

THE EVOLUTION OF THE LATVIAN EXTERNAL SECTOR: IMBALANCES, COMPETITIVENESS AND ADJUSTMENT

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1 Introduction

Since 1992 Latvia has undergone intense economic restructuring which led in the early 2000s to a period of sustained growth fuelled by capital inflows and a strong domestic demand. At the same time, the country developed unsustainable external and internal imbalances that kept on increasing until 2008 and put government finances under strain, pushing it to ask for assistance when the international financial crisis caused a sudden stop in external financing. The country's external position deteriorated to such extent that its current account deficits reached a staggering 25 per cent of GDP in the quarters preceding the crisis. Similarly startling was the development of internal imbalances, with housing prices doubling in just a couple of years and the emergence of a construction bubble financed by a steep increase in private sector debt, which more than tripled as a percentage of GDP in less than a decade, from 39 per cent in 2000 to more than 130 per cent in 2008.

This paper focuses on the process leading to the accumulation of internal and external imbalances in order to understand the reasons behind them and the precautionary measures that can be adopted to prevent their reappearance in the future. More precisely, we investigate the sources of these imbalances and seek to determine the relative contributions of the demand and the supply side. Our study shows that most of the problems confronting Latvia arose from excesses on the internal demand side rather than from a loss of international competitiveness or other possible export performance-based explanations. In particular, the availability of cheap credit and extremely optimistic expectations regarding future income appear to have played a leading role in pushing households and enterprises to excessive levels of consumption, indebtedness and risk taking. As for external competitiveness, we show that the country didn't show any particularly worrying trends in terms of export performance in the period considered, as the increases in labour compensation appear to have been offset in the tradable sector by quality upgrading and improvements in product specialisation. However, this is shown to be less the case in the context of the non-tradable sectors, construction in particular, where the virtually unlimited availability of credit resulted in a boom that inflated profits and wages in the sector, causing labour and capital to be reallocated from more competitive sectors towards non-tradable ones and playing a key role in inflating internal demand.

The paper is organized as follows: first we take a long-term view of the economy and look at the evolution of Latvian net external positions since its independence in 1991; we then analyse the factors that undermined their sustainability by the time the crisis set in, looking at them through the lens of both traditional competitiveness indicators and alternative measures; finally, we focus on the role played by internal demand factors and imports in generating these imbalances.

2 Latvia's external position since independence

In the early phase of Latvia's independence and transition to a market economy (1992-94), the country's current account posted surpluses which were mainly due to limited access to external financing and weak purchasing power in the course of a process of price liberalisation and foreign trade reorientation. The current account was broadly balanced in 1995, moving to relatively large

* European Commission.

deficits afterwards as catching-up dynamics and capital inflows started to gain momentum. In the period of 1996-2000, the current account deficit as a percentage of GDP remained in the single-digit zone and was largely covered by net FDI inflows. However, the deficit widened significantly in 2000-07 and only a small share of it was financed by net FDI inflows in that period. The current account (CA) deficit peaked to the extremely high levels of 22.5 per cent and 22.3 per cent of GDP in 2006 and 2007, respectively, showing clear signs of overheating in the economy. The 2008 crisis sharply reversed the CA to a surplus, driven by the collapse of domestic demand as well as large losses in foreign-owned companies that are booked symmetrically as an inflow in the income balance of the CA and an outflow in the FDI balance of the financial account.

2.1 *External balance and debt position*

Unlike some other countries in Eastern Europe, Latvia did not suffer from a heavy external debt burden in the early phase of its transition to a market economy. The country was even a net creditor in the first years of independence. However, the following period of large CA deficits caused a rapid deterioration in the country's external indebtedness (see Figure 1, upper pane). The gross external debt increased from 31.6 per cent of GDP in 1995 to 129.2 per cent in 2008. Although the nominal debt value stabilised in 2009-10, its value as a share of GDP deteriorated further to 165.2 per cent in 2010 as a result of the recession. In net terms, the external debt widened from -3.4 per cent of GDP in 1995 to a peak of 58.7 per cent in 2009, moving downwards to 53.2 per cent in 2010 due to the accumulation of reserves in the government sector and deleveraging in the private sector. The net international investment position of the country thus deteriorated significantly to -81.4 per cent of GDP in 2009 reflecting both private debt and FDI dynamics (see Figure 1, lower pane).

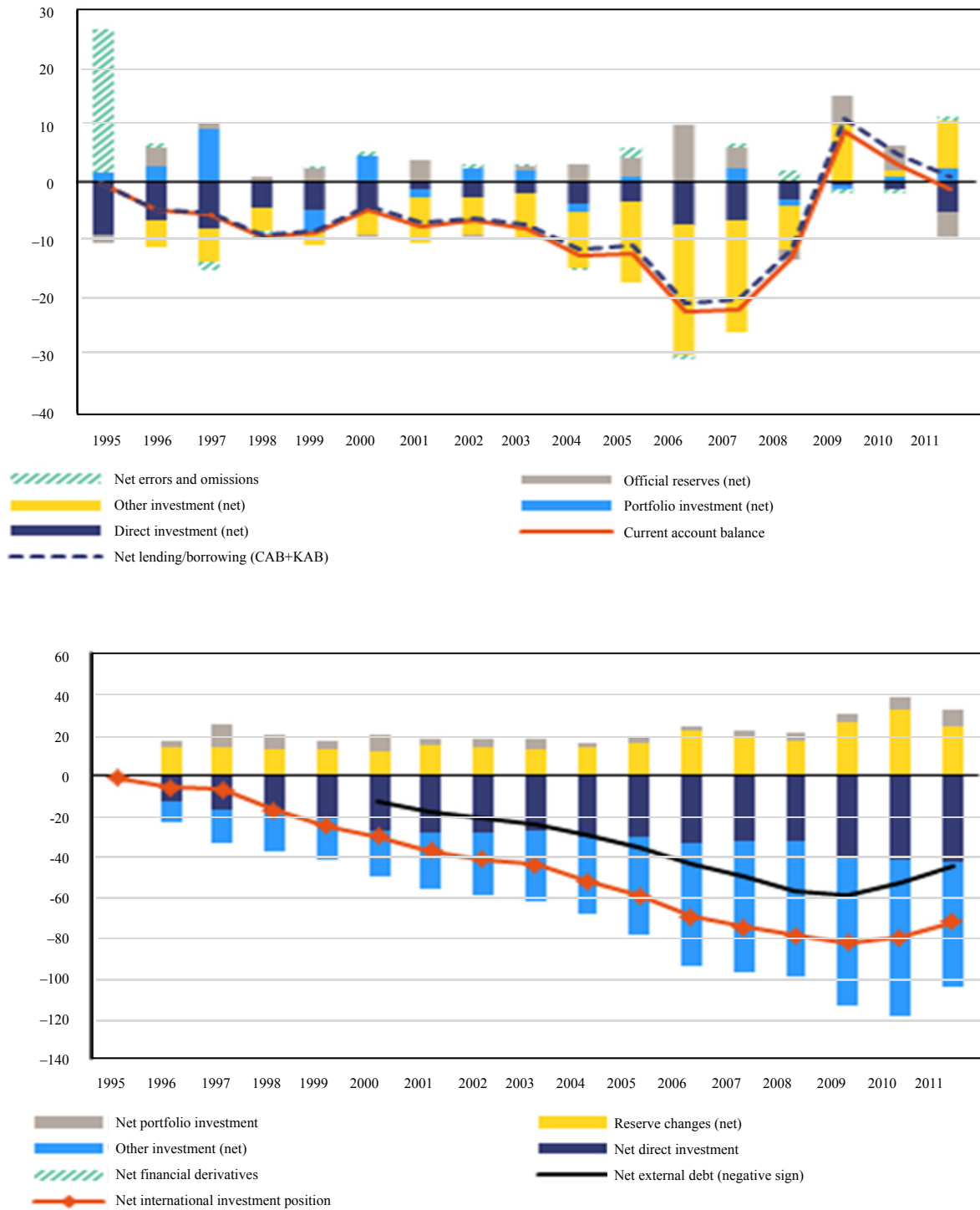
The rising share of foreign ownership has significantly influenced Latvia's external balance. This improved access to external financing and supported the modernisation of the economy. However, the rising share of foreign ownership has also increased the importance of dividend outflows and reinvested earnings in the balance of payments. The impact of reinvested earnings on the CA balance has been substantial in some years even though this item does not correspond to a cash outflow.

2.2 *External trade dynamics*

The country's export sector has undergone significant structural changes since independence. On the one hand, the geographical dimension of exports moved from the planned markets of the former Soviet Union to the free market of Western Europe. On the other hand, many industries dependent on cheap energy imports and outdated technologies had little chance to survive the challenges of liberalised energy prices and direct competition from technologically advanced western companies. Not surprisingly, the merchandise trade balance of the country has deteriorated significantly since 1992. However, the services trade balance was always on surplus during the transition to a market economy. Within the economy of the former Soviet Union, Latvia was an important transport corridor and most of its service exports were transportation, mainly sea and railway transport services. In the early period of transition (1992-94), transport businesses generated around 90 per cent of total service exports and the latter accounted for about 1/3 of the total value of exports of both goods and services. As Latvia progressed towards a market economy, the range of service exports widened substantially, in particular towards tourism and financial intermediation. Transportation remained an important sector with 49 per cent of the total value of service exports in 2010 but well below its levels from the early period of independence (see Figure 2).

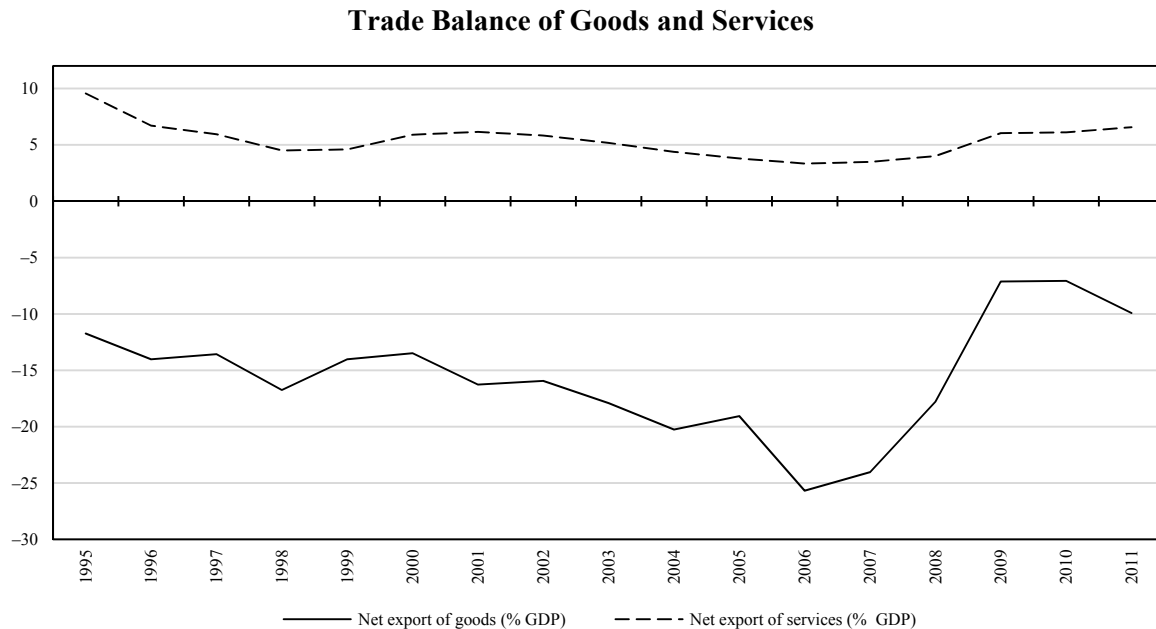
Figure 1

**Decomposition of Current Account Balance (Upper Pane)
and Net International Investment Position (Lower Pane)**
(percent of GDP)



Source: Commission Services.

