Manufacturing Industry Trends in Lithuania

Rimantas Rudzkiškis, Natalja Titova

Introduction

The article is aimed at analysing development trends of the manufacturing industry in Lithuania and assessing its prospects. This industry has been the driving force of the Lithuanian economic development in recent years. A direct contribution of the manufacturing industry to the real GDP growth exceeded 25% in 2001–2005. Moreover, its development stimulated growth in transport, construction and agriculture. The majority of the production of the agricultural sector is consumed as raw materials for food and drink industry. In the last five years, the manufacturing industry’s share in the total value added created in Lithuania grew from 19.4% in 2000 to 22.1% in 2005. In this respect, Lithuania differs considerably from other EU countries. Eurostat estimates that the relative weight of the manufacturing industry in all other EU countries decreased in the period concerned, except for Poland where it did not change. Although analysts and investors often treat the three Baltic States as a single region, their development was different in this respect: the weight of the manufacturing industry has declined slightly in Latvia and Estonia, similarly to other EU member states.

As Lithuania strengthens its integration into the EU economic area, it undergoes a convergence of its macroeconomic indicators with the EU averages: the gap between the consumer prices, wages, labour productivity, GDP per capita, etc. is shrinking. Expectations are that the structure of the manufacturing industry will undergo similar changes. The share of high and medium-high technologies sector (according to the Eurostat classification this sector includes the industries with NACE codes 24 and 29–35 (Storm, 2004)) will grow and come closer to the EU average (about 44% of total value added created by manufacturing). In the last five years, Lithuania’s indicator remained at a similar level and was below 20% in 2005. So the traditional industries maintain their position while, contrary to expectations, the electronic sector classified as a high-tech industry has been facing difficulties and has been in recession recently.

In this paper, we will try to reveal the special features of development of the Lithuanian manufacturing industry and analyze their underlying reasons as well as to give an outlook for the industry and its individual sectors. Many experts agree that globalisation processes will force partial relocation of the manufacturing industry outside the EU in the near future (TNS Infratest Wirtschaftsforschung, 2004).
It is vitally important to determine if this finding applies to Lithuania as well. Before analysing the situation of the manufacturing industry, we will review the economic development of the Baltic States in recent years.

Features of economic development in the Baltic States

In recent years, Lithuania, Latvia and Estonia have stood out in the EU as the countries with a very strong economic growth. For five consecutive years, these countries occupied the top three positions among the EU member states by the annual growth of the real GDP. The available data shows that the trend will be continue into this year as well. In 2001–2005, the average annual growth rate of the Estonian and Latvian economies was 8.3% and 8.1% respectively. Although Lithuania’s indicator was slightly lower (7.8%), it exceeded the EU average 4.6 times. Economic development in the Baltic States followed a similar scenario: all countries have their currencies pegged to the euro, their governments pursue a rather strict fiscal policy, the Scandinavian capital has strong positions in all the three countries, and a favourable geographic location secures good revenue from transit and re-exports. Economic development was boosted by increased flows of foreign direct investment (FDI) into the banking sector. When strong foreign banks took over the control of many local banks several years ago, borrowing costs went down dramatically swelling the banks’ loan portfolio, giving impact to construction and domestic trade and shaking up the real estate market. Therefore, robust economic growth in the Baltic States relied to a large extent on increasing domestic consumption. Experts even started to hint at a possible overheating of the economies, especially in Latvia.

Statistics provided by Eurostat prove. Kochetkov’s statements (Kochetkov, 2005) that the level of industrialisation in the Latvian economy was rather poor with a low relative weight of production of goods and the low technology industries such as timber and paper industry, food industry, etc. dominating the industry structure. In 2005, the share of the manufacturing industry in the value added created in the Latvian economy went down to 13.1% and was considerably lower than the indicators of the domestic trade, transport and communication sector.

Last year, the relative weight of the manufacturing industry in Estonia was 16.8% of total value added and was slightly lower than the EU average (17.4%), while all other new EU members (except Malta and Cyprus) had much higher indicators. The indicator in the Czech Republic was 26%, Slovenia recorded 24.6%, etc. It has to be said that the share of the manufacturing industry in some old EU member states remained high (see Figure 1).

