competitiveness of Baltic States – analysis of overall performance measures

Based on the analysis conducted in Section 3, it should be acknowledged beyond doubt that the economic crisis strongly affected the competitiveness of the Baltic economies, which was clearly demonstrated by individual macroeconomic variables. At the same time, this influence was short-lived. This provokes a question: was such a brief crisis, despite its severity, reflected in overall measures of competitiveness?

The measurement methodology of general competitiveness employed by WEF and IMD[9] is based primarily on the perception of changes in the selected aspects of economic, social and business environment. The *Global Competitiveness Index* (proposed by WEF) captures open-ended dimension of competitiveness by providing a weighted average of many different components, each of which reflects one aspect of the complex reality, called competitiveness. WEF groups all of these components into 12 *pillars of economic competitiveness.* Moreover, each pillar is characterized by over a dozen specific variables.

Figure 10 illustrates dynamic changes in the competitiveness of the Estonian economy in 2006–2011[10]. The influence of the crisis on the perception of competitiveness is only noticeable in two aspects: *macroeconomic stability* and *health and primary education* (drop in average values in 2009–2010 by 0.97 and 0.62, respectively). As far as the financial aspect of competitiveness is concerned, the crisis materialized with a certain delay (drop in *financial market sophistication* in 2010–2011 by 0.58).

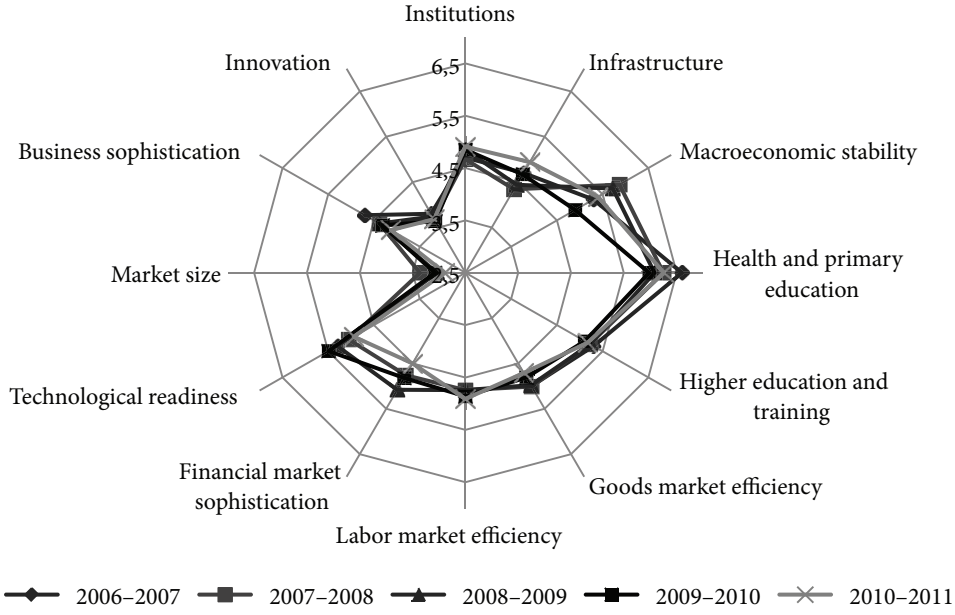

Figure 10. GCI – comparative dynamic performance of Estonia in 2006–2011
Source: Own calculation based on WEF [2006; 2007; 2008; 2009; 2010]

[9] Available data on competitiveness measurement employed by IMD are provided in the annex; their presentation is identical to WEF (visible deterioration of only one index – economic performance index), but due to the absence of data concerning Latvia, they were not subjected to a more thorough analysis, and the presentation is purely demonstrative.

[10] WEF presents data on a two-year basis, with each subsequent report referring to the year preceding the issue of the report, i.e. data from 2007 are given in a 2008 report. Therefore, the economic crisis should possibly be reflected in competitiveness in the report 2009–2010 and 2010–2011.

