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5 The Lithuanian economy as a European Union member state

Structure, performance and prospects

Algirdas Miskinis and Aušrytė Rastenienė

1 Introduction

Lithuania is the largest of the three Baltic States,[1] with a population of three million people. The country regained its independence in 1991, joined the European Union (EU) in 2004 and adopted the euro in 2015. Although Lithuania started the transition to a market economy later than some other new member states, its business environment is one of most liberal not only in the EU but also in the world. The free market created favourable conditions for economic growth and today the Lithuanian economy is far ahead in comparison to most other states of the former Soviet Union. Since 1995, the Lithuanian gross national income (GNI) per capita in purchasing power parity (PPP) terms has more than doubled, from US$7,368 (in 2005) to US$16,858 in 2012 (UNDP, 2014).

Lithuania ranked 35th out of 187 countries on the Human Development Index 2013 and is thus one of the countries with 'very high human development'. For Lithuania this is the best result since its first rankings. Among the member states that joined the EU in 2004, only few countries are above Lithuania in this ranking, namely Slovenia (25th), Czech Republic (28th), Cyprus (32nd) and Estonia (33rd).

This chapter is organized into seven sections. Section 2 presents information about the structure of the Lithuanian economy, while Section 3 discusses the performance of the economy. Section 4 deals with the characteristics of a small country like Lithuania. Matters related to Lithuania's accession to the EU are analysed in Section 5.Section 6 presents a discussion on the major challenges faced by the economy and that need to be addressed to improve the sustainability of the economy. Section 7 concludes the chapter with a summary of the main findings.

2 Structure of the Lithuanian economy

2.1 The Lithuanian economy after independence

After the restoration of independence, the economic situation in Lithuania could be defined as one of economic turmoil. The Banks and the monetary system had to be re-created, the national currency, the litas, was introduced and new governance institutions were established.

The new government of independent Lithuania had to decide how to stabilize the economy and foster confidence in the market participants. The government of the country, together with the Bank of Lithuania, and Lithuanian as well as foreign experts, decided that the best means to reach this goal was to fix the exchange rate of the domestic currency. For this purpose, a currency board arrangement was introduced in April 1994, taking into consideration the fact that Lithuania was a small open economy, and that, at that time, there was a shortage of specialists capable of carrying out monetary policy properly. In addition there was the need to further build confidence in the financial market and in governmental institutions.

The setting up of a currency board, and the support this received from politicians, accompanied by a sound fiscal policy, ensured the successful control of inflation and fostered trust in the Lithuanian state and the country's financial market. The most serious challenge to the currency board arrangement was in 1996, with a bankruptcy crisis among Lithuanian banks, and the following year during the Russian financial crisis.

The introduction of the currency board arrangement sent a clear signal to business that the exchange rate policy would not be used to stimulate exports and that the competitiveness of business enterprise in Lithuania had to depend on the ability of entrepreneurs to find foreign markets, forecast market trends, be flexible and innovative, adopt modern technology and upgrade management structures.

2.2 Liberal economic governance

Following independence, the Lithuanian government chose an economic system which may be called liberal capitalism (Girdėnas, Giedraitis and Rasteniene, 2003; Kuokštis, 2014). The most important feature of economic governance during this period was flexibility. This made Lithuanian business and labour market actors adaptable to change. As a result, Lithuania received relatively high scores in the world competitiveness ranking (IMD, 2015), and in some cases Lithuania outperformed its neighbours.

The independence period demonstrated that the Lithuanian business community understood the signals transmitted by the state very well. The capacity of business to adjust to drastic economic and political changes was manifested in the reaction of the business community to the Russian financial crisis of 1997 and the global financial crisis in 2008.

2.3 The sectoral composition of the Lithuanian GDP

The structure of the Lithuanian economy has changed considerably between 1995 and 2013, as shown in Table 5.1.

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Table 5.1 shows that in 2013 distribution and transport industries accounted for 12.9% of gross domestic product (GDP), a share which has increased since 1995. Such a high share reflects the fact that Lithuania acts as a bridge for transportation of goods between Western and Eastern parts of Europe and that this sector is very important for the Lithuanian economy. This sector thrives in a situation of free trade.

The table also shows that the manufacturing sector is also of major importance for the Lithuanian economy. In 2013 this sector produced 24.5% of gross value added when the EU average was only 19.1%. The strongest sector in manufacturing is the chemical industry inherited from the Soviet era, led by petrochemical and fertilisers' subsectors.

With regard to the services sector, it can be seen from Table 5.1 that Lithuania has a small financial sector, the smallest in the EU (2.2% in comparison to 5.4% EU average).

The public sector is also relatively small in Lithuania, and second smallest within the EU, after Latvia (13.5% in Lithuania when EU average is 19.4%).

The share of traditional agriculture in 2013 accounted only 3.8% of gross value added indicating that agriculture sector does not play a crucial role in the economy.

In 2014, the fastest-growing sector after five years of post-crisis stagnation was construction. In the first quarter of 2014, home sales jumped by 44% year-on-year. Most purchases of houses and apartments were made without mortgages indicating that borrowing from banks remains weak despite very low interest rates, demonstrating that banks are not eager to undertake risks.

