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THE EUROPEAN COMMITTEE
UNDER THE GOVERNMENT OF
THE REPUBLIC OF LITHUANIA

SYSTEMISATION AND ANALYSIS OF FINANCIAL, ECONOMIC AND SOCIAL IMPLICATIONS OF LITHUANIA'S INTEGRATION TO THE EU

Summary
2002

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Introduction

Lithuania as a transitional economy is highly sensitive to the changing environment and relations with other countries. Integration to the European Union exerts probably one of the largest partially controllable impacts leading to various economic and social transformations. The anticipated enlargement of the European Union by inviting Central and Eastern European countries is of significant importance even today, and, no doubt, will call for certain additional structural changes in the countries that seek the EU membership. According to the results of various studies by different authors, both regions, the EU member states and the EU candidate countries, as a whole, will benefit from the integration process; however, its implications for Central and Eastern European countries will be much stronger than those for the present EU member states.

The present study is an attempt to summarise a number of qualitative and quantitative studies and to assess in quantitative terms the impact of the EU integration on Lithuania's economy.

The study and the conclusions drawn will help to raise the awareness of the authorities and the wide public about the implications of the actions targeted at achieving the EU membership, and about what sectors of the economy will be most affected by such actions. The forecasts made in the study will help the interested government institutions and other economic entities to more rationally plan their integration-targeted actions that are accelerating and to more efficiently allocate and use the available resources needed for the actions concentrated in terms of time. Information collected for the purpose of the study may serve as a baseline for further studies by other authors, and the results of the forecasts may help to encourage other practical and academic researches relevant for Lithuania's economic and social development.

The Goal, Key Objectives and Methods of the Study

The goal of the present study is to systemise the results of studies conducted to date in Lithuania on implications of implementation of EU legislation and other requirements for the membership in the EU and to asses the impact of all such factors on Lithuania's economic indicators relevant for the gross domestic product, by simulating the impact of the European integration on the Lithuania's economy.

The study is set to achieve the following ***key objectives:***

- To review the studies conducted to date in Lithuania on implications of implementation of EU legislation and other requirements for the membership in the EU and to analyse and systemise their results.

- To collect the data on financial implications by referring to the Lithuania's EU Accession Programme (The National Programme for the Adoption of the Acquis – NPAA), the Pre-Accession Economic Programme (PEP), the National Development Plan, and other official documents.

- To estimate the cost and the benefits of the EU integration for the period of 2002-2009 and to develop the primary database that is needed and that is adequate to be

able to calculate the cost and the benefits of the integration in the period of 2002-2009, i.e. by matching their nomenclature with the macroeconomic model parameters.

- To identify sectors that are most sensitive to the EU integration processes and to perform a more in-depth analysis of such sectors.

- To perform econometric simulation of implications of the EU integration. The simulation is to serve the purpose of estimating, on the basis of the primary estimation of the implications contained in the primary database, the future impact of the EU integration on Lithuania's economy, expressed as a change in the gross domestic product (GDP) caused by the integration process.

For the purpose of calculating the impact of the EU integration on Lithuania's economy, two target econometric models have been developed with the goal of estimating the secondary impact of the primary impulses of the integration on the economy according to the present relations in Lithuania's economy between the main macroeconomic indicators on the macro level and relevant economic indicators of individual activities on the sector level.

If to compare the present study with those conducted in other countries, the present study is, in a sense, a standard one, i.e. oriented towards estimation of the impact on the economic growth. On the other hand, it is somewhat narrower, since it is does not deal with welfare changes, employment implications, budgetary revenues, etc. **The focus of the present study is a break-down of the GDP into its components.** For this reason, relatively simple models describing dependencies of nominal aggregate expenditure and indicators of individual activities were used. Usage of more sophisticated models was precluded by insufficient length of the available economic time series.
Confines of the study. All studies of this type, whereby two hypothetical situations are compared (what would have happened if we had not started the integration process at all, and what might happen after the full completion of the integration process), have a high degree of indefiniteness. In analysing the integration processes of transitional economies, several additional methodological difficulties are encountered, such as:

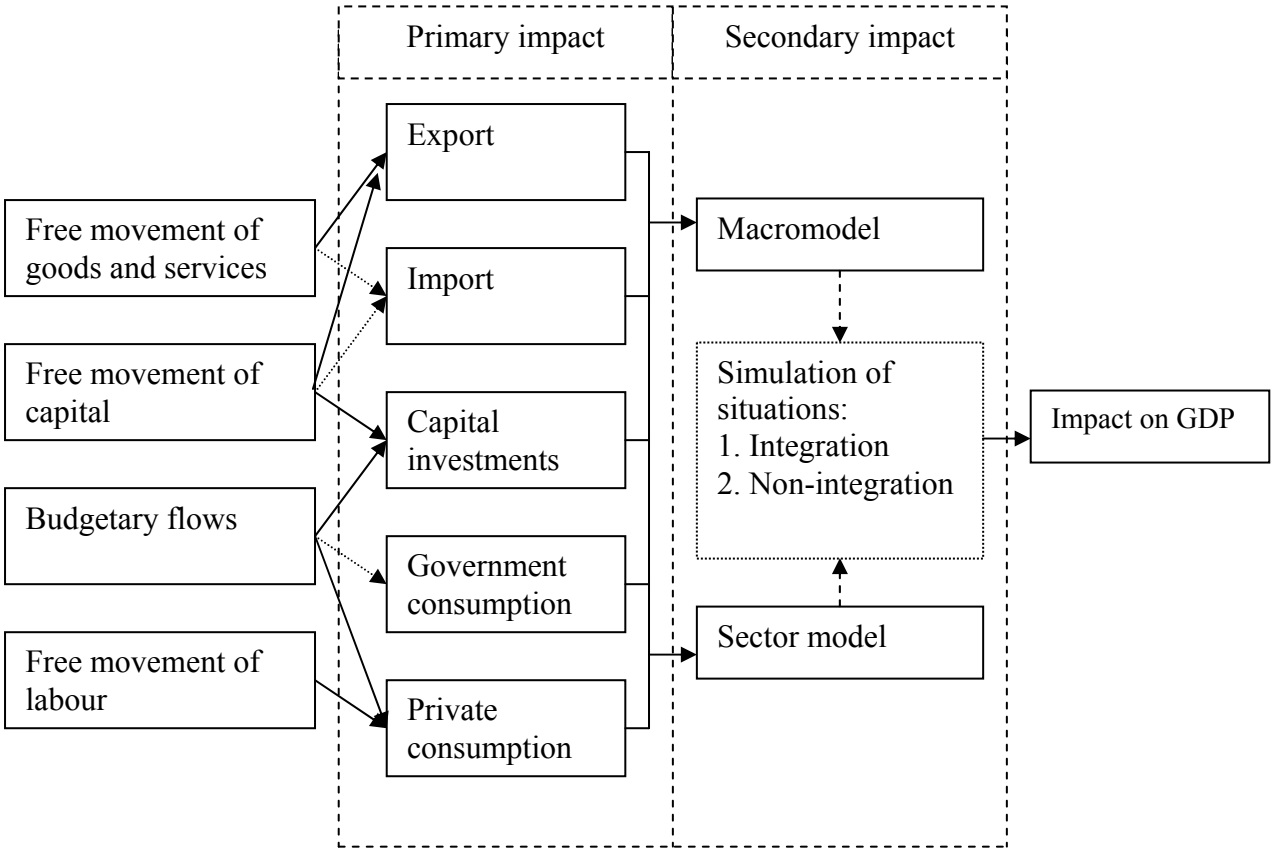
- It is, first of all, difficult to differentiate the transformation processes of the transitional economy from its integration processes, as both are structural.
- Another difficulty encountered in analysing the integration processes of the country is to differentiate the benefits and the cost of the regional integration from those of the overall globalisation, as all integration processes are interrelated.
- Another thing to bear in mind is the fact that the analysis is based on the present relations that may not necessarily remain the same in the future.

Another reason why the econometric models were selected for the study is the fact that one of the most important components of applied general equilibrium models is the Input-Output Table which has not been published by the Statistics Department of Lithuania yet.