Figure 2



Source: Commission Services.

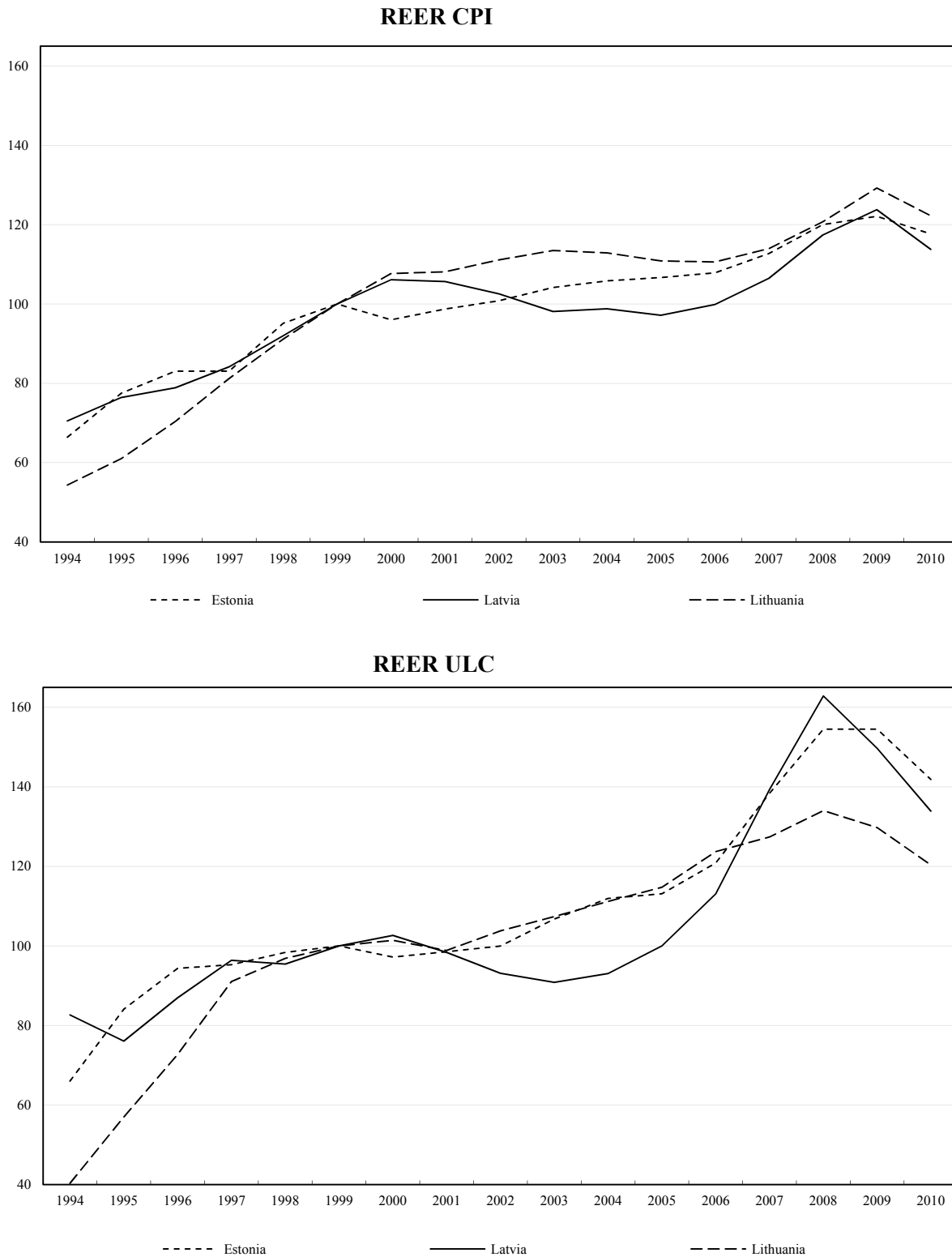
The diverging trends of net exports of goods and services suggests that economy-wide labour cost developments, with the exception of some extreme hikes in 2006-07, cannot be fully blamed for the overall deterioration in the external balance of the country, as the more labour intensive sector of services was consistently in surplus. The structural dynamics in the foreign trade balance from 1992 until the economic crisis of 2008-09 shows that the factors underpinning the deterioration in the country's external position and competitiveness are more complex and are related to a comprehensive range of indicators that capture more than just labour cost and labour productivity.

2.3 The evolution of price and cost competitiveness

The standard approach to analysing external competitiveness through real exchange rates and labour productivity explains only part of the movements in the Latvian external balance. Similarly to the other two Baltic countries, Estonia and Lithuania, the real effective exchange rate in Latvia appreciated significantly in the pre-crisis period of rapid economic growth, as shown in Figure 3. In Latvia, and to a lesser extent in Estonia and Lithuania, the appreciation was more pronounced for the rate based on unit labour costs than on CPI, showing that wages rose faster than the cumulative effect of consumer prices and real GDP growth. This divergence was quite significant in the period of overheating between 2005 and the first half of 2008. However, the fluctuations of the real effective exchange rates, based either on consumer prices or unit labour costs, fail to explain the rapid increase in the CA deficit in the period of 2000 until 2005. In that period, the real exchange rate depreciated in consumer price terms and did not change significantly in unit labour cost terms while the CA deficit surged to 12.5 per cent of GDP in 2005 from 4.8 per cent in 2000. Subsequently, when the crisis hit the country in 2008-09, the CA balance moved to a surplus before the spike in the real effective exchange rate and unit labour costs was fully corrected.

Figure 3

Evolution of REER CPI (upper pane) and REER ULC (lower pane) in the Baltics



Source: Commission Services. Note: 1999=100.

The dynamics of the CA balance and standard competitiveness indicators in Latvia show that the assessment of the country's external position need to cover a much broader area of indicators that go beyond the simplified model of relative export prices and labour costs. The remainder of the study seeks to assess the relevance of standard competitiveness indicators and to propose complementary analysis that may provide a better understanding of developments in competitiveness and external imbalances. The Latvian case also emphasizes the need to analyse the demand side of the economy, in particular savings and import demand, as excessive external imbalances can arise even in periods of improving export competitiveness.

3 Sustainability of the external position and traditional competitiveness measures

The set of traditional indicators on external balance sustainability comprises flow variables derived from the balance of payments as well as stock values of external assets and liabilities that have direct implication on future balance of payments transactions such as dividend, interest and principal payments. As for the flow values, balance of payments indicators are largely focused on the CA balance and its components, including trade in goods and services, income and current transfers. FDI and other financing flows are also analysed within the financial account of the balance of payments. All these indicators provide a fairly good picture of the country's external balance in historical terms but they are not forward looking and may not always signal risks of sudden reversals in the future. As far as the external balance sustainability may be dependent on market sentiment, especially in small open economies, credit default swaps and yields on private and public external debt can be used as indicators with forward implications on the external balance.

The use of stock indicators such as foreign reserves, the net international investment position and gross and net external debt also provide important information on future balance of payments flows. The country's indebtedness at a certain point in time has direct implications on future outflows related to interest payments (part of the CA balance) and principal debt repayments (part of the financial account). In addition to the debt exposure, the net international investment position includes the FDI stock (foreign equity) that is not of a debt nature but has important implications on the future external flows related to dividend payments and reinvestment earnings. Table 1 shows that both dividends and reinvested earnings have a significant impact on Latvia's external balance as the share of foreign equity in the country is relatively high.

Although the analysis of the external balance indicators is often straightforward, there are some important additional aspects that need to be taken into account for Latvia as well as for other small and catching-up economies with a high share of foreign equity.

Firstly, the CA balance is strongly dependant on cyclical effects in the external environment that can be linked to the prices of primary resources, as Latvia is strongly dependant on energy imports, on the prices of commodities with a high weight in the export and import volumes, and on the external demand in major trading partners. Cyclical effects could also affect the CA balance through the income statements of foreign-owned companies, as profits and consequently reinvested earnings usually rise in periods of rapid economic growth which results in a higher accounting outflow in the CA balance and a symmetrically booked inflow in the financial account with an overall neutral effect on the balance of payments. In periods of contraction, losses of foreign-owned entities have a reverse positive impact on the CA and a symmetric negative impact on the financial account. However, reinvested earnings do not originate from actual cross-border transactions and could be often influenced by cyclical effects rather than long-term trends. Therefore, the adjustment of Latvia's CA balance by excluding the impact of reinvested earnings provides additional information on actual cross-border flows and eliminates some cyclical effects.

Table 1

Selected External Sector Indicators
(percent of GDP)

	1992-95	1996-00	2001-05	2006	2007	2008	2009	2010
CA to GDP	7.0	-6.8	-10.1	-22.6	-22.4	-13.1	8.6	3.0
- o/w net dividends	0.0	-0.2	-1.0	-1.0	-1.7	-1.4	-2.4	-1.7
- o/w net reinvested earnings	0.0	-0.8	-1.3	-3.6	-2.1	0.2	8.0	1.3
Net FDI to GDP	4.4	5.7	2.9	7.5	6.8	3.0	0.6	1.5
- o/w reinvested earnings net	0.0	0.8	1.3	3.6	2.1	-0.2	-8.0	-1.3
Gross external debt (eop)	31.6	61.9	100.0	114.5	128.1	130.0	156.5	165.2
Net external debt (eop)	-3.4	13.1	35.8	44.2	49.7	57.1	58.7	53.2
Net IIP (eop)	-1.7	-30.2	-59.6	-69.9	-74.7	-79.0	-82.7	-81.4

Source: Commission Services.

Table 1 suggests that such adjustment could significantly change the reading of the CA balance in Latvia, as for example the large surplus in 2009 was largely based on losses in foreign-owned entities that cannot be sustained in the long run.

The second specific aspect of the balance of payments analysis for Latvia is related to the catching-up status of its economy and EU convergence prospects. Investment demand in such economies tends to exceed the rates of domestic savings and the difference is reflected into relatively large CA deficits. However, such deficits are not necessarily a sign of worsening competitiveness and can be sustainable in the long term, particularly if they are financed by non-debt financial flows (FDI), which are directed to export-oriented or import substitution industries. However, FDI flows directed to domestic demand-facing industries are more difficult to interpret as on the one hand they may improve the technological base and the productivity of the economy but on the other hand may also worsen the long-term outlook on the CA through dividend outflows that will not be offset by a positive impact on exports.

3.1 Competitiveness through prices: real effective exchange rates (REER)

Real effective exchange rates provide a measure of price developments in relation to trading partners and therefore have some forward-looking implications on the country's competitiveness. However, it is often difficult to determine the equilibrium REER and consequently moves towards the equilibrium could be mistakenly interpreted as a loss of competitiveness. Moreover, different price indicators used for the calculation of REERs can lead to very different conclusions. Tax impacts on consumer prices can also distort the REER readings as value added taxes or excise duties do not affect export prices and have fully identical effects on imported and domestically produced goods and services. Finally, REERs do not take into account changes in productivity unless they are adjusted for unit labour costs. For catching-up economies, structural changes with shifts to higher value-added or more labour intensive sectors (e.g. services) are more pronounced

than in trading partners and REERs will tend to overestimate potential price effects on competitiveness. There is also empirical evidence that fluctuations in the REERs are not always fully correlated with external balance indicators even if the data series are adjusted for time lags. This is also the case for Latvia as can be seen from Figures 2 and 3, especially in relation to the CPI-based REER.