2.4 Final expenditures

Table 5.2 shows the final expenditures in Lithuania. It can be seen that the Lithuanian economy has become increasingly dependent on foreign trade. The share of exports to the GDP is constantly growing and in 2013 reached

Table 5.1 Sectoral composition of GDP, %

Sector	*1995*	*2004*	*2013*
Agriculture, forestry and fisheries	9.3	4.8	3.8
Mining and quarrying	0.4	0.5	0.4
Manufacturing	25.9	24.2	24.5
Market services	10.4	35.0	40.3
Of which			
- Transport and distribution	8.4	9.5	12.9
- Financial services	2.0	2.2	2.2
Public sector	15.2	15.5	13.5

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Table 5.2 Final expenditures (in current prices, million euro)

Final expenditures	*1995*		*2004*		*2013*	
	€m	*%*	*€m*	*%*	*€m*	*%*
Private consumption expenditure	4952.7	63.5	11888.9	65.2	21947.7	62.8
Public consumption expenditure	1909.5	24.5	3457.3	19.0	5861.6	16.8
Gross fixed capital formation	1581.2	20.3	4176.1	22.9	6457.2	18.5
Exports of goods and services	3700.5	47.5	8643.7	47.4	29387.9	84.1
Total final expenditure	6862.2	88.0	15346.2	84.1	28950.6	82.8
Less imports of goods and services	4530.5	58.1	9924.8	54.4	28950.6	82.8
Gross Domestic Product at market prices	7797.9	100	18237.4	100	34962.2	100

Eurostat National accounts and Lithuanian Statistics Department

84.0%. A large part of exports is simply re-export of goods and services, showing that Lithuania is making use of its geographical position and increasing entrepot trade. A low share of gross fixed capital formation in 2013 indicates that investments did not recover to a full extent after the economic crisis. Public consumption expenditure is decreasing demonstrating that the redistribution of incomes is diminishing and the role of the public sector is shrinking.

According to data issued by the Lithuanian department of statistics, the main Lithuanian export partners in 2014 were Russia (20.8% of export), Latvia (9.2%), Poland (8.3%) and Germany (7.2%), while import partners were the same – Russia (21.6% of import), Germany (10.9%), Poland (9.4%) and Latvia (6.9%). In 2007 the share of the Russian market was lower in both exports (15%) and imports (18.2%) indicating that the importance of Russian trade after the economic crisis increased. It is necessary to stress that in 2013 re-export from Lithuania to Russia was around nearly six times larger than export of goods of Lithuanian origin and that export of services exceeded export of goods by 75%.

The main traded goods in 2014 were mineral products (17.8% of exports and 25.3% of imports), machinery and electrical equipment (correspondingly 15.4% and 17%) and chemical products (correspondingly 92% and 10.4%). In Lithuania, traditionally, a very important export sector was textiles, accounting for more than 15% of export, but currently its share is negligible.

A deeper look at Lithuania's exports indicate that a relatively large proportion are re-exports and this in turn indicates that the country serves as a bridge for markets in other countries. Most of re-exported goods are transported by Lithuanian freight carriers making the logistics sector important in creating value added and services export.

The composition of foreign trade partners has changed considerably over time: the change started even before Lithuanian accession to the EU, when it was envisaged that Lithuania would become an EU member state. In 1998 the share of the Commonwealth of Independent States (CIS) countries, the main former trade partner, dramatically decreased from 46.6% in 1997 to 18.2% in 1998, as the share of the EU states and other European countries increased. Such a fast change of trade partners was speeded up by the 1997 Russian financial crisis, but preconditions for it were created by the trade liberalization arrangement between the EU and Lithuania, through the implementation of Free Trade Agreement for industrial goods in 1995. Decreased trade with CIS countries was replaced also by growing trade with European Free Trade Association (EFTA) countries. In recent years the EU market share has made up more than half of the export markets. The CIS countries' market share in the export markets currently accounts for about a quarter, but fluctuates due to the unilateral decisions of Russian foreign trade policy. In their search for stable markets, Lithuanian producers have increased exports to the USA, Turkey and Asian countries.

Imports to Lithuania almost tripled between 2004 and 2014, and the cost of imported products, contrary to economic expectations, increased, possibly because cheaper and frequently lower quality products from the CIS were replaced by higher quality and more expensive products from the EU (Miskinis, 2013).

3 Recent economic performance

Since 2002 Lithuania has enjoyed relatively stable economic growth interrupted by the global financial and economic crisis in 2009, when GDP fell by 14.8%, but recovered in the following years. Table 5.3 presents some relevant indicators in this regard.

Table 5.3 Main socio-economic indicators

Indicator	*2002*	*2004*	*2006*	*2008*	*2010*	*2012*	*2013*
Annual GDP growth (%)	6.9	7.4	7.8	2.9	1.6	3.7	3.3
Inflation (%)	0.3	1.2	4.5	8.5	1.6	3.2	1.2
Unemployment rate (%)	13.8	11.4	5.6	5.8	17.8	13.4	11.8
GDP per capita PPS/EU average (%)	43	50	56	63	60	69	73
Current account/GDP (%)	−5.3	−7.6	−10.6	−12.9	−0.3	−1.2	1.6
Fiscal balance/GDP (%)	−1.9	−1.5	0.4	−3.3	−7.1	−3.2	−2.1
Public sector debt/GDP (%)	22.3	19.3	17.9	15.5	37.4	41.2	39.4
Export growth (%)	10.5	16.2	15.8	28.5	32.7	14.4	6.5
Net migration per 1000 population	−3.4	−9.5	−7.5	−5.2	−25.2	−7.1	−5.7

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As can be seen from Table 5.3, economic growth in Lithuania before the global economic crisis was impressive, averaging about 7% per annum. Such fast growth can partially be explained by the fact the Lithuania started from a very low level after the system transformation in 1990–1995. However it was also due to the huge potential of Lithuania in terms of production capacity.

According to Eurostat, the Lithuanian GDP per capita in purchasing parity standard (PPS) in 2002 accounted only for 43% of EU average while in 2013 it reached 73.0%, catching up with Greece. Such a leap forward was possible due to the fast productivity growth in the Lithuanian economy and to an extent was a consequence of a decreasing EU average, with Bulgarian and Romanian membership. There was also the effect of extensive emigration of unemployed persons and of low paid Lithuanian persons.[2] In 2014 GDP per capita in Lithuania reached €12,381 and was very close to Latvia's (€12,052) and Estonia's (€14,860).

The main driving force in the Lithuanian economy between 2008 and 2012 was the export performance. During this period, export growth reached around 30% per annum, however, mostly due to the deterioration of the trade terms with Russia, the growth in exports of goods and services slowed down in 2013 to 6.5% per annum.