The macro-econometric model applied for the purpose of the study describes the main statistical relations between the indicators that are components of aggregate expenditures, i.e. the analysis is focused on the demand side and is made on the assumption that the potential GDP volumes will be larger.

The impact of the EU integration is estimated by conducting a standard analysis of reaction of the model to various impulses, i.e. the integration scenario is being compared to the basic scenario of non-integration. For this purpose, we have, first of all, identified the primary sources of the integration impact. In quantitative terms, these sources appear in the model as the primary impulses. The secondary impact is estimated by using macro-econometric and sector-econometric models, wherein the GDP is simulated by applying structural vector autoregression models. The macro-econometric model helps to identify the components of aggregate expenditures, whereas the sector-econometric model is used to analyse the structure of the GDP by industry, i.e. the gross domestic product and capital investments are broken down by activity. This degree of detail enables to assess the effect of the primary impact that has shown itself in individual activities and to obtain the DGP break-down, the objective of the study.

Picture 1. Chart of the Impact of the EU Integration on Lithuania's Economy



Attention should be drawn to the fact that not all activities will be subject to the primary impulses. Therefore, in the model, the indicators of certain activities will be impacted indirectly only, i.e. through the secondary impact, e.g. impulses of capital investments in other activities will impact performance indicators of the construction industry, and the like.

For a more detail description of the models, see the full version of the study report.

Key Conclusions

Systemisation of the Results of Studies on Implications of Implementation of EU Legislation and Other Requirements for the Membership in the EU

- Most studies conducted in different countries have produced positive conclusions regarding the impact of the integration on the current member states. For example, for Austria and Germany, Keuschnigg and Kohler (1999), and Keuschnigg and Keuschnigg (1999) project a positive impact on the GDP growth in the long term: around 0.45 and 1.08 per cent, respectively; and a positive impact on welfare: around 0.38 and 0.51 per cent of GDP, respectively. For candidate countries too, different authors, from Baldwin (1997) to Lejour et al. (2001), and Directorate (2001), project a positive impact. According to the latter study, upon the accession when the candidate countries will start receiving support from the EU Cohesion Fund and other instruments and when the general productivity is expected to grow, their GDP in the period from the date of accession to 2009 will grow at a rate varying from 2.9 per cent under the pessimistic scenario to 5.6 per cent under the optimistic scenario on the average, i.e. several percentage points faster than in the present EU member states.

- Systemisation of the results of the studies conducted in Lithuania to date on implications of implementation of EU legislation and other requirements for the membership in the EU has yielded the following results:

    - Due to the accession to the EU, investments in the Lithuania's economy will amount to around LTL 23 billion in the period of 2002-2009. It has been estimated that the EU structural funds and the Cohesion Fund will account for LTL 9 billion of this figure. Public investments will total LTL 4.5 billion, whereas the remaining part of the investments will be financed by the private sector.
    - Integration to the EU will bring much direct benefits to Lithuania in the form of payments from the EU budget. It has been estimated that payments from the EU structural funds and the Cohesion Fund, direct payments to agriculture, and contributions committed by the EU and the donor countries in the form of grants will amount to around LTL 15 billion in the period of 2002-2009.
    - It has been estimated that the cost of the integration will amount to about LTL 16 billion, of which 9 billion will be financed by the government. The larger part of this cost are payments to be made by Lithuania to the EU budget. In the period covered in the study, these payments will average at LTL 4.3 billion. Another significant portion of the integration costs is related to implementation of safety at work requirements (about LTL 3.5 billion). The costs of decommissioning of the Ignalina Nuclear Power Plant are estimated at around LTL 1.8 billion (this figure refers to the period of 2002-2009 only, and excludes investments in construction of new power plants, modernisation of the existing power plants and implementation of environmental measures), whereas the administrative costs to be born by the government are estimated to stand at about LTL 1.5 billion. Additionally, it has been estimated that Lithuania's economy will suffer another LTL 1.7 billion due to migration of labour force.