3.2 *Competitiveness through productive efficiency: unit labour costs (ULC)*

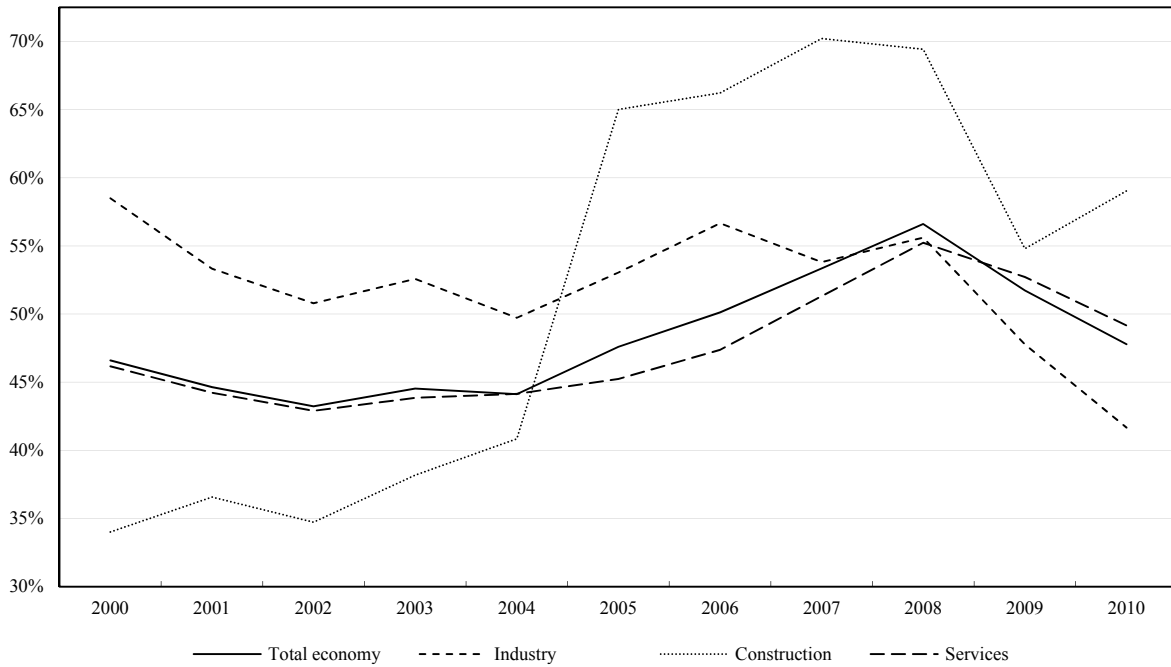
Changes in ULC relative to major trading partners provide a good overview of competitiveness in terms of labour productivity. It also provides some information on the side of import demand as far as labour income is one of the main determinants of household consumption. However, labour costs are only one factor of production and in some tradable sectors they account for less than 50 per cent of the total production costs. A more comprehensive analysis of competitiveness needs to take into account all input costs as well as profit margins. While non-labour input costs may be difficult to measure, changes in the profit margins could be relatively easy to monitor both on aggregate and at a sector level through the value added approach of calculating GDP. For catching-up economies, structural changes can have a significant effect on ULC dynamics. The way ULC indices are usually calculated does not include any adjustments for these changes, as aggregate labour costs are simply divided by GDP. In case the economy is shifting towards more labour-intensive sectors such as services, like is often the case in catching-up countries, this approach can show deterioration in the aggregate ULC index even if indices at sector level remain unchanged. In order to account for these composition effects, changes in ULC at an aggregate level can be calculated as a weighted average of the changes in the ULC values for each sector, following the approach of calculating consumer prices or GDP indices. For example, Figure 4 plots the evolution of the ratio of labour compensation over gross value added at a sector level and it shows that there can be significant heterogeneity in wage dynamics across sectors. Considering that labour share increased enormously in construction during the boom and went through a strong correction since the bust, a sector approach to ULC assessment would identify the role of the construction sector in driving imbalances, as the negative impact of its growing wage share was reinforced by its increasing contribution to total GDP.

3.3 *Export performance and capacity to compete abroad*

The evolution of the country's export market share in world imports (or the change in the share *vis-à-vis* major competitors) is a good outcome indicator of export competitiveness. Latvia's share in EU and global imports are plotted in Figure 5. Even if it does not capture the dynamics in the external balance, since imports need also to be taken into account to that end, the indicator gives an idea of the capacity of the country's enterprises to compete on international markets. However, this is also a backward looking indicator that does not capture the dynamics in production and other factors, and therefore cannot be entirely relied upon to forecast future movements in the external balance. Nevertheless, the steady improvement in Latvia's export market share, even in periods of deteriorating REER and ULC, suggests that standard competitiveness analysis needs to be expanded to include a broader range of indicators going beyond prices and labour costs, for example by taking into account the fact that higher domestic costs of production may be offset by higher quality and better access to foreign markets. The diverging trends in the current account balance and export market shares also suggest that the vulnerability of the Latvian external position was mostly driven by demand factors, and notably the huge growth of imports, which should be carefully studied in parallel to export competitiveness indicators.

Figure 4

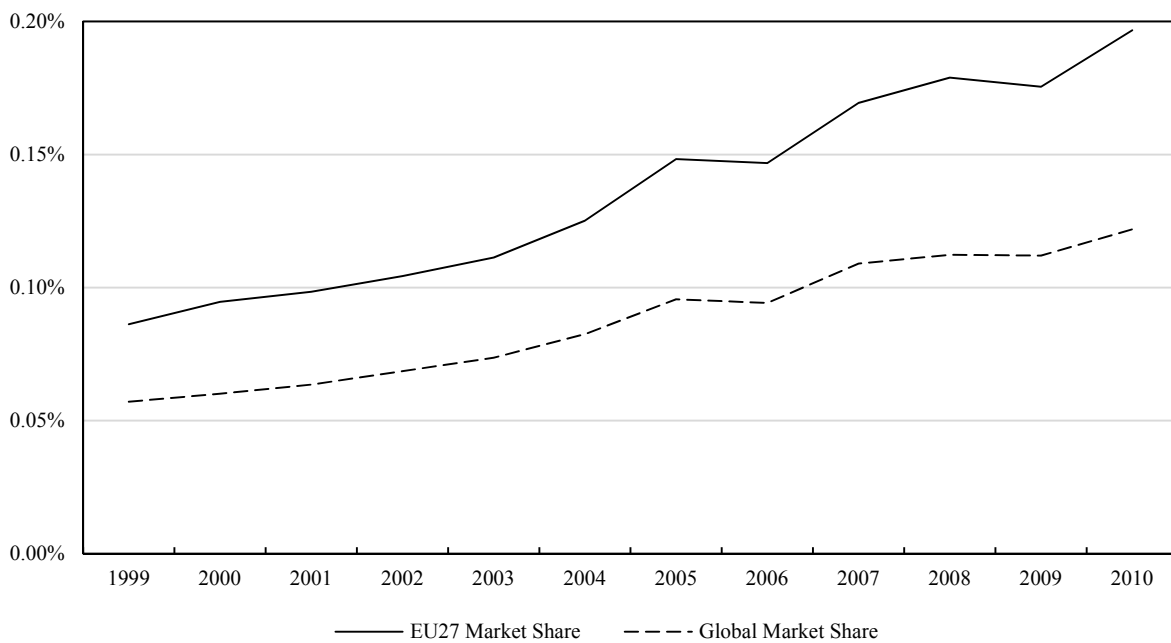
Ratio of Labour Compensation Over Gross Value Added at a Sector Level



Source: Commission Services.

Figure 5

Evolution of Latvia's Export Market Shares



Source: Commission Services.

3.3.1 Quality and non-cost competitiveness of exports

Following the methodology proposed in Di Comite (2012) on the measurement of quality upgrading and non-cost competitiveness at a country-product level, it is possible to go beyond market shares to analyse Latvian firms' capacity to compete abroad. By comparing how Latvian enterprises fare *vis-à-vis* international competitors in a given market, a fair indicator of competitiveness can be produced, which is not distorted by home market bias or trade barriers (as would be the case if Latvian products were compared with imports in the Latvian market).

Keeping EU27 performance as a benchmark, Latvian trends in physical unit labour costs, quality content of exports and non-cost competitiveness can be inferred from the observation of export prices and wage bills at a sector level.¹ In this way, it is possible to identify to what extent long-term competitiveness issues arose in the tradable sector during the boom years and whether the country is getting back on track after the crisis. There is currently no consensus on the definition of quality and non-cost competitiveness, which also implies that instruments to measure them vary substantially. One alternative would be to measure demand shifts through a methodology based on a nested constant-elasticity-of-substitution utility function with demand shifters, this methodology leading to the identification of one dimension of differentiation across varieties. In this paper we aim at going one step forward and thus exploit the properties of a quadratic utility function in order to identify separately two different components of demand. One, referred to as "quality", captures the capacity of firms to extract higher mark-ups from their products. The other, called "non-cost competitiveness", expresses the ability of a firm to sell higher volumes of their products, for a given level of mark-ups. Specifically, the functional form adopted for identification purposes is the following, based on the utility function of a representative consumer U in the market i , consuming $q_{s,i}$ quantities of a mass of varieties S available in a market i and a numéraire variety q_0 , which may be seen as representing the consumption of all the other goods in the economy and just serves as a unit of account for all the other parameters in the model:

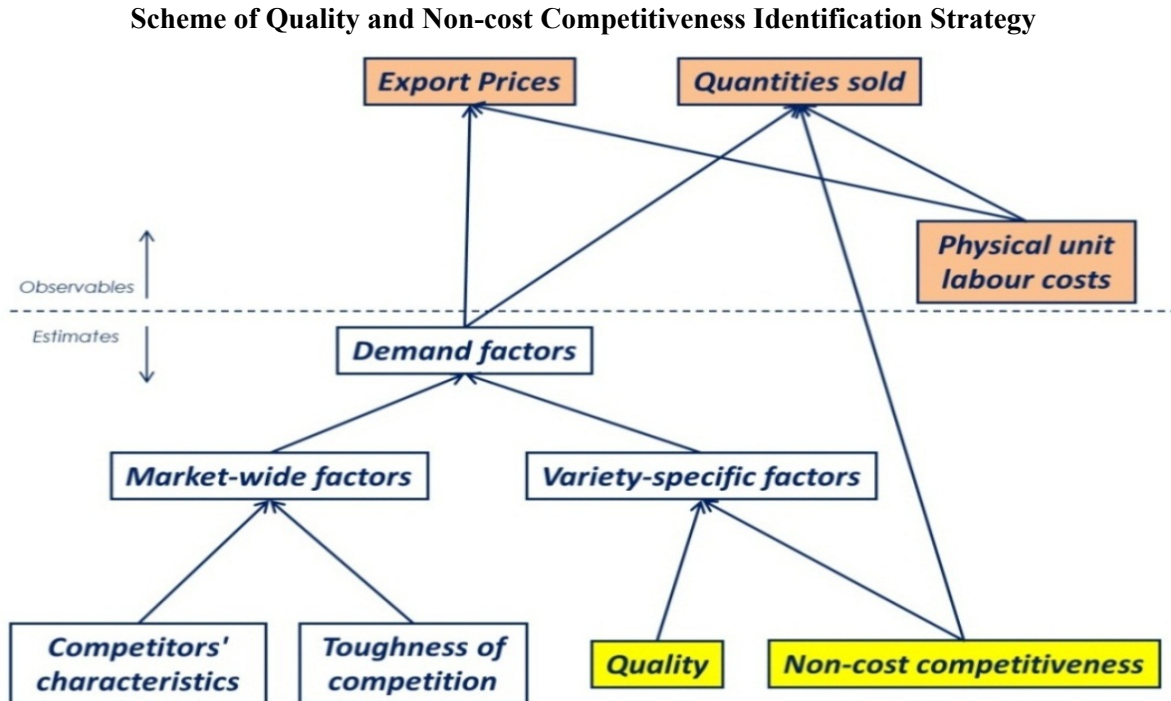
$$U_i = \int_{s \in S_i} \alpha_s q_{s,i} ds - \frac{1}{2} \int_{s \in S_i} \beta_{s,i} q_{s,i}^2 ds - \frac{\gamma_i}{2} \left[\int_{s \in S_i} q_{s,i} ds \right]^2 + q_0$$