In Lithuania, as in many emerging countries, the major expenditure in total final expenditure is consumption expenditure. In 2014, Lithuania's consumption expenditure amounted to 63.7% as a percentage of GDP, while the EU average in the same year was 56.9%, with the lowest being that of Luxembourg at 29.6%. When in 2013 Lithuanian exports faced severe trade barriers in Russia and harsh competition in other countries, the economic growth to a large extent was the result of increases in private consumption expenditure.

Eurostat's indicator of Actual Individual Consumption (AIC) measured in PPS, which refers to all goods and services actually consumed by households indicating the welfare of households, reached a level of 78% of the EU average, increasing from 70% in 2011. This shows that there was a very swift recovery from the economic crisis. The current AIC in Lithuania is higher, in relation to the EU average, than that of all new EU member states, with the exception of Cyprus and Malta.

3.1 An overheated economy

Fast economic growth before the global economic crisis resulted in an overheated economy that gave rise to inflationary pressures leading to an inflation rate of 8.5 % in 2008, accompanied by a relatively high current account deficit, which reached 12.9 % in the same year. Before the 2008/09 crisis, the Lithuanian economic growth was partially fuelled by external debt and financial resources from foreign banks, as well as extensive investments in real estate. With the slowing down of capital inflows, there was a sharp decline of domestic demand, leading to a sharp fall in GDP in 2009.

The basic three economic flaws before the great recession were that economic growth was too much based on real estate, rather than on the tradable

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sector, investments relied too much on direct or indirect foreign loans, instead of on domestic savings and the government did not adequately manage foreign capital inflows, all of which created an economic bubble. At that time, the pegged exchange rate of the domestic currency restricted the manoeuvrability of government ability to control external trade and capital flows by the means of monetary policy.

After the economic crisis, the current account balance substantially improved, from -12.9% to GDP in 2008 to -0.3% in 2010 and turned positive in 2014. However the fiscal deficit increased to 7.1% of GDP in 2010 and public debt reached 37.4% of GDP in that year, continuing to increase to about 39% in 2014. The recovery of the economy after economic crisis had a positive impact on the labour market as unemployment declined from 17.8% of the labour forces in 2010 to 11.8% in 2014.

3.2 Public finances

Total general government revenue in 2014 in Lithuania accounted for 34.3 % of GDP, compared to the EU average of 45.2%. The only country with a lower ratio was Romania (33.4% of GDP) whereas in Denmark the ratio amounts to 58.5% and in Finland 55.5%. In Lithuania the rate of redistribution of income is relatively low, one reason being that successive Lithuanian governments were reluctant to introduce universal real estate taxes or taxes on passenger cars, and the country is currently one of few EU member states to apply a flat rate personal income tax. Lithuania country's tax revenue is largely dependent on indirect and labour taxation, while the revenue from environmental and wealth taxation remains very low.[3] When redistribution of income is low, wages in the public sector and pensions tend to be relatively low also. At the end of 2014, the average old-age pension in Lithuania was only €241whereas in Estonia it was €350.

When government revenues are low, public spending also tends to be low. Public expenditure as a percentage to GDP in 2013 was one of the lowest in the EU, accounting only for 35% of GDP, while the EU average was 47.6%. Before the fiscal consolidation that followed the economic crisis, the share of expenditure in Lithuania was much higher – around 45%. The expenditure cuts that accompanied the fiscal consolidation were rather drastic, including the freezing or cancellation of projects, cuts in wages and pensions, and reduction of other social benefits. Low public spending indicates low input by the government into final consumption and low impact on economic growth. The government so far has not used public spending as an expansionary tool to stimulate growth to the extent of other EU countries.

A low rate of income redistribution may be expected to lead to income inequality. According to Eurostat,[4] the average Gini coefficient in the EU in 2013 was 30.5 whereas that for Lithuania was higher at 34.6. Inequality in Lithuania is much higher than that existing in egalitarian countries such as Slovakia (Gini coefficient 24.2), Slovenia (24.4), and Czech Republic (24.6). As inequality

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is high, the risk of poverty is also high. According to Eurostat, at-risk-of-poverty rate after social transfers in Lithuania in 2013 was 20.6 when the EU average was 16.7.[5] Only Greece, Romania and Bulgaria had higher poverty rates.

3.3 The 2009 global crisis

A major challenge faced by the Lithuanian economy after the reestablishment of independence in 1990 was the economic and financial crisis of 2009. The crisis not only had a devastating impact on economic growth and welfare but also damaged the prestige of Lithuania among foreign investors as political risks increased and the long-term economic potential looked uncertain. As already explained, in 2009 GDP fell by 14.8%, however, the recovery was also rather fast and already in 2010 the country's economy experienced 1.6% GDP growth. To a large extent, such fast recovery was due to austerity measures undertaken by the Lithuanian government and, to an extent, it was achieved at the expense of the population's wellbeing. The major tool to combat recession was the so-called internal devaluation, encompassing cuts in public spending including to social programmes and such budget expenditures as pensions, social benefits and others.

The policy of cutting budget expenditure, though not popular in some countries like Greece, worked very well in Lithuania and by 2014 Lithuania was again one of the fastest growing countries in the EU. Austerity-based recovery permitted the revival of the economy, although there may yet be long-term negative social consequences associated with unemployment and emigration.

During the economic crisis there were two government decisions made that could have long-term detrimental economic consequences. One of these was to borrow funds from the market at very high interest rates rather than borrow from the International Monetary Fund (IMF), as was done by Latvia; this substantially increased Lithuanian public debt from 15/16% of GDP in 2008 to 40% to GDP in 2009. The other government decision was to invest in the construction of a liquefied natural gas (LNG) terminal, with the aim of diversifying the gas supply, so as not to rely excessively on Russian gas. However, LNG supplied domestically is much more expensive than that supplied by Gazprom. Lithuanian companies are currently being forced to purchase expensive gas from the Lithuanian LNG terminal and to bear a share of the cost of the terminal maintenance.