- Systemisation of studies conducted in Lithuania concerning individual sectors has revealed that the EU integration will boost the growth of capital investments in Lithuania. For instance, the flow of investments anticipated in Lithuania in 2002 and 2003 necessitated by the preparations for the integration by the private sector alone will be higher than three billion Litas a year (cf.: capital investments in 2001 totalled LTL 6.5 billion, excluding those made by personal companies[1]). This growth of investments is possible (although hardly imaginable, e.g. investment in agriculture alone is expected to grow fourteen times from the level of 2002 and 2001). Therefore, individual studies on implications for individual sectors should, first of all, be treated as being tentative, i.e. disclosing in which sectors and for what reasons the economic processes brought about by the EU integration will likely take place. Secondly, it is likely that for the purpose of determining the volumes of investments, the investments caused by the globalisation processes are not differentiated from the investments that will be brought by the EU integration processes. For these reasons, direct transposition of the results of such studies into the forecasts of macroeconomic indicators may make such forecasts less realistic.

- Approximation to the EU standards does and will inevitably call for certain additional investments. However, the information produced by individual studies about the volumes of the investments needed for the approximation could be used only after the need for such investments and realistic timeframes have been additionally estimated, which is especially true of agriculture and industries, where the total need for investments in approximation to the EU requirements in the period of 2002-2009 almost seven times exceeds the total amount of payments to be received from the EU over the same period.

- In assessing the impact of approximation of individual sectors to the EU requirements on Lithuania's economy, account must be taken of the fact that a large portion of the investments would have been made even if Lithuania had not decided to join the EU. The investments would, in any case, have been necessitated by the globalisation processes, by the goal to achieve international competitiveness, and by the geographical position. It is actually impossible to segregate the amount of the investments necessitated by the EU integration. Ignoring this circumstance in spreading the results of fragmentary studies might cause certain political speculations favouring a certain economic entity or social group.

Estimation of the European Union's Total Financing Commitment for 2004-2006

- According to the European Union's preliminary allocation of funds, the financial support to Lithuania will total EUR 1.73 billion in 2004-2006. Support made available through the EU structural funds and the Cohesion Fund will amount to EUR 607 million. Payments under Phare, ISPA and Sapard instruments will amount to EUR 303 million.

- By preliminary estimations, payments to be made by the Republic of Lithuania to the EU budget will account for 1.2 per cent of GDP annually. Estimation of the payments between the EU budget and the Lithuanian budget leads to the conclusion that Lithuania's receipts from the EU budget will be higher than its payments to the EU budget, and this

[1] Source www.std.lt.

positive difference will gradually increase in the first few years of membership.[2] Excluding the costs of decommissioning of the Ignalina NPP, the net positive difference between budgetary transfers will amount to EUR 258 million (about LTL 890 million) in 2004, EUR 392 million (about LTL 1353 million) in 2005, and EUR 525 million (about LTL 1813 million) in 2006.

- Cash flows have been estimated by applying the calculation principles suggested by the European Union. In estimating the EU payments to Lithuania, apart from the above-mentioned calculation principles, the preparedness to absorb the committed amounts has been assessed. According to the results of such calculations, Lithuania can expect to receive EUR 439 million (about LTL 1515.8 million) to finance various needs in 2004, up to EUR 577 million (about LTL 1992.3 million) in 2005, and up to EUR 716 million (about LTL 2472.2 million) in 2006. For the time being, it is impossible to estimate how much Lithuania is likely to receive in later years. The present study is based on the assumption that the receipts in later years will be neither lower not higher.

- The impact of the EU funds on Lithuania's economy is analysed on the assumption that Lithuanian institutions and the economy will be able to fully absorb the committed amount.