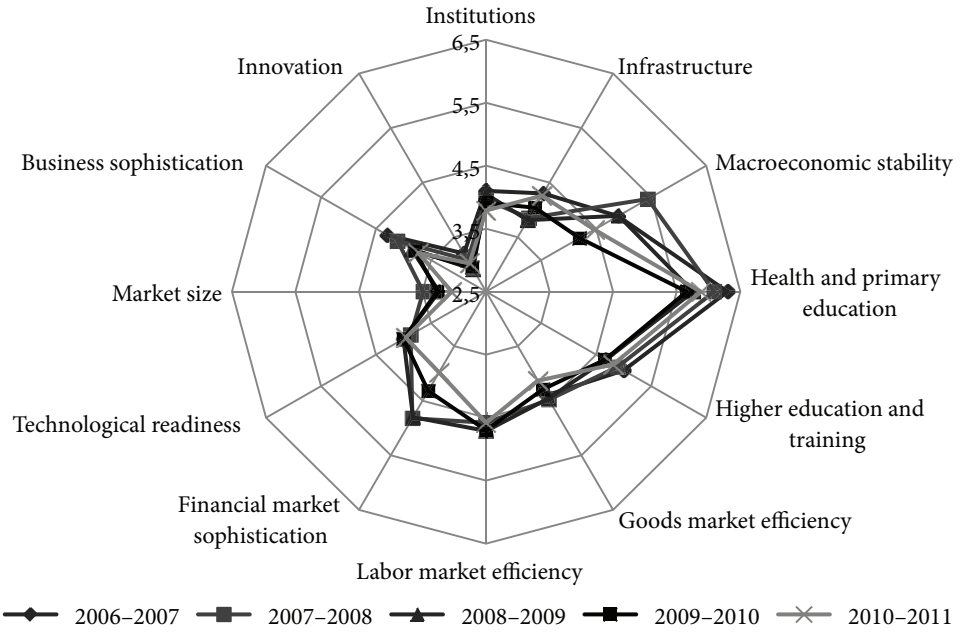

Figure 11. GCI – comparative dynamic performance of Latvia in 2006–2011
Source: Own calculation based on WEF [2006; 2007; 2008; 2009; 2010]

Other variables describing the Estonian economy remained almost unchanged (deviating by a maximum of 0.3 point over the whole period under study) or improved (particularly *infrastructure* – increase by 0.6 and *institutions* – increase by 0.24).

A similar situation occurred in the Latvian economy. It should be stressed that this economy has, on average, poorer competitiveness than Estonia, in all the studied dimensions.

Nevertheless, the crisis has only affected Latvian economic competitiveness by undermining its *macroeconomic stability* and *health and primary education* (drop in average values in 2009–2010 by 1.24 and 0.64, respectively). The deterioration of the financial (*financial market sophistication*, drop in 2010–2011 by 0.84) and business (*business sophistication,* drop in 2010–2011 by 0.57) aspect came to Latvia with delay, just like in Estonia. Other variables describing the Latvian economy remained almost unchanged (deviating by a maximum of 0.4 point over the whole period under study) or improved (particularly *infrastructure* – increase by 0.49).

In Lithuania, the influence of the crisis on economic competitiveness was similar, if not more severe (Figure 12). The drop in competitiveness was again demonstrated by lower values of *macroeconomic stability* and *health and primary education*, but the scale of deterioration was much bigger than in the other two cases (drop in average values in 2009–2010 by 1.45 and 1.06, respectively). On the other hand,

the perception of financial environment competitiveness (*financial market sophistication*, drop in 2010–2011 by 0.55) in Lithuania suffered a milder blow – though also with a year-long delay. Other variables describing the Lithuanian economy remained almost unchanged over the whole examined period.