Despite the above-mentioned common features and similar starting positions, the situation in Estonia and Latvia after regaining of independence has been more favourable for the services sector development than in Lithuania. Estonia is a neighbour of the Scandinavian region and historically had close ties with the region. Additionally, St. Petersburg is not that far away. Therefore, the country may expect more revenue from tourism and transit than Lithuania and their relative importance is even stronger as Estonia is much smaller than Lithuania. Moreover, Estonia managed to attract more FDI flows with the lion’s share coming from Scandinavia, as the Nordic countries (Denmark and Sweden) are focusing on developing their services export. Similar findings apply to Latvia as well. However, the country's current level of the economic and, especially, industrial development is lower than the Estonian. Estimates of the Latvian Ministry of Economy and the Bank of Latvia show that the shadow economy share in the country is rather high, which distorts market relations. The rocketing real estate prices in recent years promoted by investments of the Russian origin (its volume in the real estate market is difficult to estimate due to the lack of reliable statistics) was not favourable for the industry development.

Lithuania, on the other hand, should follow in the footsteps of Central European countries and focus on production of goods, which is also confirmed by the behaviour of foreign investors. At the end of 2005, a third of FDI stock to Lithuania fell at the manufacturing industry, while the same indicators in Estonia and Latvia were only 13.3% and 12.8% respectively. Analysis of the investment flows in recent years promoted by investments of the Russian origin (its volume in the real estate market is difficult to estimate due to the lack of reliable statistics) was not favourable for the industry development.

Figure 1. The share of manufacturing activities in total value added in 2005 (percent)

Source: Eurostat
2005 and the first half of 2006 compared with previous years. The downward trend is especially obvious when the FDI to value added ratio is considered. Are these just temporary failures or is Lithuania virtually losing the competitive battle with the neighbouring countries in attracting foreign investment? The answer to this question will shape the overall outlook of the national manufacturing industry to be presented later after analysis of the results of previous years.

**Lithuanian manufacturing industry indicators**

In recent years, about 60% of the manufacturing industry’s production has been exported. Therefore, its development relies heavily on exports. On the other hand, econometric studies conducted with the Granger causality test (Rudzkis, Kvedaras, 2003, and Kvedaras, 2004) have shown that export of commodities was an exogenous variable in relation to the national macroeconomic indicators for a long time and was only affected by FDI to a significant degree. Similar findings were reached by modelling exports of industrial production with updated statistics: using a two-step Engle-Granger methodology (Rudzkis, Kvedaras, 2005, and Engle, Granger, 1987), the only statistically significant regressor in the equation describing the long-term co-integration links of export was FDI flows into the manufacturing industry ($p$-value $< 0.0001$). Updated quarterly data (for the period 1999–2005) allowed including the scope of tangible investment into the manufacturing industry ($p$-value $\cong 0.1$):

$$S_E(t) = 1.34 + 0.351(I(t-2) + 0.65(F)(t) + \varepsilon(t),$$

where $S_E$ = production export, $I$ = tangible investment, $F$ = foreign direct investment; all indicators are logarithmic in the equation.

These results of econometric modelling are fully in line with the expert opinion stated by one of the article’s authors in a number of reviews and seminars. After regaining of independence in Lithuania, previous economic ties were lost and the majority of manufacturing industry companies had excessive production capacities for a long time. High unemployment rate ensured excessive labour resources and production facilities were cheap, which means that production was only restricted by the demand factor. Correlation between FDI and export volumes was high as foreign investors helped Lithuanian companies penetrating foreign markets. The impact of the Russian crisis illustrated the situation quite well. Having temporarily lost a significant share of market, the Lithuanian industry, which was recovering strongly, hit rock bottom in 1999. However, development of the manufacturing industry regained strength in 2000–2005. Annual growth of the value added (at the prices of 2000) averaged 10.6% in the considered period and this year’s development was even stronger. Local companies managed to start close partnerships with customers abroad and the EU integration brought about new opportunities: export-limiting quotas were abolished, subsidies for exports to third countries were introduced, etc. Moreover, both economies in Western Europe and CIS are on the rise, which means that the neighbouring markets are expanding.

