

**University of Tartu**  
Faculty of Economics and Business Administration

**STRUCTURAL WEAKNESSES  
AS BARRIERS TO SOCIAL PROGRESS  
IN ESTONIA**

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**Tartu 2014**

ISSN-L 1406-5967  
ISSN 1736-8995  
ISBN 978-9985-4-0831-5  
The University of Tartu FEBA  
[www.mtk.ut.ee/en/research/workingpapers](http://www.mtk.ut.ee/en/research/workingpapers)

## **Structural Weaknesses as Barriers to Social Progress in Estonia**

Janno Reiljan, Claus-Friedrich Laaser, Klaus Schrader\*

### **Abstract**

Although Estonia developed a functioning market economy, it has hardly succeeded in catching-up economically with the richer countries of the euro area. Correspondingly, the level of social security is still rather limited. To improve the income situation and enhance the social security systems it is essential to overcome the structural weaknesses of the Estonian economy, which is mirrored in the apparently low productivity level. The challenge for the Estonian policy is to create a suitable business environment to support the needed structural change.

**JEL Classification:** F43, H55, O52

**Keywords:** Structural change, catching-up, social security and international competitiveness

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## **1. INTRODUCTION**

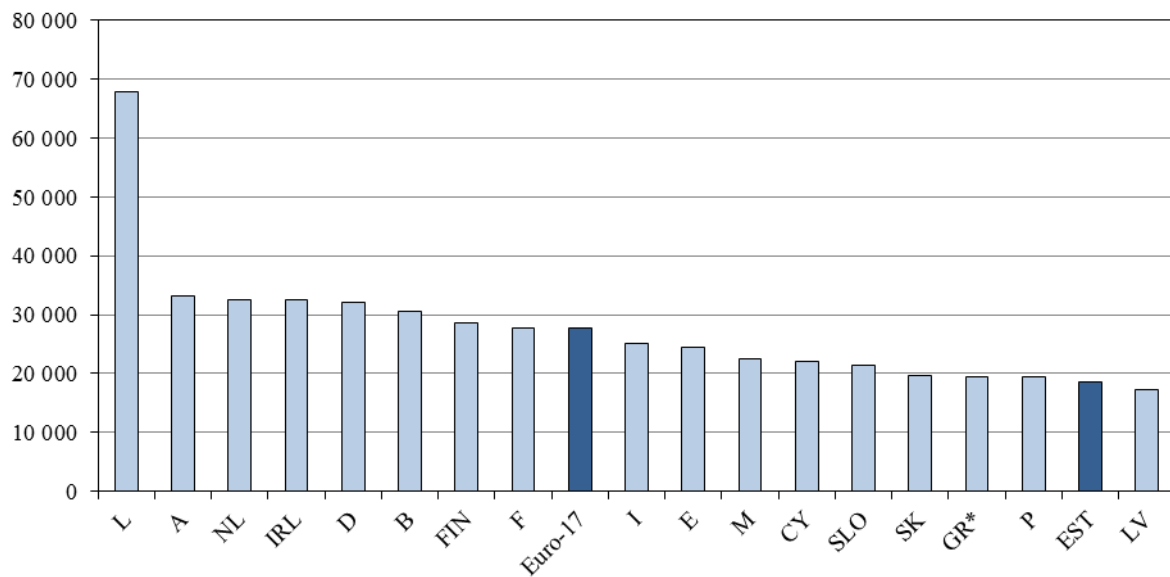
Estonia is widely regarded as a paramount example for a successful transformation of a socialist economic system to a functioning market economy. This process can be considered as a model case not only for other transformation countries, but even for crisis-shaken EU members in Southern Europe. Moreover, Estonia has gained reputation for a consequently performed stabilization policy, which was crowned with the success of the countries' membership in the Euro Area.

Against the backdrop of this positive image which contrasts strongly with the crisis scenarios in Southern Europe the remaining problems of Estonia are often ignored. Estonia has hardly succeeded in catching-up economically with the richer countries of the Euro Area since its independence. Correspondingly, the level of social security which the country can afford and sustain is rather limited. Without social stability, however, public acceptance of the market economy might lose strength in the course of time. The aim of this paper is, therefore, to demonstrate that creating a functioning market economy according to EU standards is a necessary but not a sufficient condition for successful economic and social catching-up in the long-run. The question is raised which obstacles to socio-economic development still exist in Estonia, and which options Estonian economic policy has in order to overcome development deficiencies.