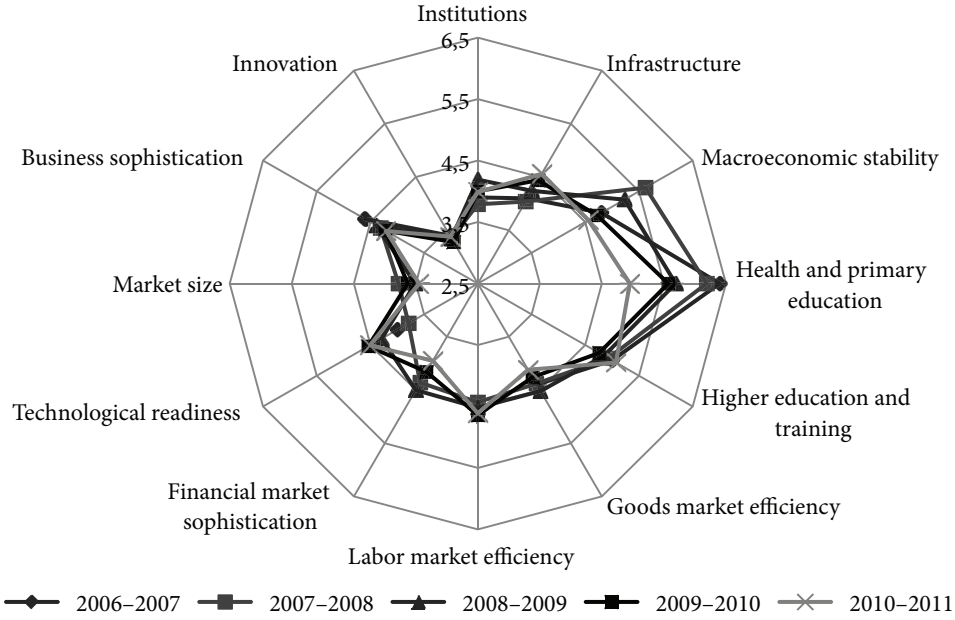

Figure 12. GCI – comparative dynamic performance of Lithuania in 2006–2011
Source: Own calculation based on WEF [2006; 2007; 2008; 2009; 2010]

In general, it may be stated that in all the analyzed countries there was a similar mechanism of reaction of their economic competitiveness to the economic crisis. It was demonstrated primarily in the deterioration of a broadly defined macroeconomic situation (*macroeconomic stability*), but also in poorer healthcare and education on the basic level (*health and primary education*).

The analysis of trends in competitiveness based on World Economic Forum data sets the issue in three sub-indices, defined by WEF as *basic requirements*, *efficiency enhancers* and *innovation factors*. At the same time, these sub-indices reflect the level of economic development and indicate different ways of competing on the global market[11]. Moreover, it is possible to consider competitiveness in absolute terms (values of the variable attained by every country in 2006–2011 – illustrated

[11] According to the latest report, the three countries studied here have completed the second level of development and are currently undergoing transformation to the third stage.

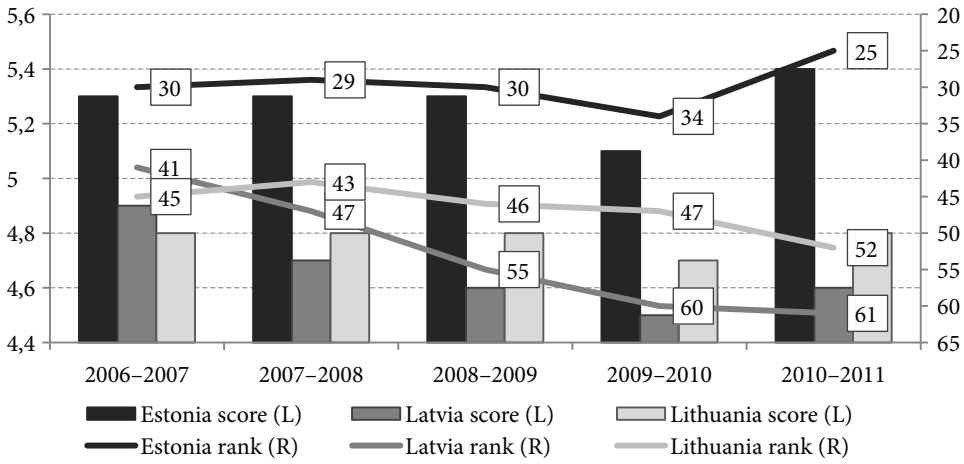

Figure 13. Basic requirements for competitiveness – comparative performance of Baltic countries in 2006–2011

Source: Own calculation based on WEF [2006; 2007; 2008; 2009; 2010]

in Figures 13, 14 and 15 on the left axis, marked with *L*) and relative terms (rank on the list of all countries[12] – illustrated in Figures 13, 14 and 15 on the reversed right axis, marked with *R*).