3.4 The current economic environment in Lithuania

Economic growth very much depends on the business environment where economic activity is undertaken. This section will present the scores assigned to Lithuania on some global indicators, which suggest that Lithuania, in many ways can be considered as a country with a business environment conducive to the attraction of investment, although the role of incentives remains a major consideration in this regard.

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According to the 2015 IMD World Competitiveness rankings (IMD, 2015), Lithuania improved its position from 34th to 28th place and was above other Baltic States Estonia (31) and Latvia (43). IMD ranking measures the effectiveness of the application of the country's physical, financial and human resources to enhance economic growth. The ranking takes into account more than 300 criteria, part of which are based on statistical indicators and others on a survey of international executives. Lithuania reached the best place among new member states and only a few EU member states are ahead, including Denmark, Sweden and Germany.

The scores in the Global Competitiveness Index (GCI) were also relatively high for Lithuania. In the GCI rankings for 2014–2015 (Schwab, 2014), Lithuania was placed 41st, with only Estonia and Czech Republic from new member states being ahead. Lithuania holds the best positions in higher education and technological readiness and the worst in market size and financial market development.

The most problematic area for business is inefficient government bureaucracy. In the area of corruption Lithuania still has a problem as according to Amnesty International the perceived corruption level in Lithuania in 2014 was rather high – Lithuania ranked 39th out of 179 countries, far behind neighbouring Estonia which was 26th.

In 2015, in World Bank's 'Ease of Doing Business Index' ranked Lithuania 24th out of 189 countries.[6] On this index, Lithuania did well in registering a property, and starting a business, and not so well in getting electricity. The ranking demonstrates that conditions for developing business in Lithuania are very good.

The Heritage Foundation's Index of Economic Freedom (IEF)[7] assigned a score of 74.7 to Lithuania, which indicates that Lithuania's economy was the 15th freest in the world and 6th freest in the European Union. The IEF has ten separate components, most of which focus on policies within a country, assessing the liberty of individuals to use their labour or finances without undue restraint and government interference. Since 2010 Lithuania was especially successful in the implementation of sound fiscal and monetary policies and combating corruption. Lithuania and Estonia were ahead of the other new member states in terms of the IEF.

Labour costs are very important for a country's competitiveness in the world market and for that country's economic success in general. Although since joining the EU in 2014, total hourly labour costs in Lithuania have doubled, wage rates remain relatively low. In 2014, hourly labour cost in the private sector was €6.5 (lower only in Bulgaria and Romania) while EU average was €24.6 and in Denmark €40.3. Even in Greece, a country facing a huge foreign debt problem, hourly labour cost is more than twice that in Lithuania (€14.6). Low labour cost makes Lithuanian economy and especially labour intensive industries competitive, but is associated with other problems, including increased emigration and slow convergence with the EU average labour cost.

A major Lithuanian advantage is that it has one of most educated labour forces in the EU. In 2012, according to Eurostat, the share of the population

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aged 30–34 with completed tertiary education in Lithuania accounted for 48.7%, a rate much higher than EU target for 2020, which is set at 40%. A higher level of education in 2012 was reached only by Ireland (51.1%), Cyprus (49.9%) and Luxembourg (49.6%). Lithuania, however, faces a problem with such a high level of education in that the education and training offered is not always relevant to the labour market needs. This is leading to a shortage of workers ready to take blue-collar jobs. Over-education and shortage of blue-collar workers are two reasons why some foreign industrial companies are reluctant to invest in Lithuania.

3.5 Research and development and foreign direct investment flows

High productivity and new technologies, accompanied by research and innovation, are crucial to securing sustainable growth. In the EU gross domestic expenditure on research and development (R&D) as a percentage of GDP in 2013 accounted for 2.01% and a target is set for 3% for 2020. In Denmark, Finland and Sweden R&D expenditure exceeds 3% of GDP, creating a solid basis for the modernization of their economies. In Lithuania, expenditure on R&D is half as much (0.95%) as the European average. This low level of expenditure on R&D can stifle the development of new products and technologies in the private sector and does not allow Lithuania to satisfactorily move up the value chain. In 2014, high-tech export in Lithuania accounted for only 6.4% of total exports of goods, much less than the EU average of 15.6%. Only in five EU countries does high-tech export have a lower share, while on other hand the case of Malta, with a share of 28.9%, indicates that even a small country can be very successful in high-tech export.

Another important driver of economic development is external finance, especially foreign direct investment (FDI), which is over and above domestic savings and does not create external debt. According to the United Nations Conference on Trade and Development (UNCTAD)[8], in 2013 FDI stock in Lithuania was US$17.5 billion, or about 36% of GDP, indicating that Lithuania was not very successful in attracting FDI despite the attractive business environment just described. In comparison, another Baltic State, Estonia, managed to attract US$21.5 billion FDI, or about 88% of GDP.

Miskinis and Reinbold (2010) argue that the main motive for FDI is a search of new markets, and that cost reduction is not as important. The reasons for cost-reducing vertically integrated investment are high labour cost, lack of skilled labour and restrictive labour market regulations in the home country. The determining factors that encourage FDI include investment incentives and favourable policies in the recipient country. The location of the recipient country is also an important determinant. The Czech Republic, Estonia, Slovakia and Hungary, may be better locations than Lithuania for attracting FDI in terms of distance from major markets, and this could possibly be one reason why they tend to attract relatively more FDI than Lithuania. Another factor that is likely to influence FDI flows is the size of

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the country. Large countries with a large domestic market, an abundant workforce and natural resources endowments tend to attract FDI more than small countries. Miskinis and Juozenaite (2015) further argues that the government striving to attract FDI has to create favourable conditions for business, fight against corruption, and control budget and public debt effectively, all factors that render a country attractive for foreign investors.

