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**BUSINESS & ECONOMICS**

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## **INTERNATIONAL COMPETITIVENESS OF THE BALTIC STATES IN THE TRANSFORMATION PERIOD: LITHUANIA, LATVIA AND ESTONIA**

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*Received:* March, 2008  
*1<sup>st</sup> Revision:* May, 2008  
*2<sup>nd</sup> Revision:* May, 2009  
*Accepted:* August, 2009

**ABSTRACT.** *The aim of article is the analysis of international competitiveness and competitive position of the Baltic countries (Lithuania, Latvia, Estonia) in the period 1996-2006. The first, were defined expressions of international competitiveness of economy and international competitive position with simultaneous indication of suitable factors determining the changes of international competitiveness of economy. On the basis of conducted analysis, one may say, that the international competitiveness and competitive position of the Baltic countries is relatively low yet. However, in the years 1996-2006 appeared the gradual growth of competitiveness and competitive position of the Baltic countries on international arena, what confirms favorable changes of analyzed competitiveness indexes. The possibilities of increasing international competitiveness of the Baltic countries depend on, whether the Baltic countries will fully use existing chances resulting mainly from the membership in the European Union. Moreover, the improvement of international competitiveness of Lithuania, Latvia and Estonia depends on overcoming of existing barriers, such as the necessity of public finance reforms, continuation of structural reforms, enlargement of investments, increasing the elasticity of the labour market and the gradual aiming at knowledge based economy.*

**KEYWORDS:** competitiveness of economy, international competitive position, Lithuania, Latvia, Estonia.

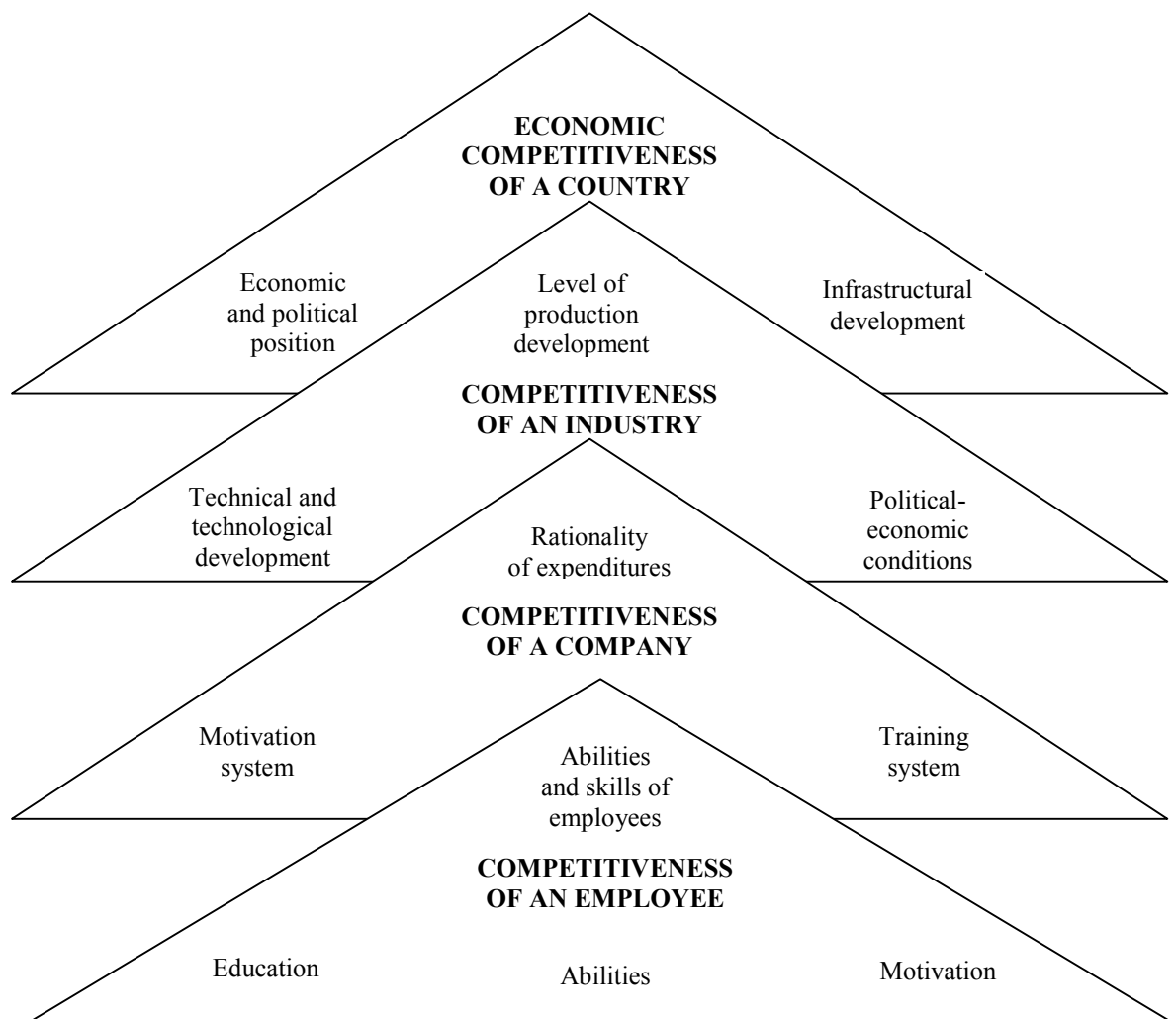
**JEL classification:** F1, P2.

## Introduction

Competitiveness means different things to different people. It is essential to differentiate competitiveness at three various levels of aggregation:

- a) at the employee level;
- b) at the firm level;
- c) at the industry level;
- d) at the nation level.

At each level of aggregation, there are various measures of competitiveness. They vary in particular in what they imply about the present and future economic success and welfare of a firm, industry or nation. Some concepts of competitiveness are suitable at one level of aggregation but not at another (McFetridge, 1995). Generalizing different interpretations of competitiveness are presented below (*Figure 1*) the relationships between the competitiveness of different economic levels.



Source: Reiljan, Hinrikus, Ivanov, 2000, p. 24.

Figure 1. Links between economic competitiveness of entities on different economic levels

In this article we will focus on international economic competitiveness of given countries. In economic literature, there are many definitions of international competitiveness of economy.