When analyzing the influence of the crisis on the first of the described sub-indices of competitiveness (i.e. *basic requirements*) in the three Baltic States (cf. Figure 13), one needs to emphasize that there was a slight drop in absolute values in 2009–2010 (corresponding to data from 2008).

The crisis appeared most distinctly in Latvia (drop in the value of average index by 0.4), and least in Lithuania (drop in the value of average index by 0.1). In relative terms – rank on the list of all countries, one might note a rather stable position of Estonia (drop from rank 30 to 34 in 2009–2010 and a quick rise to rank 25 next year). On the other hand, the global positions of Latvia and Lithuania have been on a downward trend. However, as this trend has already been present before 2006, it is hard to link it unambiguously with the influence of the crisis on competitiveness.

Similar ambiguity refers to the analysis of the second subindex of competitiveness (i.e. *efficiency enhancers*) – Figure 14. Deterioration of the measure of competitiveness occurred with a year-long delay in relation to *basic requirements*, but – like in the first case – the drop in the value of the average index was not considerable, amounting to 0.4 in Latvia and only 0.1 in the two other countries. On the other hand, in relative terms, there was a distinct drop in the position of Estonia (drop from rank 27 to 34 in 2010–2011), a stable downward trend of Lithuania and an

[12] The number of countries included in the report rose from 125 in 2006–2007 to 139 in 2010–2011.

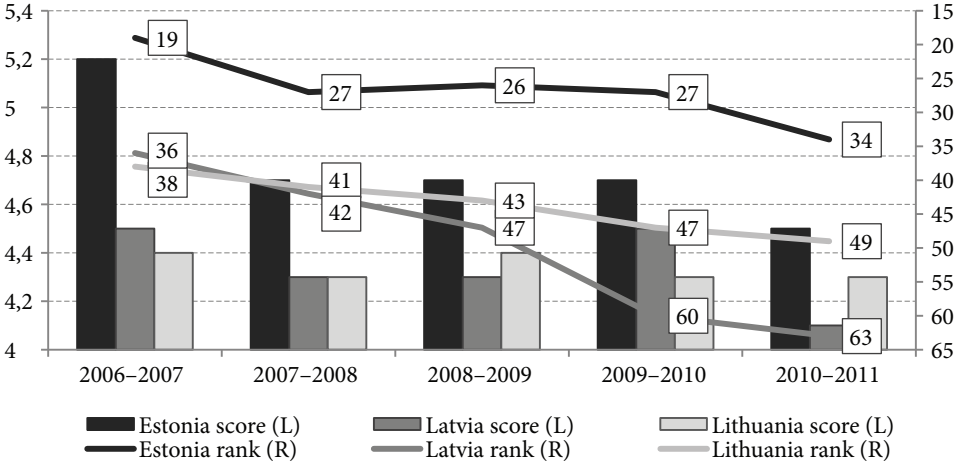

Figure 14. Efficiency enhancers for competitiveness – comparative performance of Baltic countries in 2006–2011

Source: Own calculation based on WEF [2006; 2007; 2008; 2009; 2010]

even more severe, stable downward trend of Latvia (with a serious drop in 2009–2010 from rank 47 to 60).

The third sub-index – *innovation factors* (Figure 15) does not seem to be strongly affected by the economic recession. While analyzing the presented data, it is not easy to indicate deterioration of the measure of competitiveness caused by the economic recession.