The demand shifter α_s is a positive and continuous function measuring the quality of a variety s (in this case a country-product), defined on the total mass of varieties S present in the export market considered i . Similarly, the parameter $\beta_{s,i}$ measures the non-cost competitiveness of a variety s in the export market i , and can be seen as a demand function slope shifter, which in equilibrium affects only quantities sold but not prices of mark-ups. Finally, the market-specific parameter γ_i captures the substitutability between all the pairs of varieties of the same kind of good in a particular market. While the details of the identification strategy and the data requirements are explained in Di Comite (2012), an intuition is provided in Figure 6. Price dynamics are interpreted as a function of cost and demand factors: changes in demand are then divided into market-wide effects and variety-specific characteristics; these are finally disaggregated into a quality and a non-cost competitiveness component, the latter being obtained by exploiting information on quantities sold.

By focusing on quality and non-cost competitiveness, this methodology can be used to single out trends on the supply-side of the economy, at least as far as tradable products are concerned. In the case of Latvia, we know from the previous analysis that wages increased substantially from 2003 to 2008, but did they actually outpace productivity growth? Combining trade data with information on value added and wage bill at a sector level, it can be seen already in Figure 4 that in

¹ Physical unit labour costs (PULC) are defined as the cost, in euros, of producing a given quantity of the products exported. Quality is the vertical intercept of the inverse demand function, net of competition effects, and is expressed in the same unit as prices: euros per given quantity of the product sold.

Figure 6



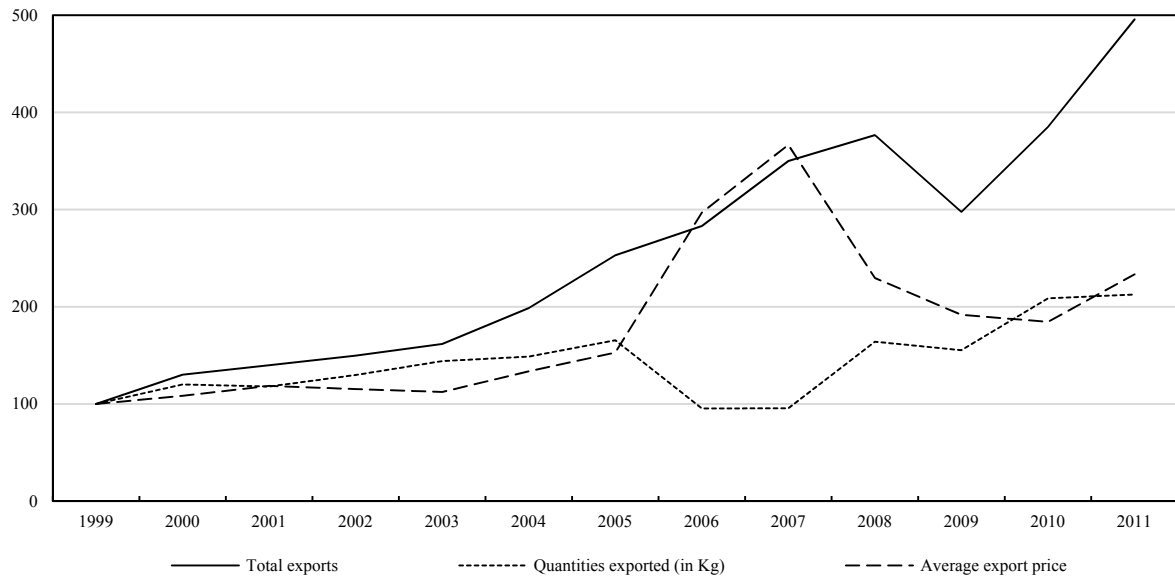
the export sector this does not appear to be the case, consistently with the wage share dynamics in the industry sector. Turning to Figure 7, it is clear that only in 2006 and 2007, the years of overheating, did an abnormal spike in intra-EU27 export prices result in a drop in quantities exported, with prices quickly falling in the aftermath of the crisis.

This is also what emerges from Figure 8, where the above-mentioned methodology is used to measure the relative importance of quality improvements and changes in physical unit labour costs (PULC) in determining Latvian export price dynamics. First, unweighted total Latvian exports (total) are considered; then, CN2-product-level parameters are calculated and added up weighting each product by its yearly share of total Latvian exports (wavrg). Disaggregating Latvian export price dynamics into a cost and a quality component, normalising them to EU27 levels and focusing on the series that corrects for industrial Latvian specialisation, it can be noticed that quality has improved rather constantly during the decade, whereas in the same period physical unit labour costs of exports did not really increase, with the notable exception of the overheating years 2006 and 2007 and the crisis starting in 2008.

The dynamics observed in Figure 8 would be consistent with a process of constant quality upgrading and catching-up with the European Union average which was interrupted only by the crisis. What is most remarkable is that after the crisis hit, Latvian physical unit labour costs of export decreased while at the same time the quality content of its products *vis-à-vis* EU27 has increased. This suggests that the Latvian industrial sector managed to keep innovating and improving its products in the context of falling or stable physical unit labour costs, resulting in the significant rebound in exports in 2010 and 2011 observed in Figure 7. This is a reassuring sign of the renewed capacity of Latvian firms to compete in international markets, which underlines the positive contribution of the export sector to the current account balance of the country.

Figure 7

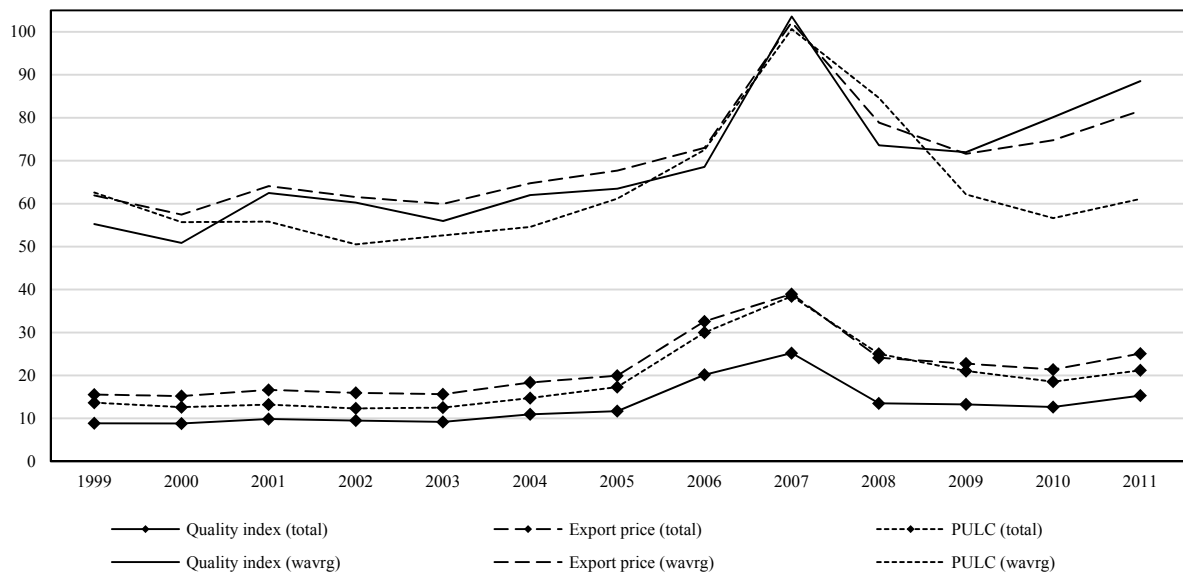
Evolution of Total Value of Latvian Exports of Goods, Decomposed into Quantities Exported and Average Export Price



Source: Eurostat Comext. Note: 1999=100.

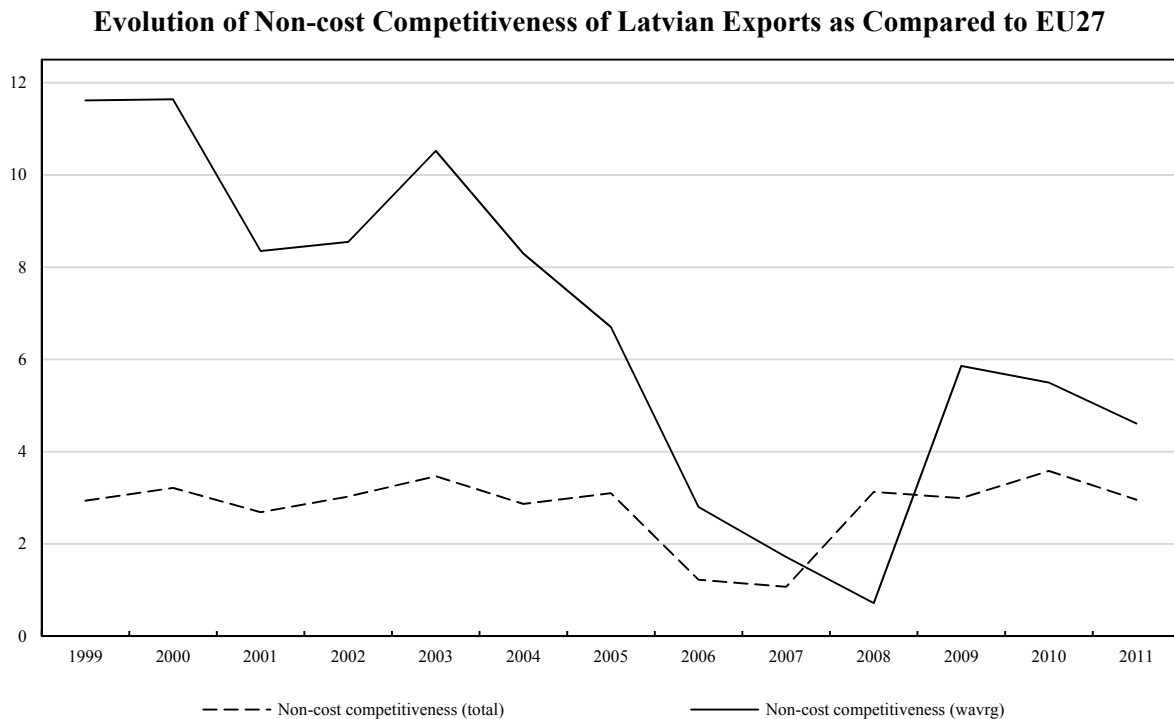
Figure 8

Evolution of PULC, Quality and Export Prices of Latvian Exports as Compared to the EU Average



Source: Authors' calculations based on Eurostat Comext data. Note: EU27 average values=100. Results corrected for Latvian product specialisation by measuring each parameter at a product level for Latvia and EU27 and then aggregate them weighting each product by its Latvian export share. Physical unit labour costs (PULC) are defined as the cost, in euros, of producing a given quantity of the products exported. The quality index indicates the intercept of the vertical inverse demand function, also expressed in euros per a given quantity of the product sold.