“A nation’s competitiveness is the degree to which it can, under free and fair market conditions, produce goods and services that meet the test of international markets while simultaneously expanding the real incomes of its citizens. Competitiveness at the national level is based on superior productivity performance and the economy’s ability to shift output to high productivity activities which in turn can generate high levels of real wages. Competitiveness is associated with rising living standards, expanding employment opportunities, and the ability of a nation to maintain its international obligations. It is not just a measure of the nation’s ability to sell abroad, and to maintain a trade equilibrium” (The Report of the President’s Commission on Competitiveness, 1984).

“[Competitiveness] may be defined as the degree to which, under open market conditions, a country can produce goods and services that meet the test of foreign competition while simultaneously maintaining and expanding domestic real income” (OECD Programme on technology and the Economy, 1992)

“An economy is competitive if its population can enjoy high and rising standards of living and high employment on a sustainable basis. More precisely, the level of economic activity should not cause an unsustainable external balance of the economy nor should it compromise the welfare of future generations” (European Competitiveness Report, 2000).

Most often, the international competitiveness of economy is defined as an ability to derive the possibly largest advantages from participation in international division of labour. Next, the international competitive position (called as a competitiveness of outcome type) is the narrower notion than the international competitiveness of economy (the international competitive ability) and it mainly treats economy in the sense of international trade. Therefore, it concerns the international exchange of goods, services and production factors (Misala, 2006).

In practice, many indexes are used to evaluate the international competitiveness and competitive position of a given country. The most often used measures are as follows: the indexes of macroeconomic stabilization pentagon, indexes of economic freedom, shares in world trade, indexes of revealed comparative advantages, indexes of intra-industry trade, balance of global capital flows, balance of foreign direct investments and changes of real effective exchange rates (Misala, 2001; Vissak, 2009).

## **1. Indexes of International Competitiveness of the Baltic countries**

Foreign policies of the Baltic countries are based on principles of liberal economy. In the area of foreign trade the attention is concentrated on continuing the process of trade liberalization, as well as on deepening the process of economic integration with European Union. Economic policy led in this way finds one’s reflection in changes of indexes of macroeconomic stabilization pentagon (see *Table 1*).

From data presented in *Table 1*, that generally in years 1996-2006 appeared relative improvement of international competitiveness of the Baltic economies. What’s more, the most noticeable improvement of indexes of macroeconomic stabilization pentagon took down since 2000 year, what shows about essential improvement of the Baltic countries competitiveness (Hsing and Sergi, 2009).

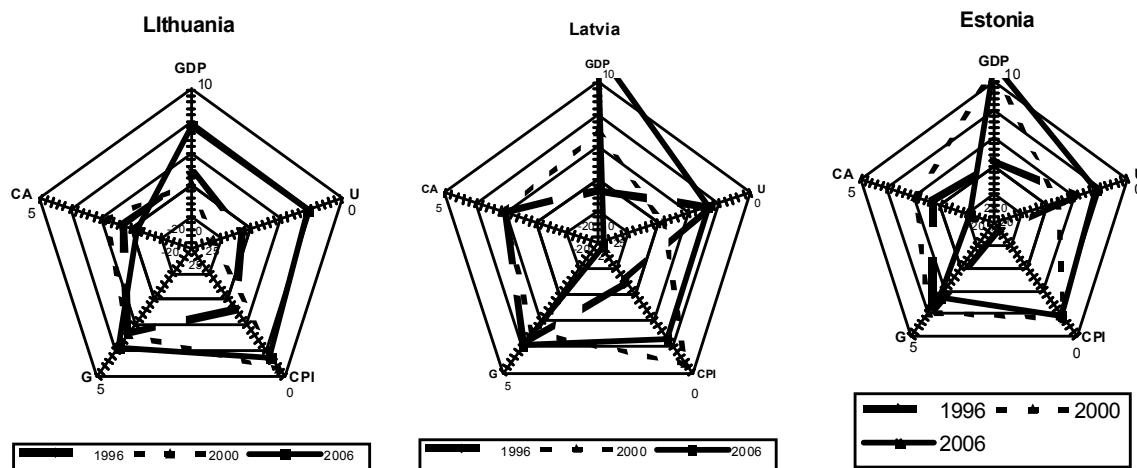
The analysis of individual macroeconomic indexes does not show full situation of the economy and this makes difficult for the evaluation of economic situation changes in time.

**Table 1. Indexes of macroeconomic stabilization pentagon for the Baltic countries, 1996-2006 (%)**

CRITERIA	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
<b>Lithuania</b>											
GDP growth rate	4.7	8.5	7.5	-1.5	4.1	6.6	6.9	10.3	7.3	7.9	7.7
unemployment rate	16.4	14.1	13.7	13.4	15.9	16.8	13.0	12.9	11.3	8.3	5.6
Inflation rate	13.1	8.2	2.4	0.3	1.4	2.0	-1.0	-1.3	2.9	3.0	3.8
Share of budget deficit in GDP	-3.3	-11.9	-3.1	-2.8	-3.2	-2.1	-1.5	-1.3	-1.5	-0.5	-0.6
Share of current account deficit in GDP	-8.8	-9.8	-11.6	-11	-6	-4.7	-5.1	-6.8	-7.7	-7.2	-11.0
<b>Latvia</b>											
GDP growth rate	3.3	8.4	4.7	3.3	6.9	8.0	6.5	7.2	8.7	10.6	11.9
unemployment rate	7.2	7.0	14.5	13.8	14.2	13.1	13.2	10.6	9.9	8.9	6.8
Inflation rate	17.6	7.0	2.8	3.2	1.8	3.2	1.4	2.9	6.2	6.9	6.6
Share of budget deficit in GDP	-0.5	1.5	-0.6	-5.3	-2.8	-2.1	-2.3	-1.6	-1.0	-0.4	-0.3
Share of current account deficit in GDP	-4.9	-5.6	-9.5	-8.9	-4.8	-7.6	-6.6	-8.2	-13	-12.7	-21.1
<b>Estonia</b>											
GDP growth rate	4.4	11.1	4.4	0.3	10.8	7.7	8.0	7.2	8.3	10.2	11.2
unemployment rate	9.9	10.4	9.5	11.6	13.1	12.4	9.4	10.7	10.0	7.9	5.9
Inflation rate	23.1	9.3	8.8	3.1	3.9	5.6	3.6	1.4	3.0	4.1	4.4
Share of budget deficit in GDP	-1.5	-	-	-	-0.2	-0.3	0.4	1.8	1.8	1.9	3.6
Share of current account deficit in GDP	-8.6	-11.4	-8.7	-4.4	-5.3	-5.4	-9.8	-11.6	-12.5	-10.5	-15.5

Source: own compilation based on Central Statistical Office data, 2008.