3.6 Labour productivity

The fast recovery of the Lithuanian economy after the economic crisis, already referred to, was partially achieved as a result of the rapid growth of productivity. According to Eurostat,[9] real labour productivity per hour worked in Lithuania grew by 14% between 2009 and 2010, when in the EU on average the figure was only 2.4%. Labour productivity in Lithuania is still growing at a fast rate despite the relatively low level of investment, which is still however lower than the pre-crisis level. Although capital formation as a ratio of GDP in Lithuania is at par with the EU average (19.3%), it is still significantly below that of some other new member states – for example in Estonia it is 25.8%, and in the Czech Republic 25.3%.

In spite of its rapid growth rate, labour productivity per hour worked in Lithuania is still relatively low within the EU, indicating that the Lithuanian industries are producing predominantly low value added products and services. By way of example, in 2013 one hour worked in Lithuania on average produced a value of €10.6, when the EU average was €32.1 euro. The highest labour productivity in the EU in 2012 was in Luxembourg (€58.2), Denmark (€53.4), and Ireland (€48.8).

Innovation is also an important determinant of economic development. Lithuania ranks 39th out of 143 in the Global Innovation Index (2014), lagging behind the other EU new member states of Estonia, Malta, Slovenia, Latvia, but ahead of Croatia and Bulgaria.[10] Lithuania has a high rank in ISO 14001 environment certificates (ranking 8th among 143 states), pupil teacher ratio (10th), school life expectance (12th), tertiary enrolment (13th), Gross domestic expenditure on R&D (13th). However Lithuania registered low ranking in the following indicators: cost of redundancy dismissal (111th), gross capital formation (108th), high-tech imports (107th) and cluster development (105th).

According to the EC's Summary Innovation Index,[11] aggregating 25 indicators, Lithuania is included in the group of moderate innovators and is ahead of only four countries – Bulgaria, Romania, Latvia and Poland. The innovation leaders in the EU are Sweden, Denmark, Germany and Finland, with a score more than double that of Lithuania, and this in spite of the fact that Lithuania has a developed tertiary and youth education system. In terms of the potential of human resources, Lithuania is sixth among all EU countries, and close to the EU average in innovation finance and support, outperforming the other 18 EU countries.

The weakest aspect of Lithuania's innovation performance relates to the linkages with entrepreneurship. Another weak point in financing innovations

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in Lithuania is a low input by business sector. In 2012, in the EU, average annual business spending on innovations was €338 euro per capita, which is relatively low, compared to Sweden (€993 euro), Finland (€869), and Germany (€657), however relatively high when compared to Estonia (€165 euro).

Yet another weakness in this regard is the lack of cooperation of business companies and research institutions in Lithuania, due to long and complex bureaucratic procedures, especially in public procurement.

4 Lithuania as a small country

Lithuania is one of the smallest states of Europe, and it is characterized by certain tendencies generally found in other small states, including a high degree of economic openness and a limited ability to reap the benefits of economies of scale.

4.1 Trade openness in Lithuania

Trade openness is often measured by the average of exports and imports of goods and services as a percentage to GDP. Figure 5.4 presents data on trade openness in the seven small EU member states. It can be seen that Lithuania is highly dependent on imports and exports (75% of GDP), although Estonia, Malta and Luxembourg have a much higher trade dependence. Larger states usually have a smaller openness ratio and the five largest countries (France, Germany, Poland, Spain and UK) have an openness ratio at about 38%.

Such exposure renders a country highly vulnerable to external shocks. The reason for such high dependency on international trade is that generally these states have a small domestic market and therefore have to rely on exports to produce a critical mass in order to compete. These states also tend to have limited natural resources endowments and therefore rely heavily on imports.

Lithuania, as many other small states (Briguglio, 2014), have a relatively high dependence on fuel which is considered a strategic import and therefore highly income and price inelastic. In 2013, 31% of Lithuanian imports were accounted for by mineral products.[12]

4.2 Limited ability to reap economies of scale

Small states face problems associated with small scale production, and this leads to limitations in their ability to reap the benefits of economies of scale with also the related problem of indivisibility, meaning that overhead costs cannot be downscaled in proportion to the population.

Smaller countries are associated with a relatively larger and less efficient public sector. Alesina and Wacziarg (1998) document that the share of government spending over GDP tends to decrease as GDP increases – that is, smaller countries have larger governments, even after controlling for several other determinants of government size.

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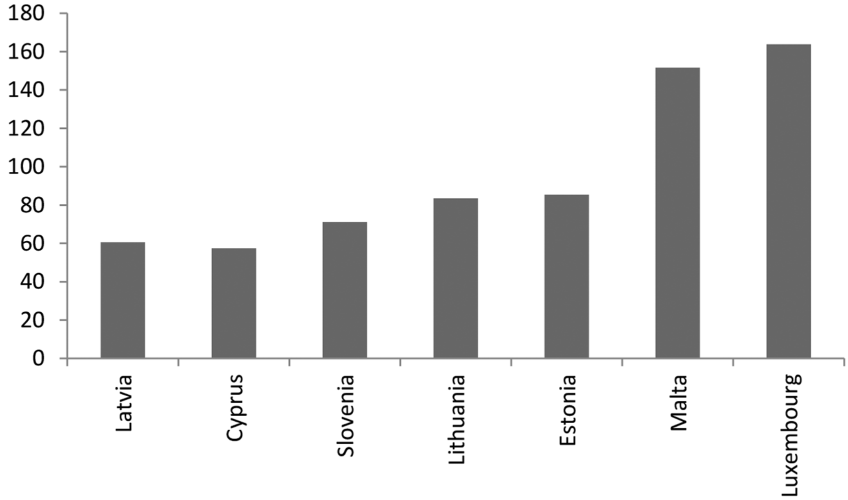

Figure 5.1 Trade openness of the seven small EU member states
UNCTAD Statistics: Trade Indicators (see http://unctadstat.unctad.org/wds/ReportFolders/reportFolders.aspx?sRF_ActivePath=p,15912&sRF_Expanded=,p,15912).