Figure 9



Source: Authors' calculations based on Eurostat Comext data. Note: EU27 average values=100. Results corrected for Latvian product specialisation by measuring each parameter at a product level for Latvia and EU27 and then aggregating them weighting each product by its Latvian export share.

The dynamics of non-cost competitiveness, shown in Figure 9, also deserve to be mentioned, as the gradual decrease of the weighted average series *vis-à-vis* the unweighted total indicator suggest that the most important export products, while experiencing a process of quality upgrading, are also selling less for a given level of mark-up with respect to EU27. This may be explained by the fact that they are entering new markets or products niches and still have to build up a customer base or a good distribution network. It should be noticed that non-cost competitiveness is measured as the capacity to sell, given a level of mark-up, so it is not its absolute level that matters (as countries may differ in size and number of firms) but its trend over time. Looking at non-cost competitiveness for the unweighted total exports, a drop can be noticed in the years 2006 and 2007, which are the years in which Latvian export prices soared dramatically and quantities dropped substantially (see Figure 7), whereas the rest of the EU did not experience any major shocks in those years (to a much lesser extent, a similar drop in quantities was experienced by the rest of the EU in 2008 and 2009, but with no particular effect on prices). Non-cost competitiveness recovered to some extent in 2008. However, the observed reversion in the relative non-cost competitiveness indicator was probably affected by a fall in its denominator, since the non-cost competitiveness of EU27 contracted because of the international financial crisis which unfolded in 2008.

It is worth noting, though, that the aggregate trends shown here may hide substantial heterogeneity across products. Table 2 shows that this is actually the case, as it shows linear trends in quality, physical unit labour costs, non-cost competitiveness and export prices for the whole manufacturing sector and for the ten most important Latvian export products. We also report the results for the export-share weighted sum of the manufacturing products to provide a more precise

Table 2

**Simple Linear Trends of Latvian Quality, PULC, Non-cost Competitiveness
and Export Prices *vis-à-vis* EU27**

Product (CN2 Product Category)	Average Share of Latvian Exports (1999-2011)	Quality trend	Physical Unit Labour Cost Trend	Non-cost Competiti- veness Trend	Export Price Trend	Market Share Trend in the EU
Wood and articles of wood (44)	26.19%	1.20%	0.39%	-0.51%	0.98%	0.07%
Iron and steel (72)	7.60%	3.32%	1.60%	0.03%	2.57%	0.04%
Machinery and mechanical appliances (84)	5.18%	8.73%	5.02%	0.00%	6.73%	0.01%
Electrical machinery and equipment (85)	4.92%	12.04%	7.17%	-0.02%	9.20%	0.01%
Mineral fuels and oils (27)	4.17%	1.51%	0.71%	0.03%	1.62%	0.01%
Furniture (94)	3.98%	3.35%	1.63%	-0.14%	2.50%	0.00%
Apparel and clothing (62)	3.76%	8.36%	3.74%	-0.05%	5.97%	-0.02%
Vehicles and accessories (87)	3.15%	8.34%	5.48%	0.01%	6.86%	0.01%
Pharmaceutical products (30)	3.09%	4.41%	1.90%	-0.01%	3.40%	0.00%
Articles of iron or steel (73)	2.44%	2.63%	0.63%	0.02%	1.74%	0.02%
Whole manufacturing		0.69%	1.16%	-0.02%	1.09%	0.01%
Export-share weighted sum		3.35%	1.37%	-0.16%	2.39%	0.03%

Source: Authors' calculations based on Eurostat Comext data. Note: Aggregates are shown for the "whole manufacturing" product as measured by Eurostat and for the "export-share weighted sum" as a weighted average of all the manufacturing products, where each product is weighted by Latvian export shares, in values. Physical unit labour costs (PULC) are defined as the cost, in euros, of producing a given quantity of the products exported. The quality index indicates the intercept of the vertical inverse demand function, also expressed in euros per a given quantity of the product sold.

aggregate indicator than the trends in total exports.² It can be noted that all the products experienced quality increases *vis-à-vis* the rest of the European Union which were larger than increases in their physical unit labour costs, which points to an overall positive effect on mark-ups, driven by lower costs of production and a higher willingness to pay for Latvian products. On the other hand, non-cost competitiveness often shows a negative sign, pointing to the fact that all the market share gained by Latvian firms came from the actual quality improvement of their products rather than from a better capacity to sell their products on foreign markets (for a given level of mark-up). This is particularly evident looking at Latvia's most important export product, "Wood and articles of wood", which is indeed experiencing a sharp fall in non-cost competitiveness labour costs but an increase in quality much more pronounced than the increase in physical unit labour costs, resulting overall in an increase in market shares.

Table 3 confirms the qualitative results provided in Table 2 by running a simple linear trend regression first on all the products, with and without product dummies, and then on the weighted average results for the entire economy. Prices and quality levels are all significantly increasing, as compared to the European Union average, confirming that Latvian export industry has fared extremely well during the last decade and even the overheating and the subsequent crisis do not seem to have caused lasting damages on the export capacity of the country. Physical unit labour costs also show an increase, partly offsetting the gains obtained by quality upgrading, but it is more modest than quality and export price increases and it is not statistically significant along all the specifications. As for non-cost competitiveness, it appears to have worsened only when weighted average results are considered, but not when all the products are pooled in the regression. This is in line with what has been observed in Figure 9 and points in the direction of major economic restructuring within product categories towards more value added varieties, whose full demand potential has possibly not been tapped yet.

Another way to grasp the high level of heterogeneity across export products is to plot their parameter levels *vis-à-vis* EU27 in 1999 and their linear trend growth from 1999 to 2011. This is shown in Figure 10, where it can be clearly noticed that a rapid process of price and quality convergence to EU levels is taking place, involving especially the products which are furthest from EU27 levels. The steeper slope and higher intercept of the price and quality trend lines as compared to the PULC line also confirms that costs are converging more slowly than quality, which is a good indicator of long-term sustainability of external competitiveness.

A key message emerging from the above analysis is that the different products appear to have a certain degree of heterogeneity and are not necessarily affected by the same shocks and dynamics. Notably, while unit labour costs in the non-tradable sector increased substantially in the years leading up to the crisis, the tradable sector, as captured by external trade data, appeared rather sheltered from this trend for most of the decade. This analysis also points to the benefit that the economies could obtain by allowing resources to be reallocated smoothly across products, as the Latvian economy managed to do. However, it should be noted that the export mix of the country is still very much concentrated on a few products, as the six most important export products account for 50 per cent of the total value of exports, which suggests that there is still a lot of space for differentiation and reallocation of resources towards products with higher growth potential. This should be clear by looking at Tables 2 and 3, showing that the current largest export product, "Wood and articles of wood", underperforms the rest of the economy on almost all the competitiveness dimensions observed.

² Total values shipped and average prices calculated on total exports implicitly amount to weighting each sector according to its physical weight and are thus not the most relevant dimension to analyse aggregate trends.

Table 3

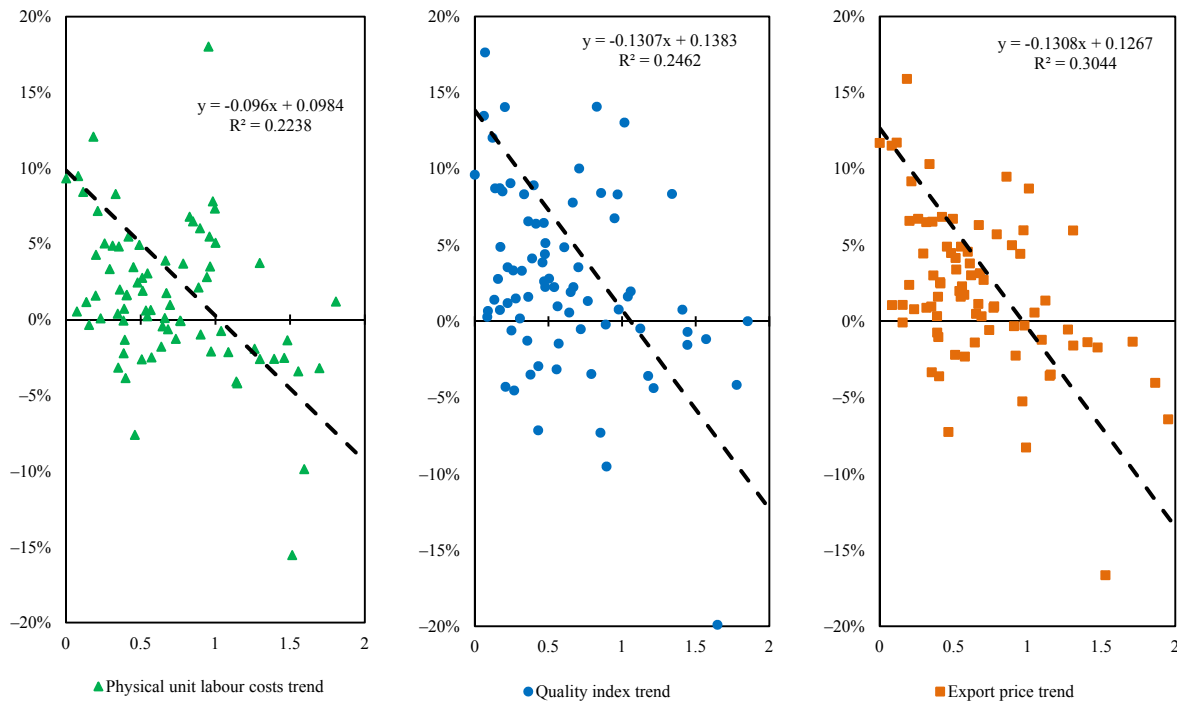
**Linear Trends of Latvian Quality, PULC, Non-cost Competitiveness,
Export Prices and Market Shares. Evolution *vis-à-vis* EU27,
Compared Product-by-product and on Weighted Average Aggregates**

Regression Type	Quality Trend	Physical Unit Labour Cost Trend	Non-cost Competitiveness Trend	Export Price Trend	Market Share Trend in the EU
Simple time trend	2.47% (4.70)	0.61% (1.63)	0.00% (0.19)	1.63% (4.16)	0.01% (8.54)
Product dummies	2.26% (5.87)	0.56% (1.98)	0.00% (0.12)	1.57% (5.23)	0.01% (12.93)
Simple time trend on weighted averages	2.54% (86.97)	0.89% (13.84)	-0.71% (-43.09)	1.75% (71.99)	-0.05% (-47.97)

Source: Commission Services. Note: *t*-statistics are reported in parentheses. Results in bold are significant at 1 per cent level. The first row represents a regression on a simple linear trend, the second adds product dummies, the third takes the weighted average values for the entire economy, each product being weighted by Latvian export shares.