Table 1. Planned allocation of funds (including the national cofinancing) to be made available from the EU structural funds and the Cohesion Fund and the Community initiatives, broken-down by individual industries, in LTL million

	2004	2005	2006	2007[3]	2008	2009
1. Infrastructure	**485**	**503**	**808**	**808**	**808**	**808**
1.1. Transport	208	216	346	346	346	346
1.2. Telecommunications	1	1	2	2	2	2
1.3. Energy	32	34	54	54	54	54
1.4. Environment	210	217	349	349	349	349
1.5. Health-care	7	7	11	11	11	11
1.6.Urban infrastructure.	27	28	45	45	45	45
2. Human resources	**279**	**289**	**464**	**464**	**464**	**464**
2.1.Science and education	165	171	274	274	274	274
2.2. Training and employment	41	42	68	68	68	68
2.3.Research and technologies	58	60	96	96	96	96
2.4.Information society	7	8	12	12	12	12
2.5. Sports	3	3	5	5	5	5
2.6. Culture	6	6	10	10	10	10
3. Production sector	**81**	**84**	**134**	**134**	**134**	**134**
3.1. Agriculture	58	60	96	96	96	96
3.2. Industry and business	11	12	19	19	19	19
3.3. Tourism	12	12	19	19	19	19
4. Other	**13**	**44**	**67**	**35**	**30**	**48**
Total	**857**	**920**	**1.473**	**1.441**	**1.436**	**1.454**

[2] These forecasts take account of actual anticipated transfers rather than budgetary commitments. According to the EU budget planning and implementation rules, many commitments are implemented in later years than undertaken. If we estimated the balance of commitments between the RoL and the EU, then the difference in the commitments would be even much more in favour of Lithuania.

[3] The figures referring to the periods after 2007, inclusive, reflect general trends rather than definite amounts, since the financing proposal has been made for the period ending in 2006, and the possible financing volumes and financing priorities in the years after 2006 are not known.

- Upon accession to the European Union, the national co-financing requirement will grow significantly; therefore, assuming that the principles of Lithuania's fiscal policy will remain the same (i.e. balanced budget, limited borrowing, etc.), a certain re-allocation of budgetary expenditures both among individual sectors of the economy and within the sectors will be needed. It is also assumed that the co-financing, direct payments, payments to the EU budget and other integration-related expenditures will not reduce the state budget expenditures.

Simulation of the Integration Impact on Lithuania's Economy

- By making use of the experience of foreign countries in conducting such studies, the impact of the EU integration on Lithuania's economy made by the customs union, the common market, migration of labour, free movement of capital, and budgetary funds was analysed with the help of econometric simulation. The analysis of these primary impulses has shown that Lithuania's economy will mostly be impacted by the effect of the common market, additional monetary receipts from the EU, and the increase of the volumes of foreign direct investments.

- It has been estimated that due to the integration Lithuania's exports alone will be about 1.9 times higher in 2002-2009 than they would have otherwise been under the hypothetical scenario of non-integration (Table 2). This high impact of the integration on exports can be explained by the fact that Lithuanian trade with the EU is dominated by the goods, the trade in which, according to Lejour et al. (2001) study, booms as a result of creation of a common market (textiles, agriculture, etc.). It should be noted, however, that the impact of the negotiation chapters is interrelated, and this segregation is a relative one: the effect of common market covers a certain part of the impact of all other negotiation chapters.