The per capita costs of many public goods in smaller countries are higher because fewer taxpayers pay for them and fewer consumers consume them. These include libraries, hospitals, diplomatic services, and national parks.

Small states are also characterized by a relatively larger number of smaller firms in the private sector. According to data by the Lithuanian Department of Statistics, in 2014 small and medium sized enterprises (SMEs) in Lithuania accounted for 99.8% of private sector firms, with micro companies with fewer than ten employees accounting for 80%, while in Germany the corresponding figure is 35%. In Lithuania SMEs employ 76 % of private sector employees and create around 63% of value added.

One advantage for small states in participating in economic integration is that this can expand their export market, thereby enabling these states to benefit from economies of scale in the private sectors. In addition, such integration renders small countries like Lithuania more attractive for foreign investors. In the case of Lithuania, after this country joined the EU, the export of Lithuanian companies became an engine for economic growth, while public spending contracted in relative terms. As a result of its integration into the Common Market, Lithuania gained access to the vast European market and was able to find niches for its unique products, which in turn led to improved usage of technology.

4.3 Small states and EU institutions

Although Lithuania is a small country, its interests can be defended within the EU institutions through a system of representation. Through the qualified

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majority voting arrangement, small states cannot exercise a veto on most issues, but their representation in EU institutions is much higher than the proportion of their population. For example, the Lithuanian population is three million or 27 times smaller than Germany's, but Lithuania's vote in the Council is only ten times smaller.

Likewise, in the European Parliament, Lithuania has 11 representatives, and in the European Commission it has one commissioner, again leading to a representation much higher than the proportion of the population.

This so-called digressive proportionality works in favour of small states, although it has to be admitted that the voice of the larger states remains very influential in EU decision making processes.

5 Lithuania's accession to the European Union

5.1 The road to EU accession

Official relations and co-operation between Lithuania and the European Community started on 27 August 1991 when the European Community recognized the independence of Lithuania and included it into its technical assistance programme PHARE. On 11 May 1992, Lithuania and the European Community signed the Agreement on Trade and Commercial and Economic Co-operation, which was followed, on 18 July 1994, by the signing of a Free Trade Agreement between the EU and Lithuania, which came into force in 1995.

Lithuania's road towards EU membership may be said to have started in a concrete manner through the signing of the Association Agreement in 1995 with the EU, and in 1999 Lithuania was invited to enter into negotiations with the European Commission on membership. This process was completed in December 2002. The support of the Lithuanians regarding accession was expressed in a referendum held in 2002.

As in other EU candidate countries there was a very lively debate on the advantages and disadvantages of EU membership. The most important economic benefit from integration was identified as the availability of a large market, without import controls, for the exports originating from Lithuania. Other advantages that were identified included incentives for efficient use resources, lower costs due to market competition; improved variety of the products and EU funds for projects (Vilpišauskas, 2002). Economic integration was also expected to provide opportunities for Lithuania, as a small country, to use the advantage of a large European market and share risks.

Apart from the economic benefits, social advantages were also identified, such as a lower probability of conflicts between member states, internal political stability, and external security. The EU Commission was also seen as an authority that can make independent decisions (Vilpišauskas, 2002).

A number of possible disadvantages were identified. These included increases in the cost of living, higher cost of imports from the third countries,

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higher tax rates, losing part of the nation's sovereignty, emigration growth and health care problems (Vilpišauskas, 2002).

There are only a few quantitative estimations of the integration impact on the Lithuanian economy. An ex-post research carried out in 2006 (UAB, 2007) indicated that as a result of EU membership, increased export affected GDP growth by an average of 1.8 percentage points per annum between 2004 and 2006. The total impact of integration on GDP was estimated at 2.7 percentage points growth per annum. This ex-post evaluation indicated that the gains were higher than those forecasted in ex-ante research in 2002. According to the same authors, the influence of integration on FDI inflows was insignificant.

5.2 Trade diversion and trade creation associated with EU membership

In the context of EU accession it is useful to assess the trade creation or trade diversion effects resulting from Lithuania's integration into the EU. Table 5.4 shows the structure of domestic consumption of goods and its change since 2000. As can be seen from the data presented in the table, consumption of locally manufactured goods decreased consistently, while the consumption of imported goods increased, except for a temporary increase during the global economic crisis. This may be due to Lithuania's growing openness and demonstrates the existence of trade creation.

Table 5.4 also shows that imports from EU countries grew constantly until 2009, and decreased slightly after that year. Such a share of the EU countries' products in the consumption of Lithuania demonstrates that even though CIS products' were cheaper, they were replaced by EU products and this could be due to a trade diversion effect.

Given these changes, it appears that, in the case of Lithuania, the trade creation effect prevailed, as expected, leading to a growth of export volume since the beginning of the integration into the EU.

5.3 High value-added sector

An interesting aspect of EU membership relates to whether or not this has speeded up the growth of sectors with high value added. Between 1996 and 2014 the share of traditional Lithuanian industries, namely, food, textiles and furniture, in total exports of goods decreased gradually, while the share of high value-added sectors grew consistently. As a matter of fact, during the 1996–2003 period, the share of high-technology exports accounted for an average of 3.8% in manufactured exports, while in 2008 it reached 11.4% (Miskinis, 2013). This tendency is collaborated by IOC, Lithuania (2014), which calculates that in 2012 the export share of high-tech products amounted to 10.2% of total exports of goods.

Lithuania's integration into the EU therefore had major trade effects, one of which was that EU products replaced CIS products, and that exports with

Table 5.4 Structure of Lithuanian domestic consumption

	2002	*2003*	*2004*	*2005*	*2006*	*2007*	*2008*	*2009*	*2010*	*2011*
Domestic production as share of consumption expenditure	42.1	45.5	45.2	40.3	37.1	39	36.4	39.1	35.9	34.7
Imported products apparent consumption expenditure	57.9	54.4	54.8	59.7	62.9	61	63.6	60.9	64.1	65.3
Products imported from the EU in consumption expenditure	31.5	29.6	31.0	33.3	39.8	36.2	39.8	41.4	36.7	38.3
Non-EU products imported in consumption expenditure	26.3	24.8	23.8	26.4	23.1	24.8	23.8	19.4	27.4	27.0

Author's calculation based on EUROSTAT data

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high value added increased their share of total exports. Product variety also improved, but the prices of imported goods went up, due to the fact that EU products carry a higher price than similar CIS products.