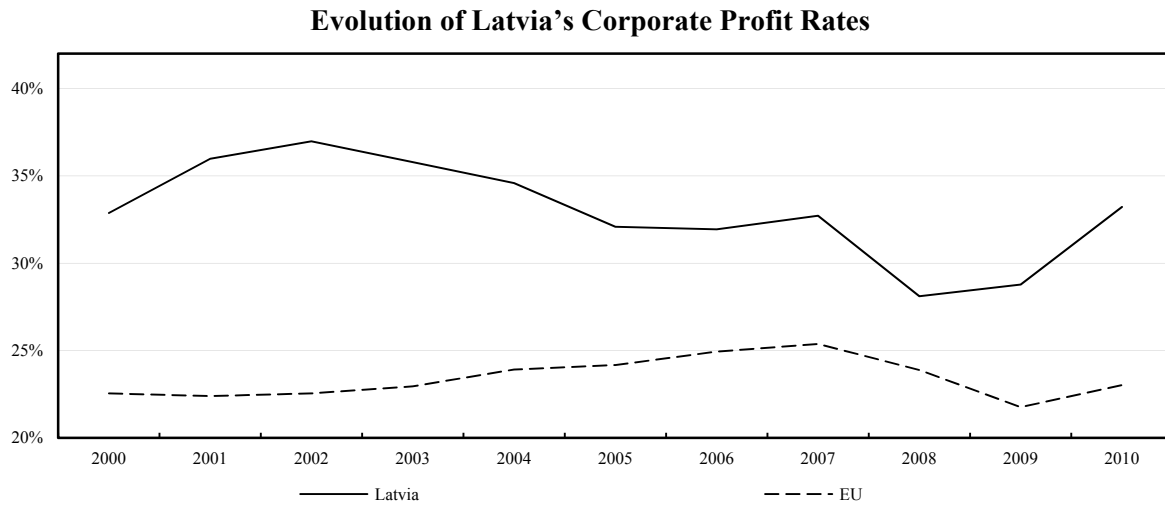
Figure 10

PULC, Quality and Price Growth and Initial Levels *vis-à-vis* EU27



Source: Commission Services. Note: On the horizontal axis the levels in 1999 of Latvian physical unit labour costs, quality index and export prices against the European Union (EU27=1) for each product in the sample (97 CN2 product codes). On the vertical axis the product-specific linear trend growth over the period 1999-2011, with a dashed linear trend line.

Figure 11



Source: Commission Services. Note: Corporate profit rates are calculated as a net-operating-surplus-to-GVA ratio).

3.4 Further alternative indicators of competitiveness

As highlighted in the previous section, standard competitiveness indicators based on prices and labour costs may fail to capture the full scope of factors affecting production costs and revenues, which can be affected by changes in quality as well as in product and market structures. For example, in some sectors of the economy, labour costs account for a relatively small share in total production costs and therefore other input costs have to be also taken into account. In particular, Latvia's historical exposure to energy-intensive industries calls for a closer look at energy costs, but also various other costs in the field of transportation, technology, logistics, and others could be brought into consideration subject to data availability. A way to assess the effects of other costs that could offset or add to changes in labour expenses is to look at corporate profit margins. In the case of Latvia, corporate profit rates have remained among the highest in the EU through the whole transition period which is a clear indication that increasing labour costs have been offset by other cost or revenue factors affecting the corporate income statements.

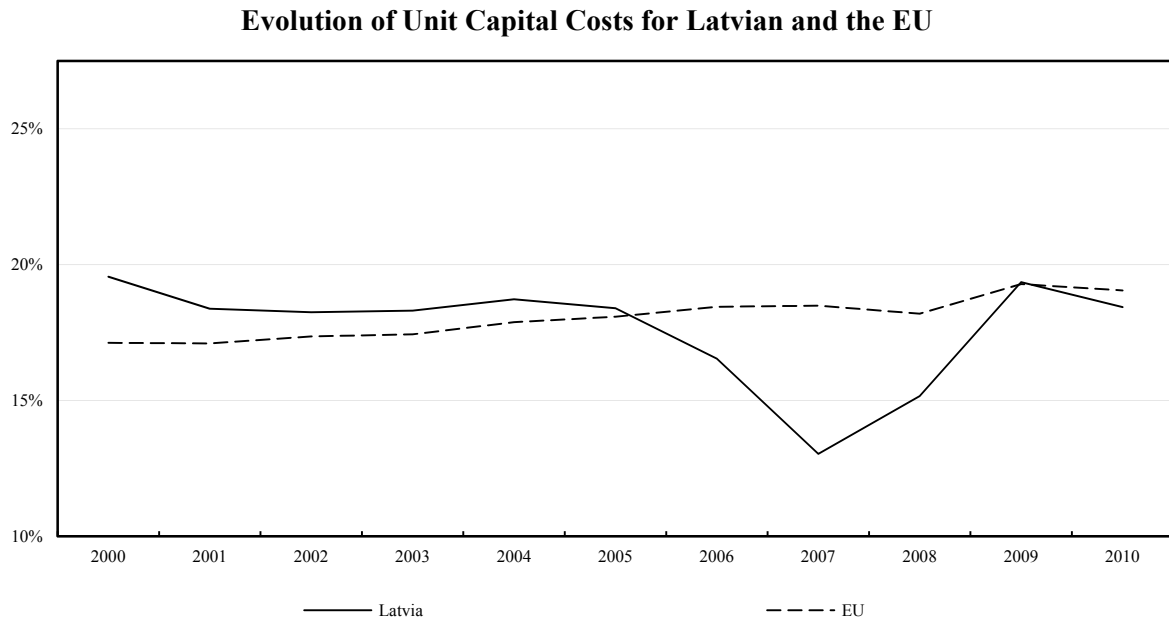
3.4.1 Profit margins

The share of corporate profits in gross value added can be calculated from national accounts statistics both at sector and aggregate levels on the basis of the following identity:

$$GVA \text{ (Gross Value Added)} = P \text{ (Profit and other capital remuneration)} + K \text{ (Capital depreciation)} + L \text{ (Labour remuneration)}$$

In addition to production-related costs, the analysis of corporate profitability reflects various competitiveness effects channelled through the revenue side of the income statement, in particular re-positioning of products in different geographical markets, product segmentation, as well as external demand and price effects. Figure 11 shows that Latvia's corporate profit rates remained higher than in the rest of the European Union in the period of 2000-10, even during the crisis, providing another argument in favour of the view that the major cause of accumulating external imbalances in the boom years was linked to excess domestic demand and not linked to a loss of competitiveness or difficulties in the industrial sector.

Figure 12



Source: Commission Services.

3.4.1.1 Capital productivity

The above identity ($GVA = P + K + L$) also provides information about changes in capital productivity by monitoring the ratio of capital use to gross value added (K/GVA). A decrease in the ratio means improvement in capital productivity as it shows lower capital costs per unit of value added. The ratio follows the logic of unit labour costs and could be similarly named as unit capital cost. The calculations for Latvia (Figure 12) show that unit capital cost has improved (use of capital to GVA has declined) in periods of increased unit labour costs which has to some extent sustained the favourable export position in the corporate sector and explains the large profit margins.

3.4.1.2 Energy and other input costs

In the analysis of the gross value added, profits can be seen as a residual value determined by other capital and labour remuneration. However, in the corporate income statements, profit is also determined by a number of other costs that are booked as intermediate consumption in the national accounts and deducted from gross output. Therefore, in order to have a fuller picture of the factors affecting profits, it is also useful to look into output and intermediate consumption. In the case of Latvia, it is worth to focus the analysis on energy costs as a key component of intermediate consumption, as Latvia's energy intensity, calculated as the share of energy intake in GDP, is still among the highest in the EU (80 per cent above the EU average in 2010).

Energy constitutes a pervasive input, being used to a larger or lesser extent in all economic activities. For the Baltic countries and Latvia in particular, energy costs in relation to output are substantial. In replication of the ULC (unit labour cost) approach, it is possible to construct a unit energy cost (UEC) for the assessment of possible gains/losses from energy efficiency and energy prices relative to trading partners. Given the country's high dependence on energy imports, changes

in the UEC also have an important impact on the country's foreign trade balance as nearly 50 per cent of the goods' trade deficit is generated by net energy imports (52 per cent in 2010). In a similar vein, it is possible to construct unit transport costs and other unit input costs that affect companies' income statements. From the point of view of the national accounts, all these costs are booked as intermediate consumption and deducted from gross output:

$$\text{Gross Output} - \text{Intermediate Consumption} = GVA = P + K + L$$

This identity of gross valued added suggests that more efficient use of energy, transport or other inputs will result into lower intermediate consumption and higher value added. These gains could be then allocated to profit or labour on the right-hand side of the equation with different implications on ULC. Historical data show a stable ratio of intermediate consumption to output in Latvia which suggests that on aggregated basis, the country's economic agents have not gained or lost efficiency through changes in the modes of using inputs counted as intermediate consumption. However, there is a strong potential for reducing the share of intermediate consumption to output through energy efficiency, given Latvia's high energy intensity at present, and therefore it is important to monitor both sides of the above equation in future analysis of competitiveness.

4 Beyond export competitiveness: the role of imports and internal demand

After having seen how the export sector of the economy fared during and before the crisis, in this section we analyse the demand side of the economy.

4.1 Analysis of the national account identities

The aggregate supply and demand of the economy provides a field where "real-variable" policies may be implemented in order to improve the current account. Starting from a breakdown of output into expenditure components, it can be shown that current account imbalances may be ultimately ascribed to imbalances in the relationship between savings and investments of an economy:

$$Y = C + I + G + X - M$$

where Y is GDP, C is consumption, I is investment, G is government expenditure, X is exports and M imports.

$$Y - T - C = I_P + I_G + G - T + NX$$

where T is taxation, I_P and I_G are private and public investment, and NX is net exports.

$$S_P - I_P = I_G - S_G + NX$$

where S_P and S_G are private and public savings.

$$NX = (S_P - I_P)' + (S_G - I_G),$$

or, if we consider the existence of factor income and transfer payments from abroad and add their net value to both sides of the identity

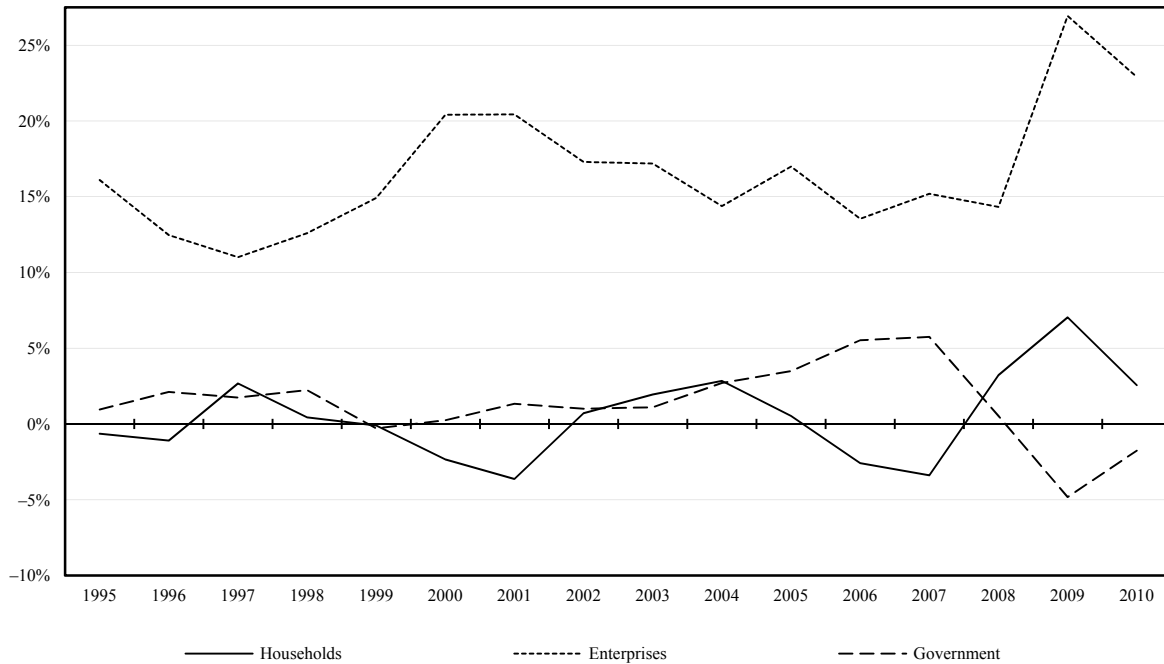
$$CA = (S_P - I_P)' + (S_G - I_G)',$$

where the new levels of net savings, $(S - I)'$, should increase with factor income and transfer inflows, and decrease with outflows. Private sector savings and investments $(S_P$ and $I_P)'$ can be further broken down into household and corporate sectors, $(S_{Ph}, S_{Pc}, I_{Ph}$ and $I_{Pc})'$:

$$CA = (S_{Ph} - I_{Ph})' + (S_{Pc} - I_{Pc})' + (S_G - I_G)$$

Figure 13

Evolution of Gross Saving Rates in Latvia
(percent of GDP)