## **2. CATCHING-UP WITHIN THE BOUNDS OF POSSIBILITY**

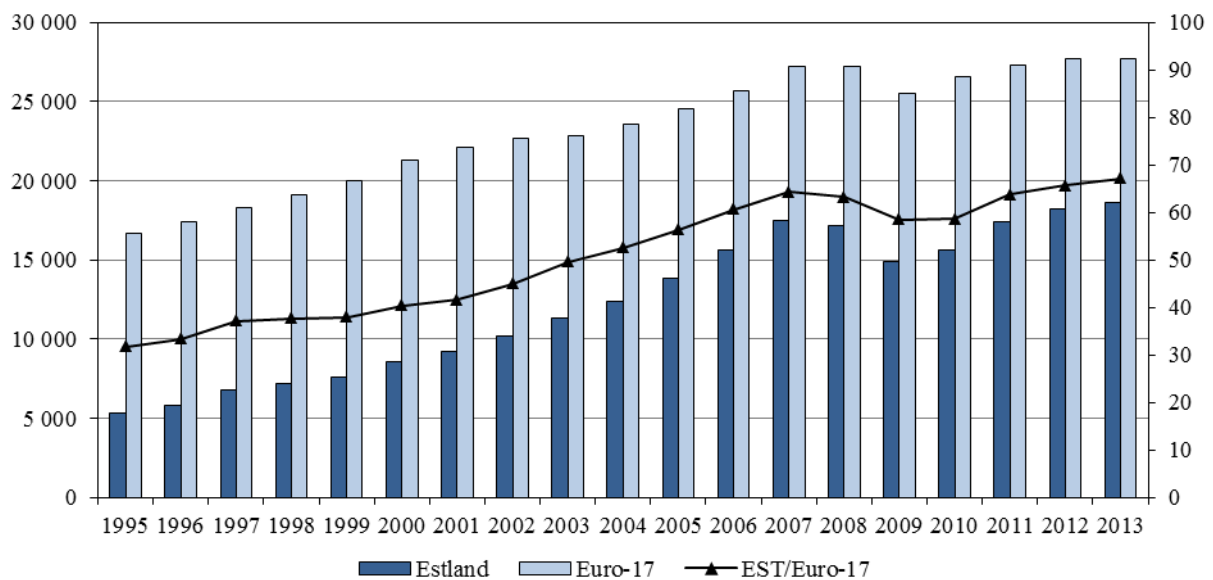
The Estonian development renders the impression that Estonia indeed made up some ground but was not able to catch-up convincingly so far. Estonia failed to move up the European income hierarchy: By 2012, Estonia was still the poorest country in the Euro Area, measured by per capita incomes in PPP. In 2013 Estonia could move up one place in this ranking but this "improvement" was only due to Latvia's accession to the Euro Area (Figure 1). To be sure, after 2000 the Estonian economy grew at rates between 6 and 10 per cent p.a. jointly with its neighbors Latvia and Lithuania the country was even labeled as a "Baltic tiger". The growth dynamics were accompanied by a process of making up ground relative to the wealthier EU members; during the period 1995 to 2007 the relative per-capita income (as measured against the Euro-17 average) doubled to 64 per cent (Figure 2). But the global financial and economic crisis in 2008 and 2009 made a sudden end to this favorable trend also in Estonia.

In the course of the crisis Estonia's growth model expired: During the 2000s years the main driver of Estonian growth had no longer been exports, but instead an expansive domestic demand triggered off by cheap loans granted by Scandinavian banks and their local subsidiaries. Substantial amounts were channeled into real estate and housing, retail trade and financial services. Based on an abundant supply of credit and wage increments, private households increased their demand for consumer durables, private services and home ownership substantially. A demand-driven bubble emerged which finally burst in 2008 when the banks reversed their risk assessments and downsized their credit supply – the Estonian

**Figure 1.** Per Capita Income of the Euro Countries 2013<sup>a</sup>

<sup>a</sup>In power purchasing parities per capita. — L = Luxembourg, A = Austria, NL = Netherlands, IRL = Ireland, D = Germany, B = Belgium, FIN = Finland, F = France, I = Italy, E = Spain, M = Malta, CY = Cyprus, SLO = Slovenia, SK = Slovakia, GR = Greece, P = Portugal, EST = Estonia, LV = Latvia. — \*Value for 2012.