A more effective method of analysis is simultaneous view on several main economic measures of country. One of instrument, which enables evaluation of five such macroeconomic indexes, is the graphic presentations in the form of macroeconomic stabilization pentagon (Babińska, 2004). With this method, the statistical data is used concerning five basic macroeconomic measures, such as GDP growth rate (*GDP*), unemployment rate (*U*), inflation rate (*CPI*), share of budget deficit in GDP (*G*) and share of current account deficit in GDP (*CA*). The points of macroeconomic stabilization pentagon are scaled in such a way that the better situations in the range of analyzed macroeconomic indexes, the farther from the system centre points are laid, marked on individual axes (Bukowski, 2003).



Source: own compilation based on data in Table 1.

Figure 2. Macroeconomic stabilization pentagon for The Baltic countries in years 1996, 2000 and 2006

The macroeconomic stabilization pentagons for the Baltic countries characterized in analyzed years by area considerably differs from ideal regular pentagon (*Figure 2*). Nevertheless, in comparison with 1996, shape of figures appointed by suitable values of macroeconomic indexes in 2000 were in even smaller degree approximate to the shape of regular pentagon. However, the shape of pentagons appointed by macroeconomic variables in 2006 was to the largest degree approximate to the form of regular pentagon, what testifies to increasing international competitiveness of Lithuania, Latvia and Estonia. Afore-mentioned development tendencies confirm also the changes of indexes of economic freedom for these countries in the period of 1996-2006 (see *Table 2*).

**Table 2. Index of Economic Freedom (IEF) for The Baltic countries in years 1996-2006**

Year	Overall Rank	Score	Regulation	Trade	Fiscal	Government	Monetary	Investment	Financial	Property Rights	Corruption
<b>Lithuania</b>											
1996	22	47.4	50	60.0	84.4	68.7	3.8	50	30	50	30
1997	22	56.3	50	74.0	83.7	66.3	33.0	70	50	50	30
1998	22	60.9	50	96.0	80.5	67.9	53.9	70	50	50	30
1999	22	62.8	50	96.0	81.6	72.4	65.1	70	50	50	30
2000	22	63.3	50	96.0	80.3	71.2	72.4	70	50	50	30
2001	22	65.7	50	97.8	80.6	78.1	84.9	70	50	50	30
2002	22	67.2	50	97.9	82.7	75.6	87.7	70	50	50	41.0
2003	22	68.2	50	75.4	85.9	76.7	88.1	70	70	50	48.0
2004	22	70.9	50	75.2	88.5	75.9	90.1	70	90	50	48.0
2005	22	69.5	50	79.0	88.5	71.8	90.1	70	90	50	47.0
2006	22	73.0	87.0	77.4	88.6	71.0	90.4	70	90	50	46.0
<b>Latvia</b>											
1996	41	54.6	50	70.0	87.5	42.6	41.1	50	50	50	50
1997	41	61.9	70	60.0	85.3	64.8	57.4	70	70	50	30
1998	41	62.4	50	76.0	85.0	64.8	65.9	70	70	50	30
1999	41	63.3	50	76.0	84.8	65.8	72.9	70	70	50	30
2000	41	63.0	50	76.0	84.5	57.8	78.6	70	70	50	30
2001	41	64.9	50	75.0	83.6	72.7	83.2	70	70	50	30
2002	41	64.3	50	75.0	84.5	61.0	84.5	70	70	50	34.0
2003	41	65.0	50	73.6	85.5	66.8	85.0	70	70	50	34.0
2004	41	66.2	50	74.8	88.2	69.8	85.7	70	70	50	37.0
2005	41	63.0	50	75.0	89.1	44.8	84.7	70	70	50	38.0
2006	41	69.2	90.4	77.4	89.0	61.3	80.8	70	70	50	40.0
<b>Estonia</b>											
1996	12	67.4	70	89.0	82.1	67.8	17.3	90	70	70	50
1997	12	71.2	70	89.0	81.0	64.9	55.5	90	70	70	50
1998	12	72.6	70	98.0	81.5	41.7	62.3	90	70	70	70
1999	12	75.8	70	100.0	81.9	59.6	70.3	90	70	70	70
2000	12	74.2	70	100.0	81.7	41.1	74.9	90	70	70	70
2001	12	79.0	70	100.0	86.4	74.0	80.6	90	70	70	70
2002	12	79.5	70	100.0	86.7	64.9	87.0	90	90	70	57.0
2003	12	79.4	70	99.2	86.9	66.7	85.7	90	90	70	56.0
2004	12	79.0	70	99.2	89.2	64.4	82.1	90	90	70	56.0
2005	12	76.6	70	99.9	88.6	69.1	85.4	90	90	70	55.0
2006	12	75.9	82.0	77.4	89.2	65.4	84.6	90	90	70	60.0

Source: Heritage Foundation, <http://heritage.org>, referred on 10/03/2008.

The level of indexes of economic freedom for the Baltic countries characterized immense stability in the period of 1996-2006, and their economic value placed the Baltic countries ahead of all countries (with the exception of Latvia), what it thereby testifies to relatively high competitiveness of Baltic economies on the international arena. In 2006, Lithuania, Latvia and Estonia took respectively 22<sup>nd</sup>, 41<sup>st</sup> and 12<sup>th</sup> positions in ranking of countries with the highest economic freedom. Moreover, on the basis of data showed *Table 2*, one may say that the Baltic countries are rather liberal economies (*the mostly free or the free*).<sup>1</sup>

Another measure of international competitiveness of economy is the Global Competitiveness Report published yearly by the *World Economic Forum*. In the 2006 report covers 125 major and emerging economies. The report “assesses the ability of countries to provide high levels of prosperity to their citizens. This in turn depends on how productively a country uses available resources. Therefore, the Global Competitiveness Index measures the set of institutions, policies, and factors that set the sustainable current and medium-term levels of economic prosperity”. The rankings are based on publicly available data and the executive opinion survey, which is a business leaders’ poll, conducted by the World Economic Forum. The survey is designed to capture a broad range of factors affecting the economy’s business climate. The report ranks the world’s nations according to the *Global Competitiveness Index*.