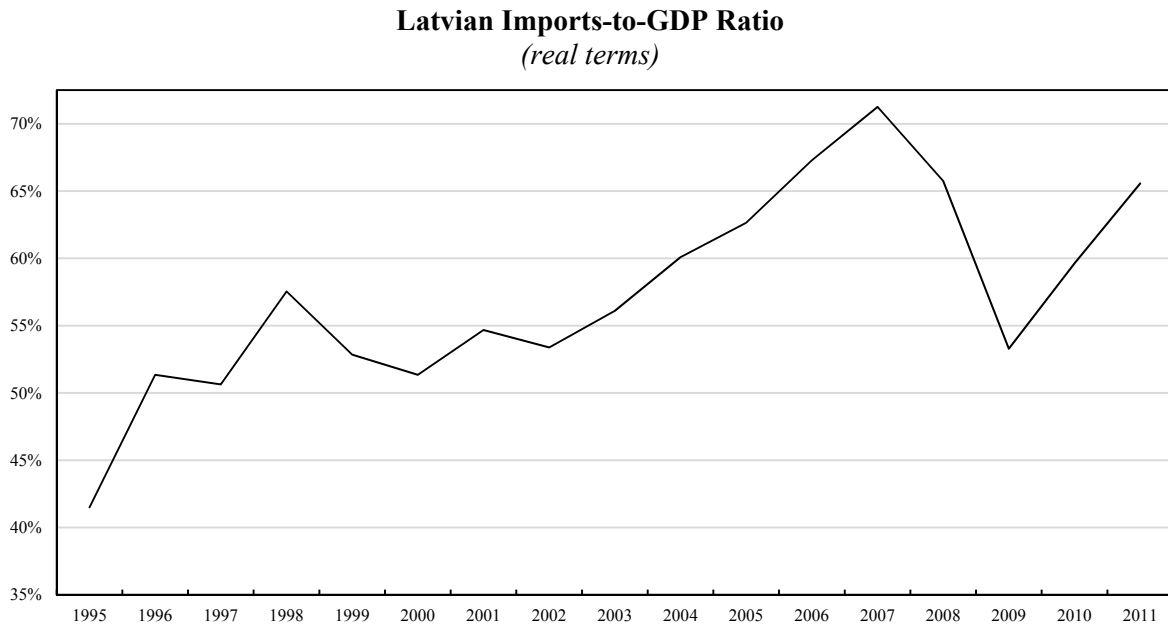
Source: Eurostat.

Therefore, a positive trade balance or current account can only be maintained when the economy as a whole saves more than it invests domestically. The surplus can then be exported, thereby increasing the international investment position of the economy. The evolution of gross saving rates in Latvia is shown in Figure 13.

External imbalances beget the question of who is saving and dis-saving in the economy. The role of the different institutional sectors – public, private and, within the latter, households and firms – should then be assessed. In fact, an imbalance may be rather benign when it is the result of a high investment rate of corporations in an economy with many growth opportunities which may then translate, for example, into larger volumes of imports of capital goods. Quite differently, an imbalance that stems from a continuous decrease in the saving rate of households and that translates into high volumes of consumer goods being imported may give rise to worries regarding sustainability. A similar argument carries over to the government sector, where the composition of government expenditure and investment and their repercussion effects on the economy as a whole play a crucial role.

As detailed in the next section, Latvian external imbalances were clearly influenced by import demand. The historical overview of the Latvian economy shows that domestic demand was pushed by two major sources: very high external financial inflows (both through bank lending and FDI) and high consumption propensity in the household sector. In fact, household saving rates in Latvia were very low in the boom years in comparison with the EU average. When the crisis took place in 2008-09, a quick adjustment of household saving rates combined with lower aggregate incomes quickly reversed the current account to a surplus.

Figure 14



Source: Eurostat.

4.2 Excess imports and import content of consumption

Latvian imports increased markedly as a percentage of GDP in the heating-up period, reaching a peak of more than 70 per cent in real terms, as can be seen in Figure 14. The speed and magnitude of the observed increase in imports could hardly be matched by a similar increase in exports, the consequence being that Latvian current account balance deteriorated markedly in the run-up to the crisis.

In fact, Latvian import behaviour appears to have undergone an important change during the boom and subsequent adjustment period when compared to historical trends. Figure 15 contrasts the expected Latvian import demand, derived from an estimated import demand function for the pre-accession period,³ with actual import behaviour in recent years.

A change in import behaviour is noticeable in the wake of EU accession, with actual imports decoupling from expected imports during the 2004-07 heating up period. In fact, “excess” imports, defined as the difference between actual and expected imports, cumulated from 2004 through 2007 to reach 20 per cent of 2005 GDP, with a correction period following from 2008 to 2010. While an increase in imports can be partly explained by the opening-up of the economy in the wake of EU-accession, other important factors contributed to a spike in import demand. Among these are very dynamic developments in compensation growth (Figure 16), a bout of “EU-phoria” following

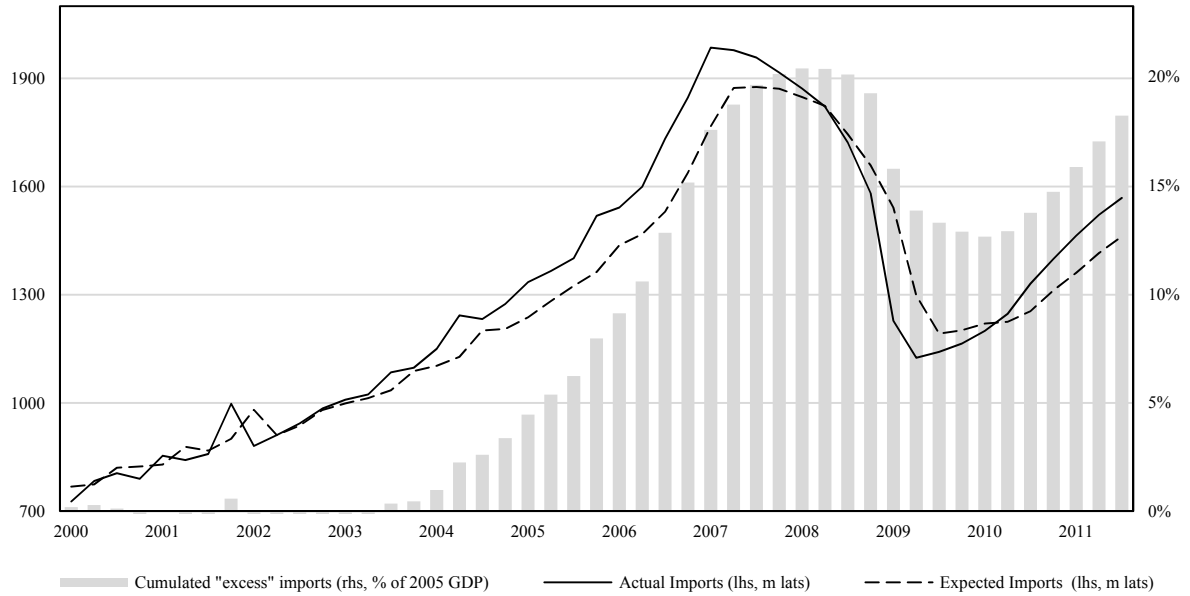
³ In line with a general class of parsimonious models used to explain aggregated imports, the following import demand function was estimated on quarterly data from Q1 1995 to Q4 2003, *i.e.*, the pre-accession years:

$$\ln(\text{real imports}_t) = \beta_1 \ln(\text{real GDP}_t) + \beta_2 \frac{\text{import deflator}_t}{\text{GDP deflator}_t} + \beta_3 \ln(\text{real imports}_{t-1}) + e_t$$

The choice of this particular specification was based on a standard battery of statistical criteria and comparisons with alternative specifications. The estimated statistical model passes standard misspecification and serial correlations tests, and all the estimate coefficients have the expected sign and are significant at a 5 per cent level. The regression explains 94 per cent of the variance in real imports.

Figure 15

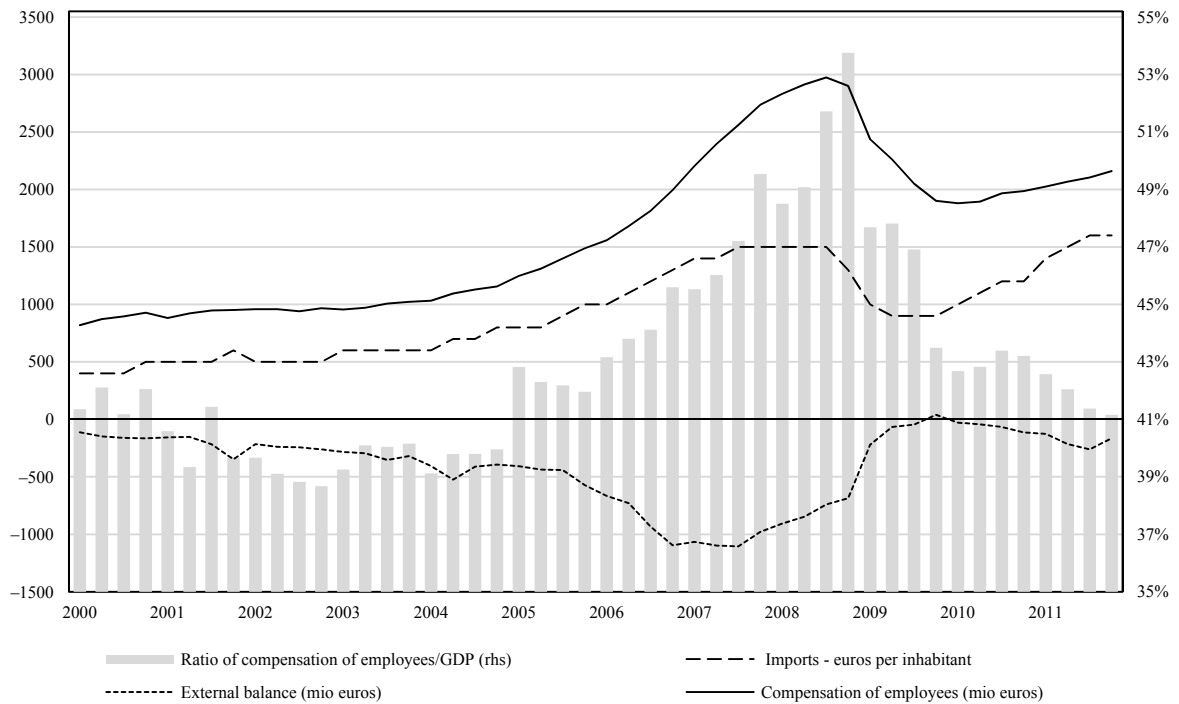
Actual vs. Expected Imports
(constant 2005 prices)



Source: Eurostat and author's calculations.