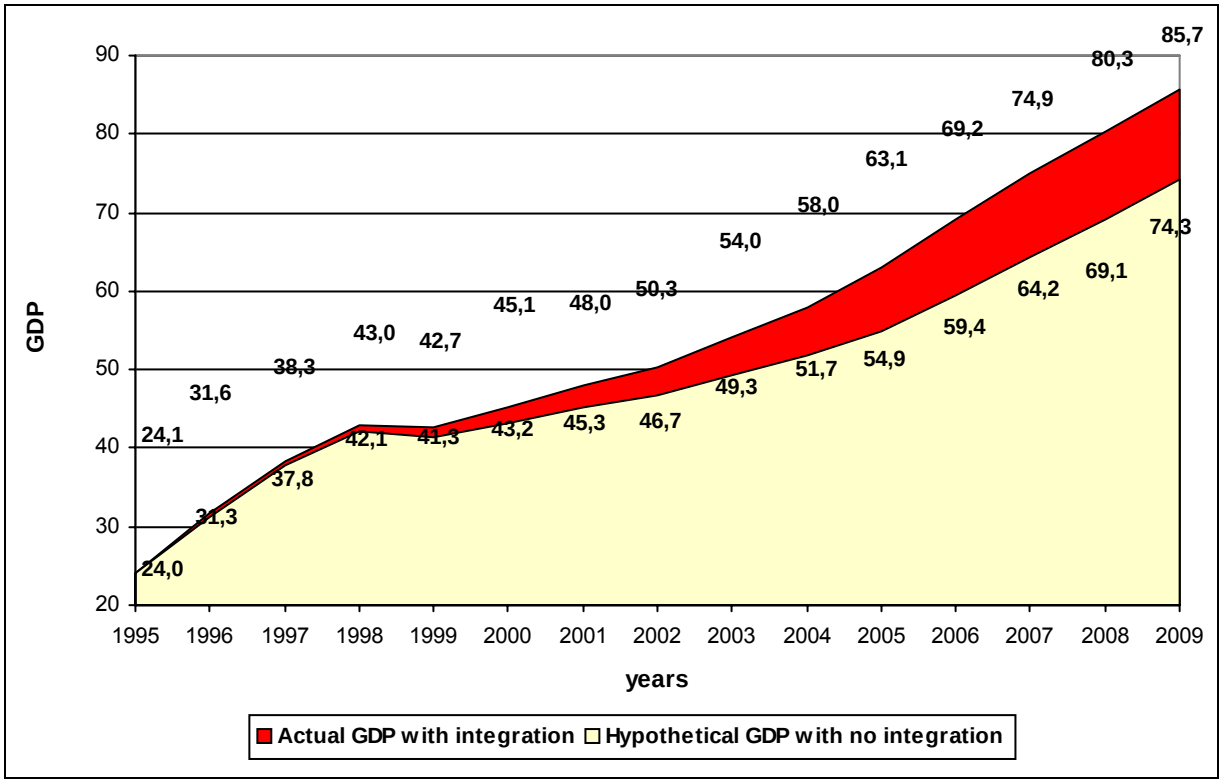
Table 2. Impact of the EU integration on expenditure components of the gross domestic product in the period of 2002-2009, in LTL million

Negotiation chapters	GDP by expenditure approach							
	Final consumption expenditure			Gross domestic investment		Export of goods and services	Import of goods and services	
	Household consumption	Government consumption	Consumption by non-profit institutions *	Gross main capital formation	Changes in stocks *			**Total GDP**
Nr. 1 Free movement of goods	20684	6074	-	7336	-	25271	26702	**32662**
Nr. 2 Free movement of persons	-654	-78	-	-9	-		-30	**-711**
Nr. 3 Freedom to provide services	2466	727	-	882	-	3014	3189	**3899**
Nr. 4 Free movement of capital	6549	1931	-	5407	-		6386	**7501**
Nr. 26 External relations	-88	-26	-	-26	-	-97	723	**-961**
Nr. 29 Financial and budgetary provisions	21909	5552	-	14089	-		18081	**23470**
Total	**50866**	**14180**	**-**	**27679**	**-**	**28187**	**55052**	**65860**

*not estimated in the model

- Due to the integration impact being analysed, Lithuania's GDP in the period of 1995-2009 is about LTL 65.9 billion (LTL 11.4 billion in 2009 alone) higher than it would have been under the non-integration scenario (Picture 2). The total impact of the factors listed, as negotiation chapters, in the table above in the period of 2002-2009 has been estimated to average at 14%, in comparison to the respective total gross domestic product under the non-integration scenario. On the other hand, there exists a strong cumulative effect: while the GDP of 2002 under the integration scenario exceeds that under the non-integration scenario by 7.7%, the GDP of 2009 is expected to be higher by 15.3%. When we assess GDP growth rates rather than absolute expressions, Lithuania's economy will grow in the period 2002-2009 about 1.14 percentage points faster than under the hypothetical scenario of non-integration. It should be noted that this is a net growth, i.e. integration costs are considered. Attention should also be drawn to the fact that the integration impact after 2006 is estimated on the assumption that funds from the EU will be made available by the same principles as those applied in the period 2004-2006; therefore, the assessment of the integration impact after 2006 is very indefinite. If we assess a more definite period, i.e. the period up to 2006, then the average impact of the integration will stand at 1.37 percentage points. It should be pointed out that this figure does not reflect the whole impact of the integration either, as the specifics of the period concerned does not allow to estimate the impact on Lithuania's economy of lower interest rates resulting from the integration process. Alongside, the further integration of Lithuania into the monetary union might bring about additional implications, for example the difference of business cycles in the EU and Lithuania, and it would be useful to conduct a separate study on this kind of impact. Moreover, the implications of harmonisation of customs tariffs have only partially been taken account of in the present study, and the "creation" of trade as a result of elimination of tariff-related barriers to Lithuania's trade with the EU should be assessed additionally.