Membership in the EU has also created conditions for more efficient utilization of the labour force due to the fact that employment increased in the expanding high-tech sector (biochemistry, nanotechnology, medical products), and in the branches of foreign companies which often employ well-educated Lithuanian workers.

5.4 Other effects of EU membership

The EU's financial support from structural funds is intended to contribute to the economic well-being of the economy, particularly in a small country like Lithuania. The support that Lithuania received significantly improved its infrastructure and was mostly used in programmes for the public sector.

EU accession may also have helped to generate competitiveness in Lithuania, as the free movement of goods within the EU forces Lithuanian firms to compete with foreign firms, thus seeking niches with higher value added.

Some disadvantages that were expected as a result of integration into the EU proved to be true. The increased dependence of Lithuanian export on the EU makes Lithuania dangerously contingent on the EU economic cycles that are beyond the control of the Lithuanian government.

Another important downside in this context relates to emigration. After joining the EU, emigration from Lithuania was much higher than expected. It was forecasted that about 120,000 inhabitants would emigrate from Lithuania between 2004 and 2010 (Kuokštis, 2014: 111). However, during this period, more than 200,000 inhabitants left Lithuania (Kuokštis, 2014). The rate of emigration per 1,000 population from Lithuania was the highest among new member states. This partly solved the unemployment problem, however, in the long term it generated problems associated with pensions, education and health care systems, as well as public finance sustainability.

With regard to the funds received from the EU, there is some debate regarding their disadvantages, including that such support may give rise to inflation, that it may not be spent according to market needs, as there are set priorities for its use, and it may give rise to corruption.

5.5 Lithuania adoption of the euro

Lithuania was the seventh in the group of countries that joined the EU in 2004 to adopt the euro. Although the original target, set in 2005, was January 2007, the date of adoption had to be postponed due to Lithuania not meeting some of the thresholds set by the Maastricht criteria. In 2006, the government of Lithuania approved a convergence plan, which pushed the expected adoption date to post-2010. In February 2013, the government of Lithuania approved a plan for euro adoption in 2015 and the Parliament approved this date in April 2014.[13]

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On 23 July 2014, the European Council decided that Lithuania had fulfilled the necessary conditions for the adoption of the euro, and as a result the country adopted the euro on 1 January 2015. The banks and their automatic teller machines were available for withdrawals of euro cash on that date. During the two weeks that followed, there was a dual circulation of the euro and the litas. The changeover required considerable preparation, involving the banking sector, post offices, and credit unions.

A European Commission survey carried out between 16 and 19 January 2015 found that 91% of the respondents did not experience problems when exchanging litas or withdrawing cash during the first week of January.[14]

A major source of concern associated with the changeover was that this would generate inflation. Therefore steps were taken to avert abuse in retailing: prices were monitored by the authorities and retailers were required to display dual prices (litas and euro) as from August 2014, where the rounding of prices was set. In addition business people were invited to commit themselves not to take advantage of the changeover for their own profit, and about 90% of all retailers in Lithuania adhered to this scheme.

It is too early to assess the actual impact of the euro on the Lithuanian economy. However studies which were conducted before the introduction of the euro were generally in favour of this changeover. The conclusions of a study on the impact of the introduction of the euro carried out by the Bank of Lithuania in 2013 (Lietuvos bankas, 2013: 35–36) stated that due to the impact of euro introduction in 2015 real exports, excluding mineral products, were expected to increase by 5% annually over a seven-year period (2015–2021). The study also predicted that real GDP in the medium as well as in the long term would be higher with the introduction of the euro.

As member of the Eurozone – an elite economic club – Lithuania should reduce its interest rates and improve its fiscal policy in line with the Stability and Growth Pact. This should in turn lead to higher credit ratings for the Lithuanian economy.

6 Challenges and prospects

The major challenges currently facing the Lithuanian economy are: (a) the trade restrictions imposed by Russia on EU imports, (b) the need to modernize the production methods, and (c) the large emigration flows.

6.1 The Russian embargo

The trade restrictions imposed by Russia on EU imports[15] are having negative direct and indirect effects on Lithuania's international trade. The restrictions of food imports by Russia in August 2014, and later the restrictions on transport services in November 2014 negatively affected Lithuania's merchandise exports (a reduction of about 4% from 2013) a large proportion of which were re-exports. Most of the decline was connected with oil products

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(24.4%) which used to account for about a quarter of Lithuanian merchandise exports, and to the re-export of vehicles (20%). The failure of major Lithuanian exporter Orlen Oil Refinery was the result of increasing world competition in the sector which was exacerbated by the Russian situation.

Export of food and agricultural products of Lithuanian origin to Russia in 2014 decreased by 28.3%, including export of meat by 44.8% and dairy products by 35.3%. The contraction of food export to Russia to some extent was offset by an increase in export to the EU and other markets.

Lithuanian exports were affected not only by the embargo on food but also by a sharp deceleration of private consumption and investments in Russia. The Russian demand for imports is also being hampered by the devaluation of the rouble.

The loss of exports to Russia has ancillary effects on transport services. Currently, nearly 90% of Lithuanian exports to Russia are re-exports, the shrinkage of which will have a relatively high negative effect on transportation companies

The fall in exports to Russia is compelling Lithuanian businesses to seek new markets for their products. These efforts should be supported by the Lithuanian government and would transform a challenge into an opportunity as the exercise may results in the diversification of export markets and as a result of the economy.