**Table 3. World Economic Forum’s Global Competitiveness Report, 1996-2006**

<i>Countries</i>	<i>Rank 1998</i>	<i>Rank 1999</i>	<i>Rank 2000</i>	<i>Rank 2001</i>	<i>Rank 2002</i>	<i>Rank 2003</i>	<i>Rank 2004</i>	<i>Rank 2005</i>	<i>Rank 2006</i>	<i>Score 2006 (1-5)</i>
Switzerland	8	6	9	15	5	7	8	4	1	5.81
Finland	15	11	5	1	1	1	1	2	2	5.76
Sweden	23	19	12	9	3	2	3	7	3	5.74
(...)										
<b>Estonia</b>	-	-	-	<b>29</b>	<b>27</b>	<b>22</b>	<b>20</b>	<b>26</b>	<b>25</b>	<b>5.12</b>
<b>Latvia</b>	-	-	-	<b>47</b>	<b>43</b>	<b>37</b>	<b>44</b>	<b>39</b>	<b>36</b>	<b>4.57</b>
<b>Lithuania</b>	-	-	-	<b>43</b>	<b>39</b>	<b>40</b>	<b>36</b>	<b>34</b>	<b>40</b>	<b>4.53</b>
(...)										
Angola	-	-	-	-	100	100	103	-	125	2.50

Source: The Global Competitiveness Report.

In 2006, Estonia, Latvia and Lithuania were placed respectively 25<sup>th</sup>, 36<sup>th</sup> and 40<sup>th</sup> in the list of 125 economies covered under the *Global Competitiveness Index* (GCI). In the analyzed period, all the Baltic countries have improved their positions in Global Competitiveness Ranking.

The next measure of international competitiveness of economies is *Human Development Index* (HDI) calculated every year by *United Nations Development Programme* and published in *Human Development Report* (HDR). The Human Development Index is the *measure of life expectancy, literacy, education, and standard of living for countries worldwide* (Dubra *et al*, 2008). It is a standard means of measuring well-being, especially child welfare. It is used to determine and indicate whether a country is a developed, developing, or underdeveloped country.

All countries included in the HDI are classified into one of the three clusters by achievement in human development: high human development (with a HDI of 0.800 or

<sup>1</sup> The countries with score 80-100 are numbered to *the free* countries, 70-79,9 to *the mostly free* countries, 60-69.9 to *the moderately free* countries, 50-59.9 to *the mostly unfree* countries and 0-49.9 to *the repressed* countries.

above), medium human development (HDI of 0.500–0.799) and low human development (HDI of less than 0.500).

**Table 4. United Nations Development Program's Human Development Index, 1998-2006**

Countries	HDR rank 1998	HDR rank 1999	HDR rank 2000	HDR rank 2001	HDR rank 2002	HDR rank 2003	HDR rank 2004	HDR rank 2005	HDR rank 2006	Score 2006
Norway	3	2	2	1	1	1	1	1	1	0.965
Island	5	9	5	7	7	2	7	2	2	0.960
Australia	15	7	4	2	5	4	3	3	3	0.957
(...)										
Estonia	77	54	46	44	42	41	36	38	40	0.858
Lithuania	79	62	52	47	49	45	41	39	41	0.857
Latvia	92	74	63	50	53	50	50	48	45	0.845
(...)										
Nigeria	142	173	151	161	172	174	176	177	177	0.311

Source: Human Development Report, United Nations Development Programme.

In Human Development Report 2006 Estonia was ranked 40th, with a value of 0,858, Lithuania was ranked 41st, with value of 0,857 and Latvia was ranked 45th, with value of 0,845 out of 75 countries in the HDI (*Table 4*). Therefore, these countries were classified into high human development countries.

### 3. Measures of International Competitive Position of the Baltic Economies

The first of analyzed index of competitive position of the Baltic countries is the share of this country in world trade. The data showed in following table indicate, that the Baltic countries in more and more degree gets involved in international trade (Saboniene, 2009). What's more, gradual growth of the Baltic countries commitment in world trade in years 1996-2006 is visible both on the export side, as well as on the import side. It confirms the thesis about growing international competitive position of these countries (see *Table 5*).

**Table 5. The share of Lithuanian, Latvian and Estonian export and import in world trade, 1996-2006 (%)**

SHARE OF THE BALTIC COUNTRIES IN:	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
<b>Lithuania</b>											
World export	0.06	0.07	0.07	0.05	0.06	0.07	0.08	0.09	0.10	0.11	0.12
World import	0.08	0.10	0.10	0.08	0.08	0.10	0.11	0.12	0.13	0.14	0.16
<b>Latvia</b>											
World export	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.05	0.05
World import	0.04	0.05	0.06	0.05	0.05	0.05	0.06	0.07	0.07	0.08	0.09
<b>Estonia</b>											
World export	0.04	0.05	0.06	0.05	0.06	0.06	0.06	0.07	0.07	0.06	0.08
World import	0.06	0.08	0.08	0.07	0.08	0.08	0.09	0.10	0.09	0.09	0.11

Source: own calculation based on World Trade Organization data.

One of measures illustrating international competitive position of the Baltic countries is also balance of foreign trade in years 1996-2006. In this case, the gradually deepening deficit in foreign trade took place since 1996 to 2006. It resulted from the higher dynamic growth of the Baltic imports; in relation to dynamic growth of the Baltic export (*Table 6*).

Table 6. The Baltic countries foreign trade, 1996-2006 (mln USD and %)

Years	Export	Import	Balance	Trade Coverage Index
	mln USD	mln USD	mln USD	w %
<b>Lithuania</b>				
1996	3356.4	4558.5	-1202.2	73.6
1997	3862.5	5643.4	-1780.9	68.4
1998	3710.7	5793.7	-2083.0	64.0
1999	3003.8	4834.5	-1830.7	62.1
2000	3809.4	5456.5	-1647.1	69.8
2001	4583.0	6353.3	-1770.2	72.1
2002	5475.6	7709.3	-2233.7	71.0
2003	7162.4	9803.6	-2641.2	73.1
2004	9302.6	12379.2	-3076.6	75.1
2006	12070.4	15704.4	-3634.0	76.9
<b>Latvia</b>				
1996	1443.3	2319.5	-876.2	62.2
1997	1671.6	2720.9	-1049.3	61.4
1998	1811.1	3191.4	-1380.2	56.8
1999	1723.8	2946.8	-1223.0	58.5
2000	1869.3	3190.8	-1321.5	58.6
2001	2000.7	3504.4	-1503.7	57.1
2002	2284.4	4053.7	-1769.3	56.4
2003	2893.7	5244.0	-2350.3	55.2
2004	4378.6	7311.0	-2932.4	59.9
2006	5302.7	8770.5	-3467.7	60.5
<b>Estonia</b>				
1996	2078.0	3223.9	-1145.9	64.5
1997	2935.7	4437.3	-1501.6	66.2
1998	3244.8	4786.7	-1541.9	67.8
1999	3017.2	4109.5	-1092.3	73.4
2000	3830.3	5052.3	-1222.0	75.8
2001	4014.6	5230.0	-1215.4	76.8
2002	4336.4	5863.3	-1526.9	74.0
2003	5622.5	7966.5	-2344.0	70.6
2004	5539.7	7882.6	-2342.9	70.3
2006	7710.3	10164.5	-2454.2	75.9

Source: own calculation based on Central Statistical Office data.