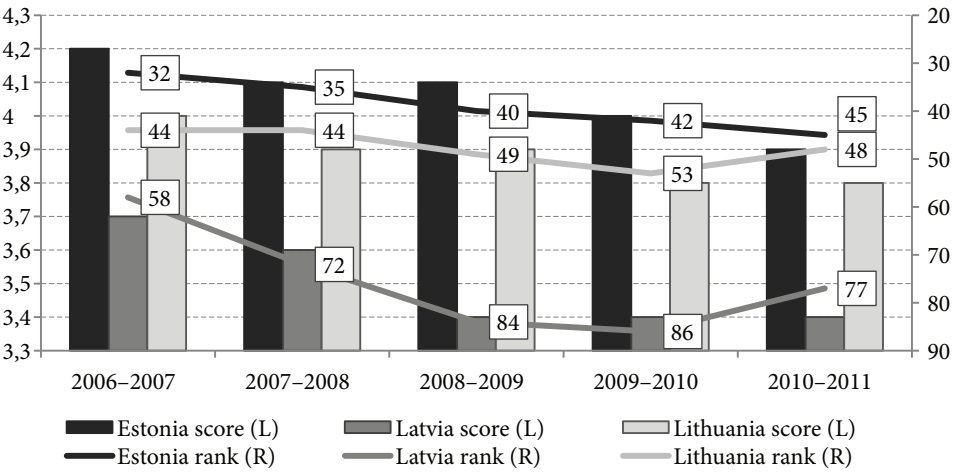

Figure 15. Innovation factors for competitiveness – comparative performance of Baltic countries in 2006–2011

Source: Own calculation based on WEF [2006; 2007; 2008; 2009; 2010]

The drop in the value of the average index (taking into account the whole period from 2006–2007 to 2010–2011) was not considerable in all three cases, amounting to 0.3 in Latvia and Estonia and only 0.2 in the third country. Exactly the same conclusions may be formulated in relation to the rank of the countries. There was a stable downward trend of Estonia, Latvia and Lithuania, which started in 2006–2007 with a one-time rise in 2010–2011 (Lithuania's rise from rank 53 to 48 and Latvia's rise from rank 86 to 77).

The analysis of overall measures of competitiveness create the foundation for much less radical conclusions about the impact of the economic recession on international competitiveness. There is only one unquestionable drop in absolute values in 2009–2010, which reflects deterioration of some basic requirements for competitiveness (referring to the *macroeconomic stability*).

Conclusions

International competitiveness and economic crisis intermingle with one another. The international cases selected for the purpose of this research (i.e. Estonia, Latvia and Lithuania) were to demonstrate clear and unquestionable evidence that recession affects the long-term international competitiveness of countries. One may believe that such deep and painful economic recession has to leave some permanent and explicit traces on a country's competitiveness. Thus, the results of this research may be somewhat surprising.

When assessing the impact of the economic crisis on the competitiveness of the Baltic economies, one may point out some regularities. First of all, the choice of measures of competitiveness, providing the basis for analysis, is of key importance to the conclusions formulated. Employing single macroeconomic variables suggests a much stronger influence of the crisis on competitiveness in comparison to the general measures used by *World Economic Forum* and *International Institute for Management Development*. However, it might be possible that the influence of recession on competitiveness – though certainly present and quite strong – was too short-lived to considerably affect the measures of competitiveness, which were constructed mainly on the basis of perceptions and opinions of various social and business groups. Having analyzed individual measures of competitiveness, i.e. macroeconomic indices, it may be concluded that the Baltic States suffered from economic deterioration for one or two years (mostly in 2008–2009). Efficient counteraction against negative economic trends was the main factor preventing the crisis from affecting other aspects of competitiveness.

Secondly, the main channel through which the crisis undermined competitiveness was macroeconomic stability (deterioration of main macroeconomic indices

of the Baltic economies). What is particularly noteworthy, the crisis essentially did not negatively affect competitiveness through the labor market and commodities market. The efficiency of these markets remained unchanged. Similar trends were displayed by two other important variables determining competitiveness, i.e. *innovation* and *technological readiness*.