6.2 Modernization of the economy

The second major challenge facing Lithuania is the need to modernize its economic institutions and structures. So far, the Lithuanian economy was to a large extent based on traditional low or medium value-added industries. Competitiveness in the production of goods and services was mainly attributable to low costs, including wages and salaries. It is unlikely, and not desirable, that in the future companies will secure growth with low salaries, one reason being that there are pressures to increase them, including those brought about by economic growth. However, in order for firms to pay higher salaries it is necessary for them to produce higher value added, so as to ensure that unit labour costs do not increase. In addition, the highly skilled members of the labour force expect to receive salaries commensurate with their skills and qualifications.

There are calls for the further modernization of the economy through investment in technological advance. This is the only way for Lithuanian companies to compete sustainably in the export market, so that they can create well-remunerated jobs for highly skilled labour, without necessarily increasing unit labour costs. Low wage rates do not offer a sustainable economic future for Lithuania, and the solution is to improve labour productivity, which would permit the increases in returns to labour. This would also improve living standards and usher in further convergence with the EU. This was identified by the IMF (2015) as the main policy challenge.

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One problem that could work against the modernization of the economy is the economic uncertainty in the Eurozone. Another is the huge capital outlays that are required for this purpose. Although investment during 2014 increased, it is still lower than the pre-crisis level. In 2008 gross fixed capital formation accounted for 26% of GDP, a ratio which fell to 18.2% in 2013.

6.3 Emigration

The third major challenge facing Lithuania relates to demographic changes mostly caused by emigration, which is leading to a decrease in the working-age population. Emigration, coupled with an aging population, are and will adversely affect the sustainability of the pension system.

According to the EU Country Report on Lithuania (European Commission, 2015), the government has not taken any decisive action to put in place a pension system reform, which would ensure the long-term sustainability of the system. Some steps have already been taken, such as that related to the statutory retirement age, which has been and is being gradually increased. Overall, the challenges for Lithuania's pension system remain, and may be intensified by continuing emigration unless a drastic reform is implemented.

Emigration is also affecting the sustainability of the education system, which is being adversely affected by the decreasing number of students. This calls for the merging of educational institutions in order to optimize the number of students per school. The Lithuanian education system needs further reforms to make teaching more applicable to the needs of the labour market.

One possible solution to reduce the negative effects of emigration is to step up labour productivity, which could result in higher labour earnings and this would render domestic employment more attractive. Another possibility is to attract workers from other countries. However, taking into consideration the fact that the majority of European countries offer higher wages than in Lithuania, this possibility can hardly be expected to be realized. In addition, the import of foreign workers may create social problems.

According to IMF (2015), it is important for the government of Lithuania to put in place policies that maximize the utilization of the demographically shrinking labour resources through the modernization of the labour law, and improvements in the labour-market relevance of education.

7 Conclusion

In this chapter it has been argued that the decision of the Lithuanian government to establish and maintain a fixed exchange rate using a currency board arrangement during the country's transformation period stabilized the Lithuanian economy and built up confidence in the state and in the financial markets.

It has been shown also that integration into the EU substantially contributed to the development of the Lithuanian economy, opening new markets

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for Lithuanian producers, providing financial support and creating conditions to make use of the country's geographic advantage. However EU accession may have also brought about some external stresses such as the dependence on economic cycles of external markets, and large migration flows.

Three major challenges facing the economy of Lithuania that need to be addressed to foster growth and stability in the country have been identified. These are the trade restrictions imposed by Russia calling for diversification of exports, (b) the need to modernize the production methods and economic structures to increase labour productivity, and (c) the need to address the emigration problem, which calls for improving employment attractiveness in the country and for urgent pension reform.

However there is room for optimism with regard to Lithuania's economic prospects. As IMF (2015) put it, the Lithuanian past resilience augurs well for future growth. The improved prospects of stability within the euro area, and Lithuania's drive to continue diversifying exports, to modernize the economy and to usher in a pension reform, could possibly offset the negative effects mentioned in this chapter, including those associated with the Russian embargo and recession.

Notes

1 The other two are Estonia and Latvia.
2 Net migration in 1990–2012 was 617.5 thousand or around 17% of the population. Since 2010 emigration has remained high but immigration has started to increase, thus reducing net migration flow.
3 See Council Recommendation on the 2015 National Reform Programme of Lithuania. Available at: http://ec.europa.eu/europe2020/pdf/csr2015/csr2015_lithuania_en.pdf.
4 Available at: http://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&plugin=1&pcode=tessi190&language=en.
5 Available at: http://ec.europa.eu/eurostat/statistics-explained/index.php/People_at_risk_of_poverty_or_social_exclusion.
6 Available at: http://www.doingbusiness.org/~/media/GIAWB/Doing%20Business/Documents/Annual-Reports/English/DB15-Chapters/DB15-Report-Overview.pdf.
7 Available at: http://www.heritage.org/index/.
8 Available at: http://unctad.org/en/Pages/DIAE/World%20Investment%20Report/Annex-Tables.aspx.
9 Available at: http://ec.europa.eu/eurostat/tgm/refreshTableAction.do?tab=table&plugin=1&pcode=tsdec310&language=en.
10 Available at: https://www.globalinnovationindex.org/userfiles/file/reportpdf/gii-2014-v5.pdf.
11 Available at: http://www.innovationdata.be/a/EC_IUS2014/Innovation_Union_Scoreboard_2014.
12 Statistical Yearbook of Lithuania (2014) is available at: http://osp.stat.gov.lt/services-portlet/pub-edition-file?id=2910.
13 An account of the process of Lithuania's adoption of the euro is given in the European Commission report entitled 'The introduction of the euro in Lithuania', available at: http://ec.europa.eu/economy_finance/euro/countries/documents/lithuania_the_introduction_en.pdf.

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14 http://ec.europa.eu/public_opinion/flash/fl_412_sum_en.pdf.
15 For more information about the Russian embargo on EU products see 'Information note on the Russian ban on agri-food products from the EU', available at: http://ec.europa.eu/agriculture/russian-import-ban/pdf/info-note-03-09_en.pdf.

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