The above described development tendencies confirm also the index changes of the import coverage by the export ( $TC_i$  - Trade Coverage Index), which belongs to relative measures of competitive position of the country. Namely, analyzing the value changes of trade coverage index it may notice the gradual growth of trade coverage index (with the exception of Latvia) in years 1996-2006, was also the symptom of gradual improvement of the Baltic countries competitive position.<sup>2</sup>

One of the most often used measures of competitive position of given country is Revealed Comparative Advantage Index ( $RCA_i$ ). It expresses relative advantage of country A in export of given good (group of goods) to country B (or the group of countries) in relation to the share of the country A in total export to the country B (or the group of countries). The following table demonstrates the data concerning RCA indexes in Baltic countries foreign trade in years 1996-2006 (Table 7).

<sup>2</sup> Value of  $TC_i$  index show about export to import relation of given country and it is express in percent.



**Table 7. Revealed Comparative Advantage Index (RCA<sub>i</sub>) in the Baltic countries foreign trade, 1996-2006 (by SITC section)**

Commodity group	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
<b>Lithuania</b>											
Food and live animals	0.40	0.58	0.46	0.26	0.31	0.40	0.40	0.46	0.44	0.49	0.52
Beverages and tobacco	-1.32	-0.97	-0.95	-0.68	-0.58	-0.40	-0.23	-0.34	-0.28	0.16	0.28
Crude materials inedible except fuels	0.53	0.43	0.34	0.49	0.42	0.45	0.45	0.47	0.46	0.40	0.36
Mineral fuels lubricants and related materials	-0.19	0.01	0.27	-0.03	-0.04	0.13	0.12	0.14	0.29	0.10	0.05
Animal and vegetable oils and fats	-0.51	-1.14	-1.35	-1.16	-1.69	-1.44	-1.09	-1.32	-1.26	-1.00	-0.72
Chemicals	0.05	-0.12	-0.08	-0.15	-0.25	-0.48	-0.44	-0.43	-0.37	-0.26	-0.23
Manufacture goods classified chiefly by material	-0.16	-0.16	-0.21	-0.19	-0.20	-0.28	-0.32	-0.41	-0.42	-0.34	-0.29
Machinery and transport equipment	-0.31	-0.40	-0.49	-0.44	-0.34	-0.35	-0.25	-0.26	-0.39	-0.32	-0.33
Miscellaneous manufactured articles	0.69	0.65	0.67	0.82	0.92	0.87	0.93	0.88	0.79	0.73	0.68
Commodities & transacts. Not class. Accord. to type	-4.03	-2.65	-2.36	-2.49	-2.53	-2.11	-2.15	-1.96	-1.17	-0.69	0.00
Average	-0.49	-0.38	-0.37	-0.36	-0.40	-0.32	-0.26	-0.28	-0.19	-0.07	0.03
<b>Latvia</b>											
Food and live animals	0.37	0.23	-0.05	-0.53	-0.72	-0.29	-0.34	-0.27	-0.20	0.02	0.22
Beverages and tobacco	-0.65	-0.73	-0.98	-1.20	-0.86	-0.41	0.16	-0.11	0.09	0.08	0.02
Crude materials inedible except fuels	2.06	2.07	2.18	2.30	2.24	2.24	2.04	1.90	1.47	1.59	1.66
Mineral fuels lubricants and related materials	-2.36	-2.55	-1.75	-1.29	-1.59	-2.04	-1.84	-1.92	-0.95	-0.53	-0.89
Animal and vegetable oils and fats	-2.70	-2.71	-0.67	-1.23	-2.43	-3.43	-2.98	-2.31	-1.48	-1.04	-0.77
Chemicals	-0.62	-0.61	-0.70	-0.78	-0.68	-0.66	-0.76	-0.69	-0.62	-0.52	-0.31
Manufacture goods classified chiefly by material	0.34	0.24	0.30	0.40	0.35	0.41	0.48	0.44	0.43	0.41	0.44
Machinery and transport equipment	-0.55	-0.95	-1.30	-1.52	-1.36	-1.30	-1.33	-1.24	-1.03	-0.82	-0.75
Miscellaneous manufactured articles	0.46	0.41	0.42	0.40	0.38	0.42	0.36	0.35	0.39	0.15	0.07
Commodities & transacts. Not class. Accord. to type	2.60	1.53	2.54	1.84	1.11	1.26	1.21	0.38	-0.10	0.06	0.12
Average	-0.11	-0.31	0.00	-0.16	-0.36	-0.38	-0.30	-0.35	-0.20	-0.06	-0.02
<b>Estonia</b>											
Food and live animals	0.13	0.14	0.02	-0.05	-0.11	0.05	0.11	-0.01	-0.12	-0.19	-0.06
Beverages and tobacco	-0.73	-1.14	-0.67	-0.92	-1.00	-0.77	-0.63	-0.37	-0.44	-0.19	0.12
Crude materials inedible except fuels	1.06	1.11	1.11	1.18	0.93	0.94	0.89	0.95	0.77	0.75	0.92
Mineral fuels lubricants and related materials	-0.46	-0.29	-0.42	-0.43	-0.48	-0.54	-0.31	-0.34	-0.44	-0.24	-0.01
Animal and vegetable oils and fats	-1.63	-2.13	-1.83	-1.00	-0.36	0.02	0.14	0.36	0.16	0.22	0.39
Chemicals	-0.06	-0.09	-0.20	-0.47	-0.48	-0.55	-0.56	-0.40	-0.54	-0.61	-0.57
Manufacture goods classified chiefly by material	0.08	0.03	0.08	0.13	0.06	0.08	0.15	0.16	0.02	0.08	0.10
Machinery and transport equipment	-0.40	-0.33	-0.34	-0.33	-0.12	-0.15	-0.32	-0.32	-0.16	-0.21	-0.15
Miscellaneous manufactured articles	0.35	0.32	0.37	0.40	0.37	0.40	0.56	0.61	0.57	0.59	0.38
Commodities & transacts. Not class. Accord. to type	-3.24	-1.78	-0.45	-2.07	0.13	-4.24	-3.24	-5.70	0.90	0.20	-0.26
Average	-0.49	-0.42	-0.23	-0.36	-0.11	-0.48	-0.32	-0.51	0.07	0.04	0.09

Source: The own study on the basis of Central Statistical Office data.