On the basis of the above considerations, it may be generally concluded that a short-term crisis, even if severe, does not have a negative influence on the economic competitiveness as long as a proper anti-crisis policy is implemented. Sharing a number of structural, institutional and performance features caused that the crisis undermined competitiveness of the Baltic States in a similar manner. This in turn caused applying an analogue crisis management policy with a fundamental tool of fiscal policy tightening by increased downward flexibility of wages and prices.

Annex

IMD World Competitiveness Indices in Estonia and Lithuania in 2007–2011

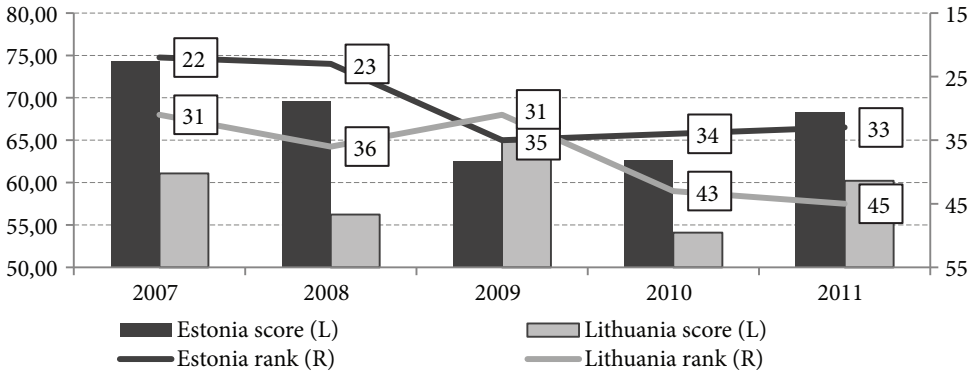

Figure 1.1. Overall competitiveness index
Source: Own calculation based on IMD World Competitiveness Online 1995–2011

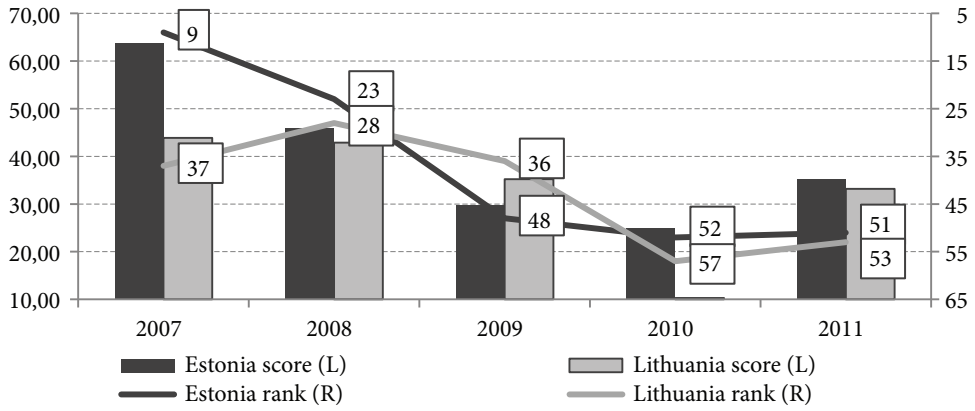

Figure 1.2. Economic performance index
Source: Own calculation based on IMD World Competitiveness Online 1995–2011