Picture 2. GDP projected by the actual and macro model, in comparison to the GDP projected under the hypothetical scenario of non-integration, in LTL billion



- The analysis of the integration impact on individual sectors has revealed that it is the manufacturing that will be most affected by the integration process in the period of 2002-2009, in terms of the share of the value added generated (LTL 18.6 billion). Of this figure, the dominating secondary impact on the manufacturing (LTL 13.1 billion) will be created by the effect of the common market. The second and the third positions, in terms of the integration impact on the value added, are occupied by the wholesale and retail trade, and agriculture and hunting and forestry (the value added generated by these sectors will be LTL 9.1 and 7.2 billion higher, respectively). In these sectors, the financial flows from the EU will have a much higher relative impact than those in the industrial sector (the impact of the negotiation chapter on financial and budgetary provisions is estimated at LTL 3.4 and 4.0 billion in the period 2002-2009, respectively), since the common market effect will be felt here more indirectly rather than directly, i.e. through the general increase in the volumes of production, income and consumption. The value added generated in the construction industry will increase, as a result of the integration processes, by LTL 3.8 billion; in the transport, warehousing and communications, by LTL 3.4 billion; and in electricity, gas and water supply, by LTL 3.1 billion. In other sectors, the value added will not be affected by the integration process that much.

- The figures given herein show that judging from the integration impact on the gross domestic product Lithuania's integration to the EU is beneficial to the national economy.

Table 3. Impact of the EU integration on the gross domestic product in the period of 2002-2009, by production approach, in LTL million

Negotiation chapters	GDP by production approach																						
	Agriculture, hunting and forestry	Fisheries	Mining	Manufacturing industry (total)	Food industry	Textile industry	Timber industry	Oil industry*	Chemical industry	Other industries	Electricity, gas and water supply	Building	Wholesale and retail trade, etc.	Hotels and restaurants	Transport, warehousing and communications	Financial brokerage	Real estate, rent and other business	Public administration and defence, compulsory social security	Education	Health social welfare	Other utilities, social and personal services	FISIM *	Taxes less subsidies	**Total GDP**
Nr. 1 Free movement of goods	2549	32	105	13138	4450	7097	318	-	276	996	1080	1277	4025	379	1493	83	401	713	1091	1199	736	-	4361	**32662**
Nr. 2 Free movement of persons	-70	-1	0	-123	-123	0	0	-	0	-1	-50	-11	-167	-18	-73	0	0	-14	-21	-38	-31	-	-93	**-711**
Nr. 3 Freedom to provide services	278	3	20	688	485	0	62	-	54	88	206	246	772	73	286	16	74	137	209	229	141	-	520	**3899**
Nr. 4 Free movement of capital	458	6	77	1445	800	0	176	-	129	340	338	737	1274	120	472	61	278	226	344	441	227	-	997	**7501**
Nr. 26 External relations	-72	-1	-5	-148	-126	0	-4	-	0	-19	-54	-58	-201	-19	-74	-4	-16	-36	-55	-58	-36	-	-126	**-961**
Nr. 29 Financial and budgetary provisions	4018	16	169	3639	2239	0	395	-	308	697	1621	1641	3440	335	1321	133	517	544	800	1082	1149	-	3046	**23470**
Total	**7161**	**55**	**366**	**18640**	**7726**	**7097**	**947**	-	**768**	**2102**	**3142**	**3832**	**9143**	**869**	**3426**	**288**	**1254**	**1571**	**2368**	**2855**	**2185**	-	**8706**	**65860**

* not defined econometrically (FISIM-Financial Intermediation Services Indirectly Measured)