Note:

a) RCA index was calculated according to equation:

$$RCA_i = \ln\left[\frac{x_i}{m_i} \div \frac{X}{M}\right] \quad (3.1)$$

where:

$x_i$  – export value of commodity group „i”;

$m_i$  – import value of commodity group „i”;

$X$  – global export value;

$M$  – global import value.

If indexes of revealed comparative advantage presented above are treating as measures of inter-industry competitiveness of the Baltic economies, then it is possible to affirm that competitiveness of the Baltic countries made gradual improvement (Pranulis *et al*, 2008). In the contemporary world economy greater and greater role plays intra - industry trade. It consists in simultaneous import and export of finished goods and their components come from the same industry by given country or group of countries in given period (Martin, Blanes, 1999). For the sake of specific structure of the Baltic trade, the intensity of intra-industry trade is so far comparatively high. It is confirmed by the data of next table (Table 8).

**Table 8. Intra-industry trade indexes in the Baltic countries trade in years 1996-2006 (by SITC section)**

Commodity group	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
<b>Lithuania</b>											
Food and live animals	0.95	0.90	0.99	0.89	0.98	0.96	0.97	0.93	0.92	0.89	0.90
Beverages and tobacco	0.33	0.41	0.40	0.48	0.56	0.65	0.72	0.69	0.73	0.95	0.98
Crude materials inedible except fuels	0.89	0.98	0.95	0.99	0.97	0.94	0.95	0.92	0.91	0.93	0.98
Mineral fuels lubricants and related materials	0.76	0.82	0.91	0.75	0.80	0.90	0.89	0.92	1.00	0.92	0.87
Animal and vegetable oils and fats	0.61	0.36	0.29	0.33	0.23	0.29	0.38	0.33	0.35	0.44	0.53
Chemicals	0.87	0.76	0.74	0.70	0.70	0.62	0.63	0.65	0.68	0.74	0.73
Manufacture goods classified chiefly by material	0.77	0.74	0.68	0.68	0.73	0.71	0.68	0.65	0.66	0.71	0.71
Machinery and transport equipment	0.70	0.63	0.56	0.57	0.67	0.68	0.71	0.72	0.68	0.72	0.69
Miscellaneous manufactured articles	0.81	0.86	0.89	0.83	0.73	0.74	0.71	0.72	0.75	0.77	0.82
Commodities & transacts. Not class. Accord. To kind	0.03	0.09	0.11	0.10	0.11	0.16	0.15	0.19	0.38	0.55	0.84
Average	0.67	0.66	0.65	0.63	0.65	0.67	0.68	0.67	0.71	0.76	0.81
<b>Latvia</b>											
Food and live animals	0.95	0.87	0.70	0.51	0.45	0.60	0.57	0.59	0.66	0.76	0.78
Beverages and tobacco	0.49	0.46	0.35	0.30	0.40	0.55	0.80	0.66	0.79	0.79	0.69
Crude materials inedible except fuels	0.34	0.34	0.33	0.29	0.31	0.32	0.37	0.42	0.55	0.51	0.54
Mineral fuels lubricants and related materials	0.11	0.09	0.18	0.28	0.21	0.14	0.16	0.15	0.38	0.53	0.35
Animal and vegetable oils and fats	0.08	0.08	0.45	0.29	0.10	0.04	0.06	0.10	0.24	0.35	0.39
Chemicals	0.50	0.50	0.44	0.42	0.46	0.46	0.42	0.43	0.49	0.53	0.55
Manufacture goods classified chiefly by material	0.93	0.88	0.87	0.93	0.91	0.92	0.95	0.92	0.96	0.96	0.89
Machinery and transport equipment	0.53	0.38	0.27	0.23	0.26	0.27	0.26	0.27	0.35	0.42	0.39

Table 8 continued

Commodity group	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
<b>Latvia</b>											
Miscellaneous manufactured articles	0.99	0.96	0.93	0.93	0.92	0.93	0.89	0.88	0.94	0.82	0.71
Commodities & transacts. Not class. Accord. To kind	0.21	0.52	0.24	0.43	0.72	0.66	0.69	0.89	0.70	0.78	0.74
Average	0.51	0.51	0.48	0.46	0.47	0.49	0.52	0.53	0.61	0.65	0.60
<b>Estonia</b>											
Food and live animals	0.84	0.86	0.82	0.82	0.81	0.89	0.90	0.82	0.77	0.77	0.81
Beverages and tobacco	0.48	0.35	0.51	0.45	0.44	0.52	0.56	0.65	0.62	0.77	0.90
Crude materials inedible except fuels	0.70	0.66	0.66	0.59	0.68	0.68	0.71	0.71	0.79	0.77	0.71
Mineral fuels lubricants and related materials	0.58	0.66	0.61	0.65	0.64	0.62	0.71	0.67	0.62	0.75	0.83
Animal and vegetable oils and fats	0.22	0.15	0.20	0.42	0.69	0.88	0.92	1.00	0.90	0.97	0.96
Chemicals	0.76	0.75	0.71	0.63	0.64	0.61	0.59	0.64	0.58	0.58	0.58
Manufacture goods classified chiefly by material	0.82	0.81	0.84	0.91	0.89	0.91	0.92	0.91	0.84	0.90	0.89
Machinery and transport equipment	0.60	0.65	0.65	0.69	0.80	0.80	0.70	0.68	0.75	0.76	0.77
Miscellaneous manufactured articles	0.96	0.95	0.99	0.96	0.95	0.93	0.87	0.87	0.89	0.85	0.97
Commodities & transacts. Not class. Accord. To kind	0.05	0.20	0.60	0.17	0.93	0.02	0.06	0.00	0.73	0.96	0.72
Average	0.60	0.60	0.66	0.63	0.75	0.69	0.69	0.70	0.75	0.81	0.81

Source: own calculations based on Central Statistical Office data.

Note:

<sup>a)</sup> IIT index was calculated according to equation:

$$IIT = \frac{(x_i + m_i) - |x_i - m_i|}{x_i + m_i} \quad (3.2.)$$

where:

all symbols like in previous equation.