These were the underlying reasons for a very strong growth of the manufacturing industry in recent years. However, the development of production of goods is already being hampered by the supply factor. In the last few years, the labour market has undergone dramatic changes: almost no free labour force is available, the cost of labour is rocketing and the lack of highly qualified labour force is very acute, which makes it more difficult to modernize production and introduce innovations. The real estate and energy costs are also on the rise. Therefore, local companies have started to lose their competitive advantage in Western Europe. So far, these negative processes were partly offset by the positive effect of integration referred to above. In addition, the growth of domestic consumption has been very strong lately. And even though enterprises’ earnings in the manufacturing industry reached record highs in 2005, the profitability ratio peaked in 2004 and started to decline later.

Considering the depleted labour resources, the only option to develop production is to improve labour productivity. So far, the pace of productivity improvement was unimpressive and even slowed down in the last two years: in 2003 and 2004, it grew (at constant prices of 2000) 8.9% and 7.7% respectively and the growth pace decelerated to 5.7% in 2005. At first glance, the underlying reason is a relative decline in tangible investment flows to the manufacturing industry. In 2000–2003, the ratio with the value added was 17.3% on average and dropped down to only 14% in 2004–2005. However, these statistics do not fully reflect the modernization process in companies since leasing of capital goods has been growing strongly in the last two years. A slowdown in the growth of productivity could be explained by initially low level of production costs and productivity, thus the companies were able to expand their production significantly by acquiring cheap second-hand equipment, while the current technological level of the Lithuanian industry is much higher and further improvement of productivity requires significantly larger financial input. Will it be easy to develop production of goods in Lithuania when the gap to the European standards will be bridged? It has to be said that the Eurostat data indicate a several times lower level of labour productivity in Lithuanian manufacturing industry compared with the EU average.

**Outlook of Lithuanian manufacturing industry**

It seems that a new phase of industrial development in Lithuania has begun, where emerging problems can only be solved by concerted efforts of businessmen and politicians. What challenges are awaiting local companies in the coming future? First, we cannot help but mention the surfeited China factor. In the last three years, China’s economy grew at a staggering pace of more than 10% per year (Asian Development Bank, 2006). Knowing that domestic investment comprises over 40% of China’s GDP, it is unlikely that the economic growth will slow down significantly in the nearest future. The weight of the manufacturing industry in China’s economy exceeds 50% and is driven by export of goods, which in 2003–2005 grew, on average, by about a third annually. More-
over, China's export's share in the EU market has been increasing recently and reached 18% in 2005. The political system in China is a combination of centralised planning and market relations and allows efficient economic expansion. The country is developing its infrastructure, introducing latest technologies, investing in higher education and facilitating production and R&D climate for foreign investors. Therefore, Chinese manufacturers have been able to offer not only cheap commodities but also the increasingly wider range of high-quality products.

It is not surprising that the study ordered by Siemens AG on the EU economic outlook (TNS Infratest Wirtschaftsforschung, 2004) predicted only partial success for the EU efforts to compete with China and India. Therefore, we can expect a further shift towards the importance of trade and services in Europe, concentration of undertakings producing capital goods and innovative products and intensifying outsourcing of intermediate consumption goods production outside Europe.

Prospects of the Lithuanian industry also depend on the policy-makers, i.e. whether these forecasts will be taken on board when shaping the Lithuanian economic policy. As we already mentioned, the national industry has been dominated by traditional activities which will face difficulties in the future because of rising labour costs and shortage of local raw materials. Innovations and development of the high-tech sector is high on the agenda. However, Lithuania has no uniform national policy in this respect. In the report submitted to the Government, experts of the World Bank noted that the Lithuanian education system is well-developed but more progress is needed to advance the systems for innovation (World Bank, 2003). A poor performance by Lithuania in advancing innovations was also highlighted in the assessment of innovation systems in EU member states conducted by the EC bodies in 2005 (European Commission, 2005). The applied science in Lithuania is weak and cannot be raised to the international level quickly as the state lacks the appropriate resources. Moreover, the accelerating emigration process makes it extremely difficult to curb the brain drain of highly skilled professionals and researchers as their adaptation abroad is facilitated by large Lithuanian emigrant communities.

To address these pressing problems, the Government would have to take immediate administrative action and implement realistic investment projects which could deliver the results in the nearest future. The priority steps should be: immediate reform of the university and vocational training system bridging the gap between the academic and business communities (as strongly recommended by the World Bank (World Bank, 2005)), quick expansion of industrial parks and introduction of foreign investment promotion schemes, strengthening public authorities in direct contact with potential investors (LDA), liberalisation of business environment, and removal of excessive restrictions.