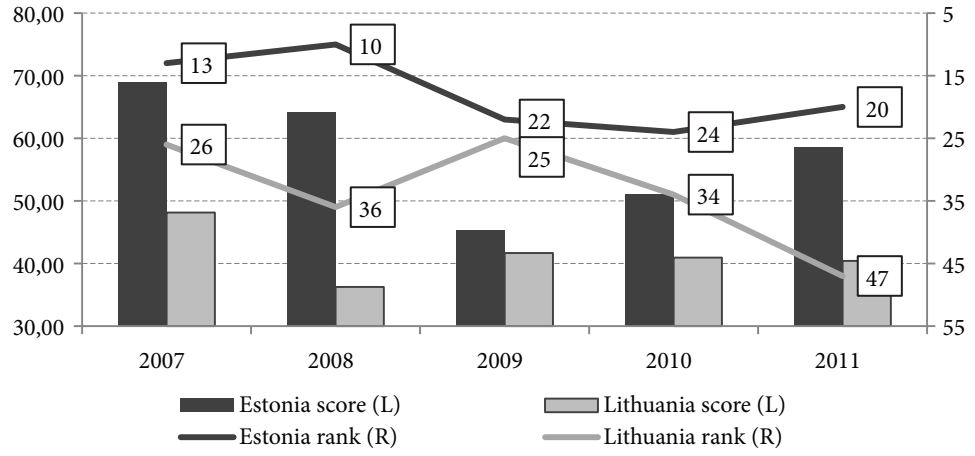

Figure 1.3. Government efficiency index
Source: Own calculation based on IMD World Competitiveness Online 1995–2011

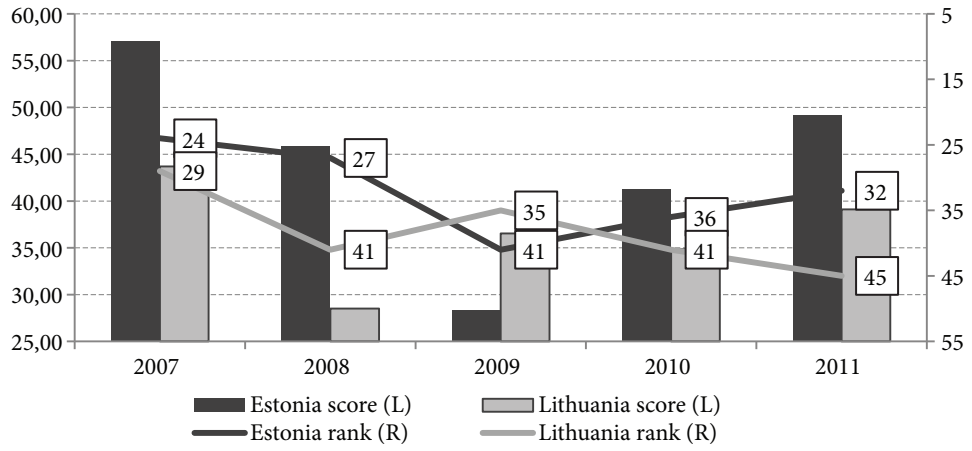

Figure 1.4. Business efficiency index
Source: Own calculation based on IMD World Competitiveness Online 1995–2011

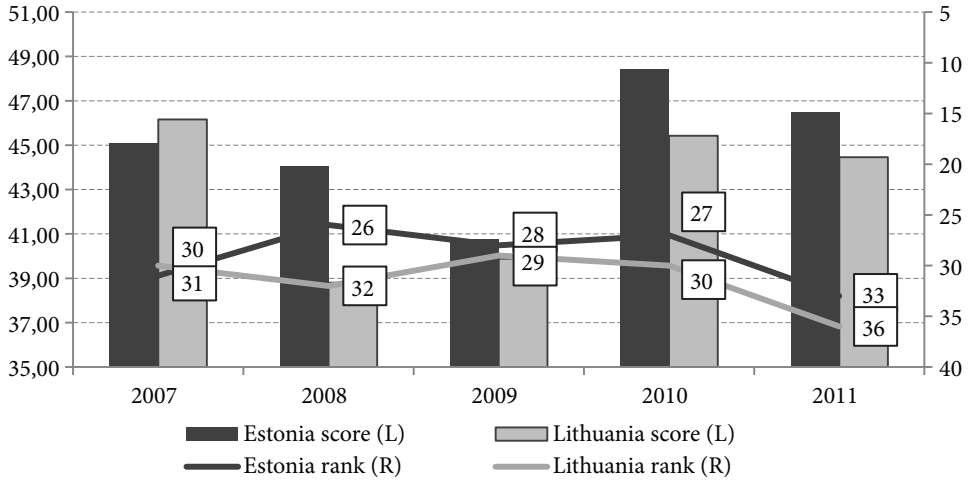

Figure 1.5. Infrastructure index
Source: Own calculation based on IMD World Competitiveness Online 1995–2011

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