Source: Eurostat (2014a); own compilation.

**Figure 2.** Development of Per Capita Incomes in Estonia and the Euro Area 1995–2013<sup>a,b</sup>

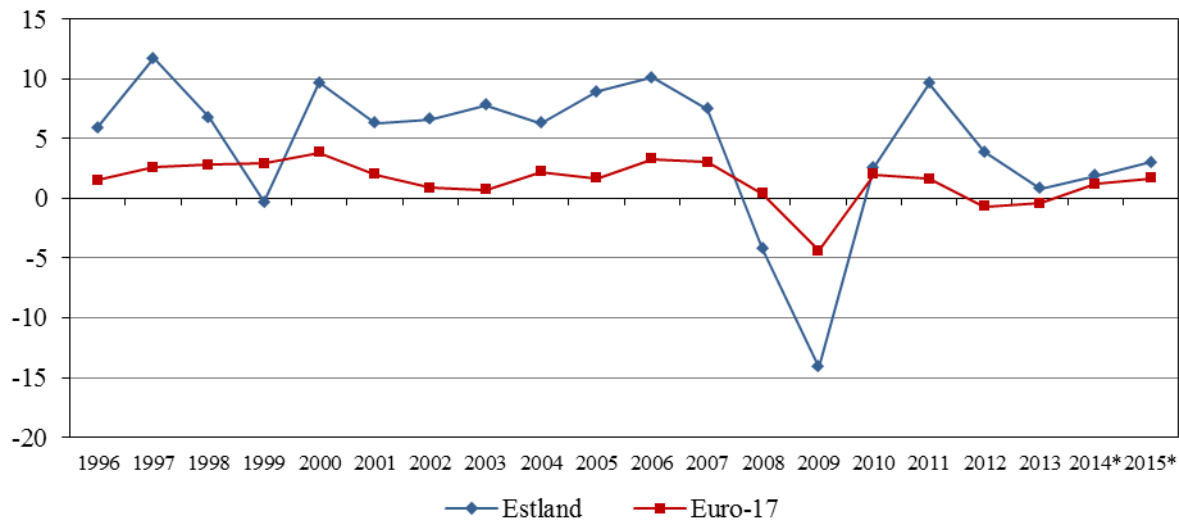
<sup>a</sup>Left axis: Per capita incomes of Estonia and the Euro-17 countries in power purchasing parities. —

<sup>b</sup>Right axis: Estonia's per capita income as a percentage of the Euro-17 countries' per capita income based on power purchasing parities.

Source: Eurostat (2014a); own compilation.

economy shrunk by two-digit rates in 2008 and 2009, and the wealth gap relative to the Euro Area-average again widened (Figure 3). A revival of the demand-driven growth model proved to be totally unrealistic due to the loss of confidence on international financial markets and the now restrictive risk policy of commercial banks.<sup>1</sup>

**Figure 3.** Real Growth in Estonia and the Euro Area 1996–2015<sup>a</sup>



<sup>a</sup>Gross Domestic Product at market prices (volumes), percentage change over previous period. —  
\*Spring Forecast 2014 of the European Commission.

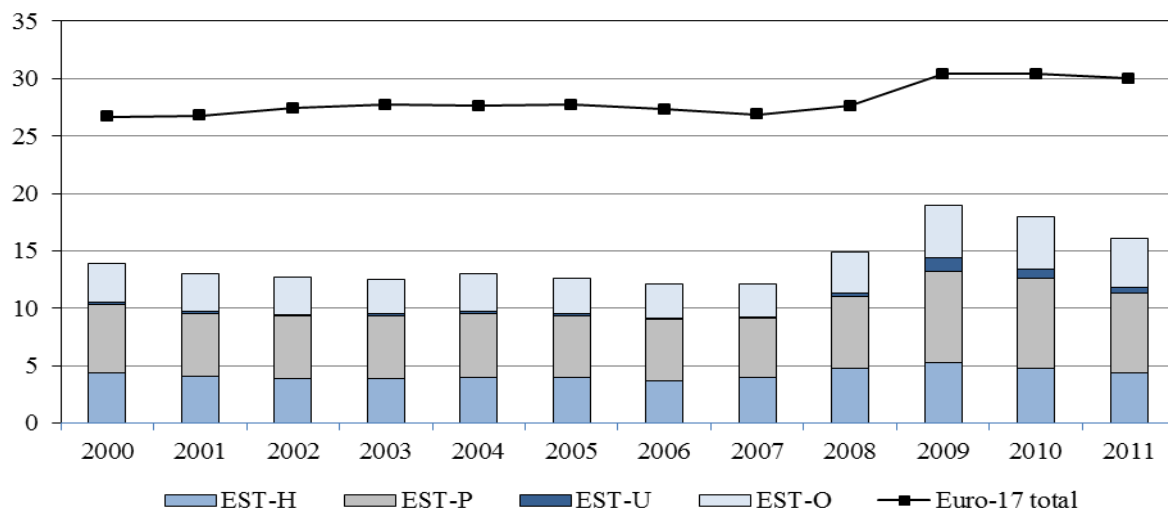
*Source:* European Commission (2014); Eurostat (2014a); own compilation.