In the modern world, it is inconceivable for a poor country to achieve a quick breakthrough in the high-tech sector without major foreign investment. In this respect, investment of transnational companies in to research activities, as seen in the Czech Republic, Hungary or Poland, would be extremely valuable.

It has to be said that the pressure from Asian rivals in the EU area has made some local companies to turn their sights on the CIS market, which has been growing strongly and has much to offer. Lithuanian entrepreneurs have a competitive advantage there as they are familiar with local business environment and have a good command of Russian. Lithuania, as an EU and NATO member with strong historic links to Russia, may serve as an effective bridge between the EU and CIS, thus boosting its appeal to Western investors who want to penetrate the giant Russian market with as little risk as possible. However, there has been a lack of concerted effort to explore this opportunity. Current relations between Lithuania and Russia are based on dissociation rather than strengthening economic partnership. Changes in this area are hard to predict. Much will depend on the Russian foreign policy. We still believe that in time Lithuanian businesses will intensify their contacts with partners from the CIS.

Last but not least, we will analyse individual industrial sectors.

**Overview of major sectors of manufacturing industry**

The manufacture of food and beverages accounts for the major share of the value added created by the manufacturing industry. However, it has been decreasing for the last ten years and shrank from 30% in 1995 to 17.2% in 2005. The trend should be reversed in the nearest future following Lithuania's accession to the European Union which brought about major changes in foodstuffs export conditions and gave a new impetus for the development of the sector concerned. The value added created last year by the food industry grew 9% at constant prices compared with 2004, and excellent results of the beginning of this year point at even better performance in 2006. Although about 2/3 of this sector's production was sold on the domestic market, the relative weight of exports has been rapidly increasing lately. Last year, the export development secured nearly 60% of the increase in the overall sales of food industry and it is very likely that exports will remain its major driving force in the nearest future. This development is being boosted by EU subsidies for exports of foodstuffs to third countries.

**Manufacture of textiles and wearing apparel.** This industry, also referred to as the light industry, still remains the largest sector of the manufacturing industry by the number of employees, although this indicator has been declining for several years. The development of the light industry after the Russian crisis was very different from that of other manufacturing industries: having entered the Western European market quite early, it successfully survived decreasing demand in the CIS region. However, over the last four year the value added created by the light industry at constant prices has been constantly lessening at progressive scale. Last year it decreased 8.4%. Under pressure of Asian competitors, our companies started losing their positions in foreign markets, exports of clothing and textiles (of the Lithuanian origin) are shrinking – as indicate both foreign trade and industrial statistics. The growing demand on the domestic market only partially offsets these losses. Nevertheless, the situa-
tion of the light industry is not dramatic. Strangely enough as production started to decline, the financial indicators began to improve: in 1998–2001, the industry incurred losses, then earned marginal profit for several years and, finally, the profitability ratio reached encouraging levels in the last two years. Lately, the sector has been undergoing restructuring: some companies are unable to compete under new conditions while others modernize production, pick up gains and continue to expand. After stagnating for several years, the flow of investment into the light industry started increasing. The volume of tangible investments, which declined significantly in 2002–2003, grew 9.6% in 2004 and 13.0% in 2005. Last year’s 12.3% increase in foreign direct investment into this industry is also a good sign for the future. Nevertheless, this sector with old traditions in Lithuania faces serious challenges in the future.

Manufacture of refined petroleum products. This sector was the leader among the manufacturing activities by turnover that reached almost 11 LTL billion in 2005. The oil industry is concentrated to a maximum in Lithuania as the relative weight of Mažeikių nafta is almost 100%. Due to the rising costs of fuel, its share in the national GDP structure increased 0.8 percentage points to 3.2%, while the relative weight of petroleum products in Lithuanian origin exports exceeded one-third for the first time. The oil industry is the best performer of the national economy and continues to stand high above the average levels. In 2005, productivity of the sector was almost 7 times better compared with the manufacturing industry indicator. The prospects of the sector are only spoiled by the arising problems with raw oil supply from Russia.