In the period of 1996-2006, the intensity of intra-industry trade for the Baltic States was on relatively high level considering the global trends. Furthermore, in the case of majority commodity groups, gradual growth of this intensity was observed. Taking into account the average intensity of the Baltic intra-industry trade, one should affirm that in the global trade, relations between intensity of extra-industry and intra-industry trade have changed. In 2006, the average intensity of intra-industry trade amounted to about 60-80%.

The next measure of international competitive position of economy is *international investment position*. The net international investment position is the difference between foreign assets and foreign liabilities and it shows, whether the given country is the net creditor or the net debtor in relation to foreign investment (Ginevičius and Podvezko, 2009).

The net international investment position of the Baltic States in the period of 1996-2006 was negative, what marks that the Baltic countries was net debtor in relation to foreign investors in the analyzed period. This is a typical situation for countries with open market economy, in the phase of fast economic development. Next, the relation of the net international investment position to GDP of the Baltic countries increased significantly in the period of 1996-2006. About the relative deterioration of the net international investment position of the Baltic countries decided the first of all essential increase in foreign direct

investment and portfolio investment inflow do the Baltic countries (*Table 9*).

**Table 9. International investment position of the Baltic countries, 1996-2006 (mln USD and %)**

Details	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
<b>Lithuania</b>											
International investment position	-3056.3	-3649.4	-4611.1	-3688.5	-2023.8	-2326.9	-2958.7	-5777.7	-3398.4	-7134.2	-1574.2
Assets	629.0	694.7	141.8	615.8	432.6	654.2	192.5	247.8	4004.2	6409.8	13457.28
Liabilities	3685.3	4344.1	4753.0	4304.3	2456.3	2981.2	2766.2	6025.5	7402.6	13544.0	28931.46
International investment position in relation to GDP in %	-38.7	-38.1	-42.9	-34.6	-18.0	-19.2	-20.8	-31.0	-15.1	-28.0	-51.9
<b>Latvia</b>											
International investment position	-351.2	-463.3	-1200.1	-1874.3	-1831.7	-2324.9	-3039.2	-3969.6	-5128.5	-7398.1	-8880.5
Assets	2365.9	3244.0	3049.9	3278.8	3278.8	3839.7	4128.2	5135.5	6658.2	9339.5	9972.5
Liabilities	2717.1	3707.3	4250.1	5153.1	5110.5	6164.5	7167.4	9105.1	11786.7	16737.6	18853.0
International investment position in relation to GDP in %	-6.3	-7.5	-18.1	-25.9	-23.7	-28.2	-33.0	-35.9	-37.7	-48.5	-49.0
<b>Estonia</b>											
International investment position	-631.1	-1712.3	-2151.4	-2784.0	-2759.4	-2979.3	-4409.8	-7240.9	-11303.5	-11223.0	-12809.6
Assets	1344.6	2045.6	2300.4	2415.7	2630.1	3025.0	4078.2	6137.7	8796.2	10699.5	15509.6
Liabilities	1975.7	3757.9	4451.8	5199.7	5389.4	6004.4	8488.0	13378.7	20099.7	21922.5	28319.2
International investment position in relation to GDP in %	-13.6	-35.8	-37.0	-53.0	-48.6	-48.7	-54.3	-66.1	-86.6	-95.4	-94.5

Source: Data of Lithuanian National Bank, Latvian National Bank and Estonian National Bank.

**Table 10. Absolute and relative amounts of foreign direct investment in the Baltic countries, 1996-2006**

Details	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
<b>Lithuania</b>											
Inward stocks of foreign direct investment in mln USD	700.3	1040.6	1625.3	2063.0	2334.3	2665.5	3981.3	4959.8	6388.8	8211.05	10938.9
Inward stocks of foreign direct investment per capita w USD	194.3	290.8	457.7	585.2	666.4	765.2	1148.2	1436.0	1857.1	2397.3	3209.6
Inward stocks of foreign direct investment in relation to GDP in %	8.7	10.6	14.6	19.0	20.4	22.0	28.2	26.7	28.5	33.0	40.9
<b>Latvia</b>											
Inward stocks of foreign direct investment in mln USD	936.1	1272.0	1558.0	1795.4	2083.8	2328.03	2751.3	3276.9	4516.9	4993.4	7532.1
Inward stocks of foreign direct investment per capita w USD	380.6	522.4	645.2	749.1	876.0	985.9	1173.2	14065.9	1950.9	2169.4	3290.4
Inward stocks of foreign direct investment in relation to GDP in %	16.8	20.7	23.5	24.9	27.0	28.3	29.9	29.6	33.2	32.8	41.5
<b>Estonia</b>											
Inward stocks of foreign direct investment in mln USD	824.8	1147.9	1821.6	2467.4	2644.7	3160	4226.4	7001.8	10064.1	11289.7	12663.5
Inward stocks of foreign direct investment per capita w USD	581.8	819.2	1311.6	1789.6	1930.5	231926.6	31149.3	5177.6	7464.0	8398.1	9450.6
Inward stocks of foreign direct investment in relation to GDP in %	17.8	23.2	32.9	44.3	48.3	52.9	60.1	76.2	89.6	88.5	88.6

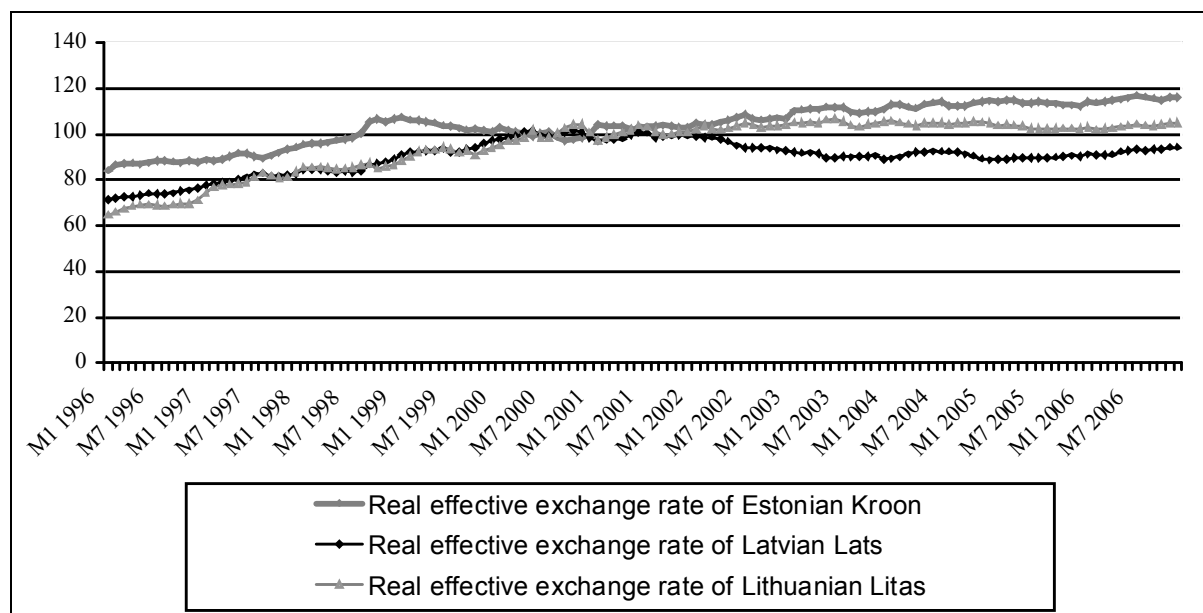
Source: own compilation based on Central Statistical Office data.