Figure 16

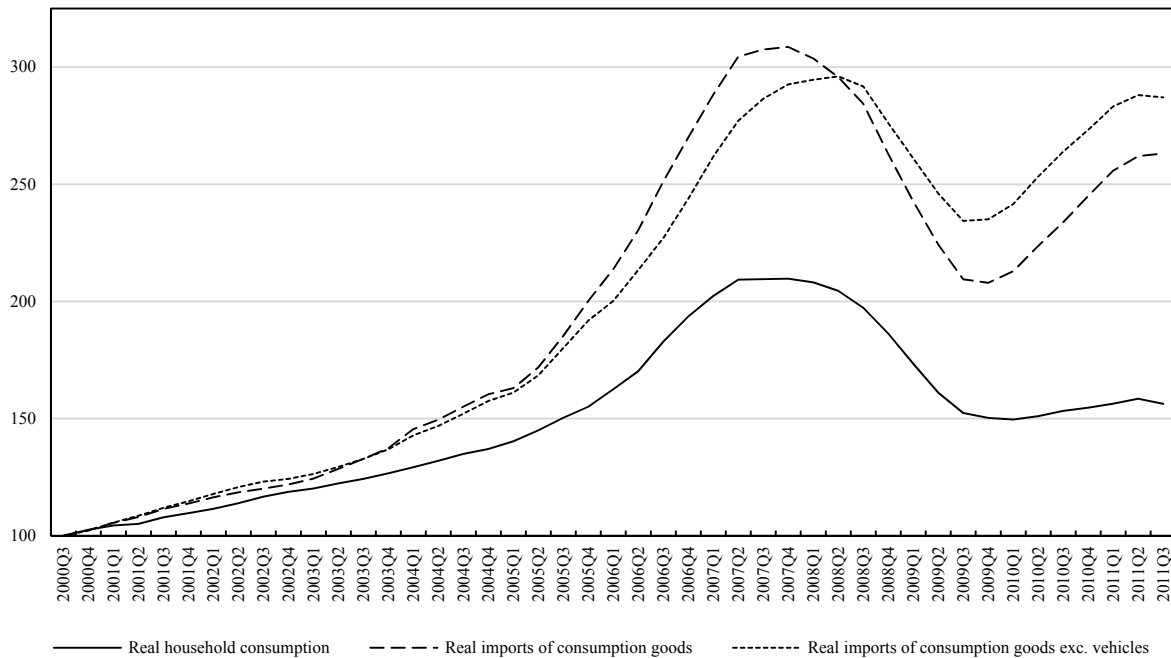
Compensation Growth and External Imbalances



Source: Eurostat.

Figure 17

Latvian Imports of Consumption Goods and Consumption Growth



Source: Eurostat.

accession in 2004 which may have masked the important economic challenges still confronting Latvia, unrealistic expectations of high and fast growing future incomes by households and, possibly, a shift in preferences towards foreign, more expensive goods.

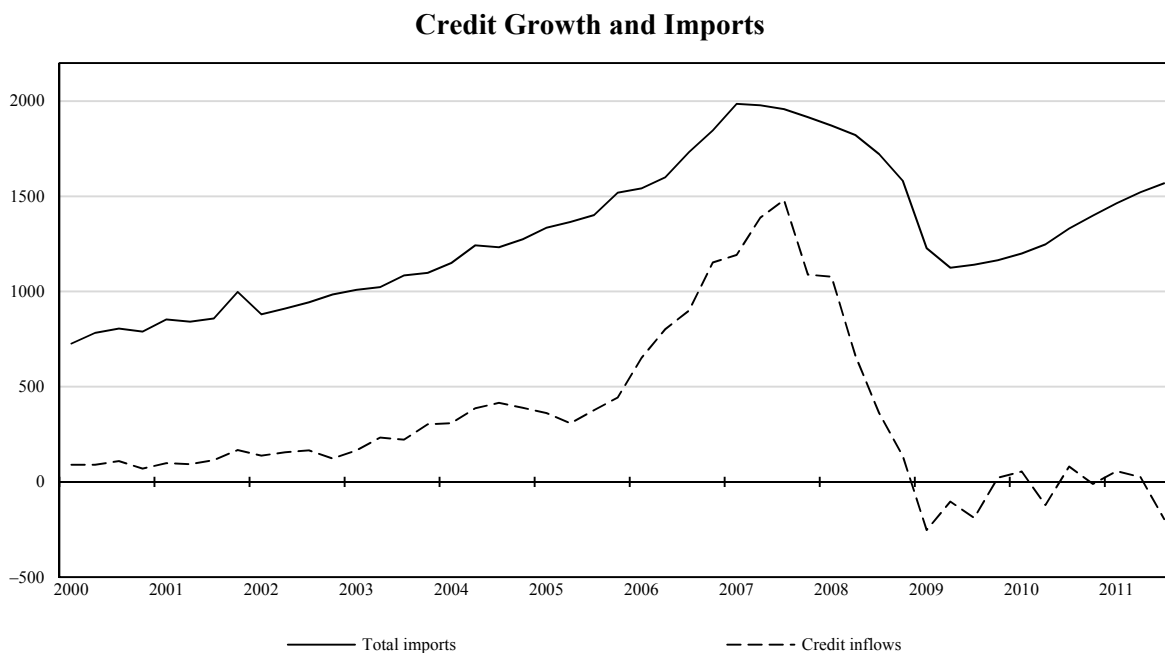
In fact, the import content of consumption appears to have increased significantly in the pre-crisis period. As depicted in Figure 17, in the heating-up period from 2004 until the collapse of Lehman brothers in the third quarter of 2008, Latvian imports of consumption goods increased much faster than household consumption, with the chart data suggesting a 28 per cent increase in the real imported-consumption-to-total-consumption ratio.⁴

The aforementioned effects were compounded by increased credit flows, namely from abroad, as the private sector leveraged up in a context of favourable credit conditions. Figure 18 evidences the important role of credit inflows in financing a buoyant import demand. Credit inflows in the form of bank loans from abroad⁵ are seen to have co-moved strongly with soaring imports. In fact, whereas prior to 2004 foreign credit inflows played a minor role, accounting for as little as 10 per cent of total imports, they grew to represent almost two thirds of import values in the 2004-07 heating up period. When the collapse of the Lehman Brothers investment bank in 2008 brought about a sudden stop in credit inflows, imports collapsed along with GDP. However, whereas credit inflows were brought to a halt, there is a limit to import adjustment in a small and very open economy such as Latvia's, which prompted the country to seek a balance of payments assistance programme from the EU in order to support its international transactions.

⁴ Due to the fact that Latvian input-output tables do not cover this period, more exact figures on the import content of consumption are not available.

⁵ Obtained from the "other investments" category of the financial account of the balance of payments (4-quarter average).

Figure 18



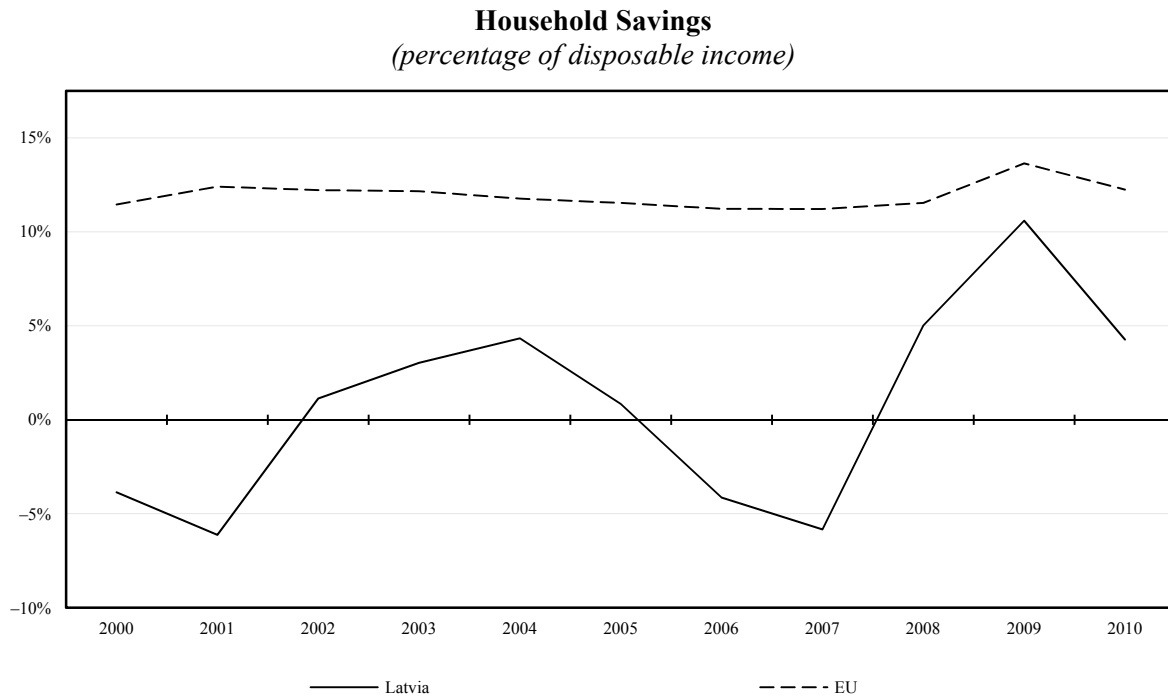
Source: Eurostat, Bank of Latvia.

5 Conclusions

In this paper it has been argued that rather than a competitiveness problem, the Latvian economy suffered from an excess of demand, fuelled by an extraordinary credit expansion. While controlling import behaviour in an economic union without capital controls and under a currency peg may be difficult, there are nevertheless some policy tools available. For example, indirect taxation may be used to redirect income from consumption towards savings, while property taxation can help curb the expansion of the non-tradable sector and taxation of vehicles (an entirely imported good in Latvia) can help moderate import values. As can be seen from Figure 19, this is going to be a challenging task for Latvian authorities, as household savings rates have been historically very low in Latvia (significantly below the EU levels) and declined steeply to negative rates in boom years.

Authorities have basically two major tools for managing demand. One of the tools is related to financial and bank regulations that could increase risk awareness and limit excess credit growth, especially in the area of mortgage lending that was a major source of overheating in Latvia. The second tool for managing household demand is based on taxation and fiscal policies whereby the tax burden can be rebalanced from labour to consumption. This would simultaneously reduce labour costs for businesses and exporters, discourage excess consumption and support higher saving rates. Additionally, property taxation can help curb excessive expansion of the non-tradable construction sector and taxation of vehicles (an entirely imported good in Latvia) can help moderate import values. The rebalancing of the tax burden was effectively done in Latvia through increases in VAT, excise, housing and transport vehicle tax rates during the period of radical fiscal consolidation in 2008-10. However, the potential for further rebalancing is still in place as both excise tax rates and property taxes (for real estate and transport vehicles) are below the EU average.

Figure 19



Source: Eurostat, Bank of Latvia.

While a significant part of the change in Latvian import behaviour is bound to be structural and associated with its integration in the single market, the future sustainability of the Latvian external position will depend on the judicious management of its internal demand and on the continued promotion of its external competitiveness, so that, differently from what happened in the 2008-09 crisis, exports dynamics can accommodate import growth. Under the conditions of fixed exchange rate regimes and demand-driven imbalances, the policy response to offsetting the import demand effects of external financial inflows and encouraging saving propensity in the household sector appear of high importance and with much lower negative effects on growth than the alternative fiscal and budgetary measures.

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