Manufacture of wood, paper and furniture. Within the several previous years the wood, paper and furniture industry has demonstrated brisk growth with value added (at constant prices) increasing on average by 22% annually in 2000–2003. During the last two years the growth rate has somewhat declined and in 2005 it slowed down to 9%, mostly due to the deceleration in export growth.

However, the outstanding indicators for January – March 2006, ambitious prospects envisaged by the major companies, the new factories under construction in addition to accelerating domestic demand suggest that the impediment to be of short term. The timber industry has all chances, in terms of the value added created to surpass not only the food and beverages industry, but also the electricity gas and water supply sector and become the largest industrial sector already this year. Last year the share of the sector in the structure of GDP in Lithuania accounted for 3.6%, and is expected to reach 4% in 2006. The prospects of the industry is somewhat worsened by the rising costs of raw materials and the increasing pressure from the side of Asian competitors.

Manufacture of electrical and optical equipment. Lithuania has only few industrial companies operating in the field of high technologies. The majority of such companies belong to the sector concerned which has been successful for a number of years. In 1996–2004, it grew continuously and rapidly. During this period, the value added at constant prices created annually by the sector increased 4 times and its share in the GDP structure exceeded 1.7% in 2004. However, the situation in the electronics industry worsened last year as some of its products were no longer able to compete with cheaper production of Asian manufacturers. Therefore, growth of the sector concerned was negative for the first time during the last decade. The 2006 is very likely to be poor for the sector. Deteriorating prospects of the sector were reflected in last year’s investment indicator: the volume of tangible investments decreased three times and accumulated FDI also started to decline. The prospects of this sector are vague. In contrast to neighbouring Poland, our country has not yet been able to win the minds of major global producers of electronic goods. The in-depth analysis of industries is provided in DnB NORD Bankas Lithuanian Economic Outlook 2006 (DnB NORD, 2006).

**Conclusions**

1. Lithuanian economy experiences very dynamic development and has a lot in common with Latvia and Estonia. This includes the strict fiscal discipline, fix exchange rate, strong presence of Scandinavian capital, well developed banking sector, considerable income from cargo transit via the country’s territory and re-export.

2. Lithuania steps out of the other Baltic countries by the much larger share of manufacturing in the economy’s structure. In this regards Lithuania is closer to some Central European countries like Czech Republic, Slovakia or Germany. Manufacturing is also an industry that is on the top of the priorities list of foreign investors.

3. The driving force of further economic expansion is the rise of labour productivity. Manufacturing industry is the most favourable sector to modernize processes by applying modern technologies.

4. Lithuanian economy has already entered the new development stage with no excessive production capacities and no free labour resources available. Production and export growth that was earlier hampered by the demand factor is recently much more restrained by the supply side factor.

5. The trend of decreasing FDI flow into the country is a bad news for the high-and medium-high-technologies sector. At the moment the share of this sector in manufacturing structure in Lithuania is lower than in the most of the European countries.

6. The reform-needing vocational training and university system and the absence of more close cooperation between academics and business is another factor that puts brakes on modernization process in the country. The effectiveness of expenditure on R&D also raises many questions.

7. The rapidly developing CIS market opens the new opportunities for Lithuanian economy. A very important trump card of Lithuania is the possibility to be a bridge connecting EU and CIS – is still underexploited.
Lietuvos apdirbamosios pramonės tendencijos

Rimantas Rudžikis, Natalie Titova

Sripanis skirts Lietuvos apdirbamosios pramonės raidos ypatumams išryškinti ir perspektyvos įvertinti. Ši ekonominė veikla pastaraisiais metais buvo Lietuvos ūkio plėtros losemotyvas. Šis veiklas yra ekonomiškas šalies eksporso sritis, transporto ir statybos veiklos, jos produkcinio dominuojančios šalies eksporto. Lietuviui siekiant kuo greičiau sumažinti ūkio atsparumą nuo išsivystymo veiklų, apdirbama apdirbimo tenka svarbius asmenys. Daugelio kitų šalių patirius liudija, kad spartus ekonomikos augimas ilgą laikotarpį dažniausiai remiasi apdirbamosios pramonės plėtra. Tačiau Lietuva vis labiau ne tik formalai, bet ir faktiškai inte-

Lietuvos apdirbamosios pramonės tendencijos

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