Moreover, to estimation the international competitiveness of the country are also used such indexes as the balance of foreign direct investments in absolute and relative forms (per capita and in relation to GDP). Suitable data are presented in *Table 10*.

The inward stocks of foreign direct investment in the Baltic countries characterized increasing trend in the analyzed period. The similar situation took place in the case of inward stocks of foreign direct investment in the Baltic countries per capita and in relation to GDP. The growth of these indexes demonstrates the increasing international attractiveness of the Baltic market and thus about growing competitiveness of Lithuanian, Latvian and Estonian economies in the years of 1996-2006.

Sometimes, the expression of international competitiveness of economy is identified with exchange rate changes of given country. In this case the comfortable tool for practical analysis of competitiveness is the real, effective exchange rate, which expresses external price of given currency with respect to currencies of main trade partners of given country, after elimination the inflation in home and abroad (Jasiński, 2003).

On the basis of analysis of the real effective exchange rates of Lithuanian, Latvian and Estonian currencies in the years of 1996-2006, it can perceive comparatively high stability of exchange rates, with insignificant tendency to appreciation of these currencies. Such exchange rate changes of these currencies point at comparatively slow increasing of international competitive position of the Baltic countries in analyzed period (*Figure 3*).



Source: International Financial Statistics, IMF.

**Figure 3. Real effective exchange rate changes of Lithuanian, Latvian and Estonian currencies, 1996-2006 (year 2000 equals 100)**

The indexes of real effective exchange rates express crucial aspect of current competitiveness of given economies. The exchange rates have substantial influence on foreign trade in a short time; however they meaning in analysis of competitiveness of economies is smaller in a long time.

On the basis of analysis of selected indexes of the international competitiveness and competitive position of the Baltic economies one may say, that the competitiveness of these countries was on relatively high level in years 1996-2006. What's more, in analyzed period, the international competitiveness of the Baltic countries improved generally, but the largest

growth of competitiveness took place in last three years. Relatively high international competitiveness of Lithuania, Latvia and Estonia was mainly determined by internal factors (e.g. the dynamic economic growth) as well by external factors (e.g. growing prices of petroleum on the world market).

Analyzing changes of indexes of international competitiveness and competitive position of the Baltic economies, it is necessary to be conscious of disadvantages of these indexes. Thereby, one should be conservative in formulation the conclusions and recommendations concerning economic policy of given country.

To the basic shortcomings of measures of international competitiveness and competitive position of economy are numbered the comparatively casual relationships with theory of international trade, fragmentariness and arbitrariness in making the opinions, as well as the limited usefulness for constructing the foundations of the future economic policy (Misala, 2006).

## Conclusions

On the basis of conducted analysis, one may say, that the international competitiveness and competitive position of the Baltic countries is relatively high (e.g. in comparison to another the “new” European Union members). Moreover, in years 1996-2006 took place the gradual growth of competitiveness and competitive position of the Baltic countries, what it was confirmed by favourable changes of analyzed competitiveness indexes.

The possibilities of international competitive growth of the Baltic economies are depended on that, whether the Baltic countries will fully use existing chances resulting from the membership in the European Union. Moreover, improvement of the international competitiveness of the Baltic countries is depended on the possibilities of developmental barriers overcoming, such as increasing deficits in current accounts, increasing inflation rates, continuation of structural reforms and reorientation of economic policy towards the knowledge based economy.

It is necessary to emphasize, that the growth of competitive ability of the Baltic economies will be only possible thanks to suitable economic policy focused on competition protection and favourable climate creation for companies' development (especially micro, small and medium firms). The economic policy should also characterize greater elasticity, what will enable quick adaptation to changing conditions in international environment.

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## **TARPTAUTINIS BALTIJOS VALSTYBIŲ KONKURENCINGUMAS PEREINAMUOJU LAIKOTARPIU: LIETUVA, LATVIJA IR ESTIJA**

**Piotr Misztal**

### **SANTRAUKA**

Straipsnio tikslas – pateikti Baltijos valstybių (Lietuvos, Latvijos ir Estijos) tarptautinio konkurencingumo bei konkurencinio pozicionavimo 1996-2006 metų analizę. *Visų pirma*, pateikiami ir nagrinėjami tarptautinio konkurencingumo ekonomikos rodikliai, *vėliau*, nurodomi tarptautinio konkurencinio pozicionavimo veiksniai, kurie tiesiogiai daro įtaką regiono (šalies) konkurenciniam pranašumui. Iš pateiktos analizės galime teigti, jog esamas (1996-2006 metų pagrindu atlikta studija) Pabaltijo valstybių tarptautiniais konkurencingumas bei konkurencinis pozicionavimas yra pakankamai silpnas, nors galime pastebėti nuolatinių konkurencingumo indeksų augimą diskutuojamuoju laikotarpiu.

Tarptautinio konkurencingumo didinimas priklauso nuo daugelio veiksnių, ypač svarbu Pabaltijo šalims pasinaudoti savo narystės Europos Sąjungoje galimybėmis. Be to, Lietuvos, Latvijos ir Estijos tarptautinio konkurencingumo gerinimas priklauso nuo vidinių ekonominės politikos svertų, tokių kaip viešųjų finansų reforma, struktūrinių reformų tęstinumas, investicijų pritraukimas, darbo rinkos elastingumo didinimas bei kryptingas žinių ekonomikos siekis.

*REIKŠMINIAI ŽODŽIAI*: ekonomikos konkurencingumas, tarptautinė konkurencinė pozicija, Lietuva, Latvija, Estija.