Unsurprisingly, from 2010 onwards the recovery of the Estonian economy was driven by exports. The export sector, having been neglected during the boom phase, had again to serve as main source of growth. The revived growth process also restarted catching-up, Estonian relative per-capita-income could once more match the pre-crisis level in 2013. However, export-driven growth has its limits, too: Growth rates between 3 and 4 per cent may be regarded as sound growth by current international standards, but would not permit substantial progress in catching-up relative to richer euro countries. In the short-term even the minimum target of 3 per cent will probably be missed (cf. European Commission 2014: 56–57).

### 3. THE ESTONIAN WELFARE STATE LAGGING BEHIND

Even though Estonia must be considered a poor country compared with other euro member nations, there have been no indications so far of any threat to social stability. Unlike the situation in Southern European crisis countries, the financial and economic crisis has not led to social erosion in Estonia, and the development of poverty in Estonia has remained inconspicuous in relation to the Euro Area as a whole. The share of people at risk of poverty or social exclusion is at the average of the Euro countries and well below the shares of the Euro crisis countries; moreover the Estonian income distribution can be labeled to be inconspicuous (Eurostat 2014b, c). Nevertheless, Estonia's state-managed social security system appears to be a weakness. Until the end of the boom years, significantly less than 15 per cent of GDP was spent on social security, not even half the average for the group of Euro-17 countries (Figure 4).

<sup>1</sup> For details see Schrader and Laaser (2010: 14–17).

**Figure 4.** Social Protection Expenditure in Estonia and the Euro Area 2000–2011<sup>a</sup>

<sup>a</sup>Social protection expenditures as percentage of GDP. — EST-H = Sickness/health care; EST-P = Old age; EST-U = Unemployment; EST-O = Disability, family/children, survivors, housing, social exclusion, administration costs, other expenditures.

*Source:* Eurostat (2014d); own compilation.

While Estonia, being a poor country, cannot afford the level of social security of the affluent Euro Area countries, in terms of healthcare and pensions it remains behind the other Euro Area member countries even within the scope of its macroeconomic performance. While public spending surged in the wake of the crisis beginning in 2008 – with unemployment in particular becoming a major burden – the level of social spending declined again in tandem with the gradual economic recovery. Only the pensions frozen during the crisis continue to be felt to this day.

The Estonians only have relatively little scope for funding their social security from labour income and savings; the losses in income and assets due to the economic crisis likewise are still in evidence. Wages and salaries fell during the crisis years, even though they were already very low compared with other Euro Area countries (Eurostat 2014e). Yet declining work-based income also had the positive effect that it was possible to boost competitiveness and to contain unemployment cuts. The wage flexibility following the crisis-related, rapid surge in unemployment then again served to ease the Estonian labour market, contributing towards social stabilization. It was possible to avoid mass unemployment on the scale that prevailed in the Southern European crisis countries and to start creating jobs again – although the pre-crisis employment level is still out of reach (Figure 5).

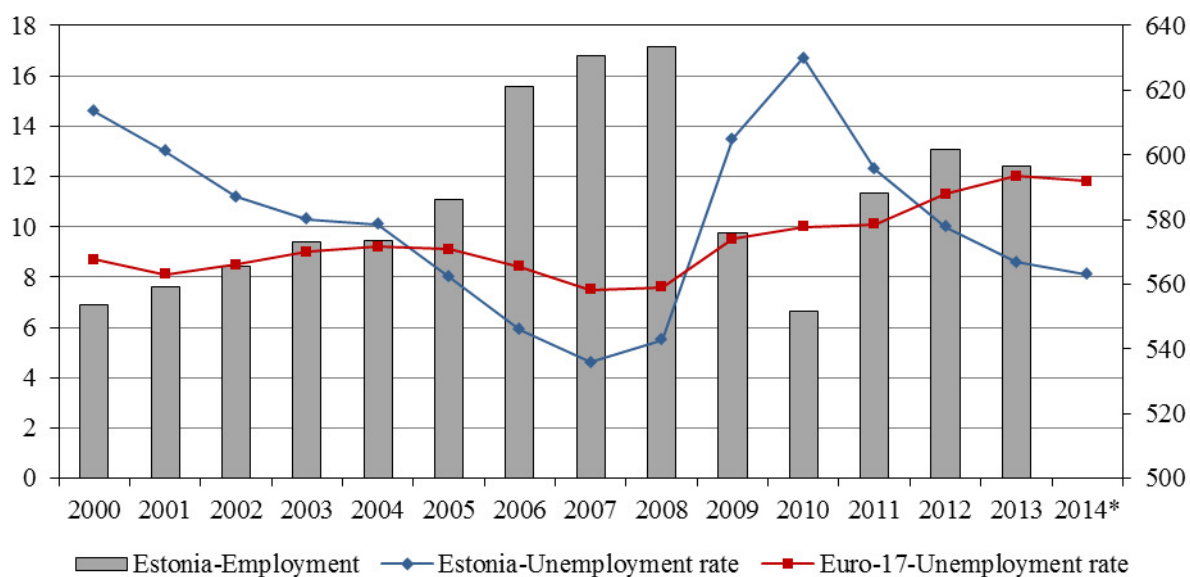
The state provided an active contribution towards stabilization via unemployment and pension insurance: in spite of the apparently modest unemployment benefits, amounting to 40–50 per cent of the average wage, for many employee households the consequences of the crisis were absorbed so substantially that social stability was never seriously questioned in Estonia.<sup>2</sup> During the crisis years 2008 and 2009 12 resp. 24 per cent of the labour force received unemployment benefits (Võrk et al. 2010: 8). Due to a maximum period of entitlement of 270 days<sup>3</sup> in many cases unemployed had to receive the much lower

<sup>2</sup> C.f. Unemployment Insurance Act of 01/01/2002, RTI 2001: 59.

<sup>3</sup> Cf. Leetmaa et al. (2004: 9).

unemployment assistance subsequently. To some extent, migration provided for further relief on the labour market (cf. Statistics Estonia 2013).

**Figure 5.** Labour Market Performance in Estonia and the Euro Area 2000–2014<sup>a</sup>



<sup>a</sup>Left axis: Harmonized unemployment rate in per cent; right axis: employment annual averages in 1 000 persons. — \*Estimates by the European Commission (2014).

Source: European Commission (2014); Eurostat (2014f); own compilation.

Furthermore, the Estonian pension system made an important contribution to social stability during the crisis years due to the fact that pensions – in contrast to shrinking wage income – were frozen at existing levels (Table 1).<sup>4</sup> This was financed with existing reserves in the pension system that had been accumulated during the boom years. Nevertheless, because pensions are wage-related, in the absence of any major progress regarding income growth the stability of the Estonian pension system is at risk. Public health care insurance, which can provide only limited health care services, also contributed to social stability but it started to run financing deficits. A sound financing base and the further development towards a health system meeting Western standards require rising contributions of the insured and/or the taxpayers.

**Table 1.** Pensions and Net Wages in Estonia 2003–2013

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Average annuity (€)	116	130	148	175	204	251	270	272	271	277	289
Average retirement annuity (€)	127	143	164	194	226	278	301	305	305	313	327
Average net wages (€)	331	363	411	484	583	670	637	637	672	706	
Annuity / wages (%)	35.1	36.0	36.0	36.1	34.9	37.4	42.5	42.7	40.3	39.2	
Retirement annuity / wages (%)	38.3	39.5	39.8	40.0	38.8	41.5	47.3	47.8	45.4	44.3	

Source: Statistics Estonia (2014); own composition and calculations.

<sup>4</sup> Cf. Leppik (2006: 9).



Estonia has developed a social security system that proved its worth during the crisis and is actually affordable by the country. The major issue of the system, though, is that Estonia's low economic strength allows only for the provision of basic social security way below the existing standards in the affluent euro area member countries. And even considering Estonia's relatively low prosperity, the public social security systems are apparently underfunded.

So far, the Estonian population appears to have accepted the current policy stance: According to a recent poll conducted by the European Commission (2013), 74 per cent of Estonian interviewees expressed being content with general living conditions in the country even in view of crisis-induced welfare losses. This percentage nearly matches the average level of contentment in the EU as a whole. In addition, Kulu and Veebel (2014: 56–73) have analyzed why the Estonian government remained in power at the parliamentary elections in 2011 although it adopted strict austerity measures in reaction to the 2008/09-crisis. According to their findings several country-specific factors contributed to voters' acceptance of the austerity measures: The government succeeded to make appear these measures as *force majeure* while the parliamentary opposition was unable to offer any promising alternative. At the same time, particularly political opponents, such as retirees, were widely exempted from negative consequences of the measures. Moreover, the Estonian attitudes vis-à-vis the institution "state" and the historical background may have contributed, too.

However, these were rather unique conditions, and it is by no means clear-cut that they will prevail in the future. One should keep in mind that, since having gained independence, income trends have been insufficient to allow for additional private pension provisioning. Therefore, Estonia is in need of a dynamic economic catching-up process with a sustainable increase in the level of personal incomes. This calls for a competitive economy with high value-adding production structures, generating higher incomes than in the past.

#### **4. THE DOWNSIDE OF THE CURRENCY BOARD SYSTEM**

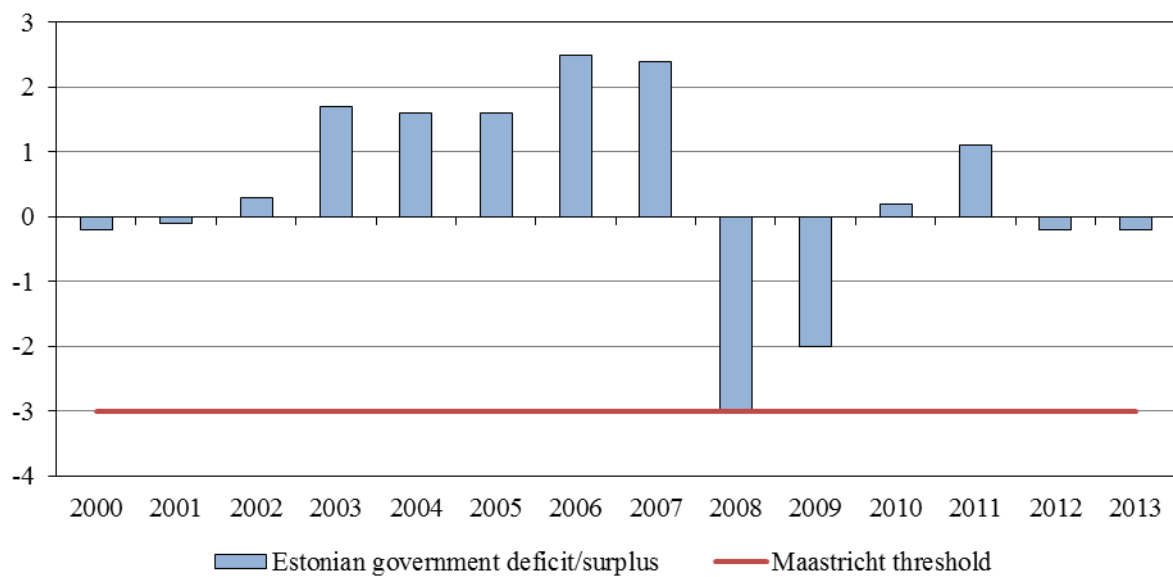
The Estonian currency system and the country's Euro Area membership need to be discussed as a potential obstacle to a faster economic catching-up process. Estonia relied on a very rigid currency board system from the outset, initially providing for a fixed exchange rate to the deutschmark and, later, to the euro.<sup>5</sup> To be sure, the Estonian currency board system proved to be successful with respect to monetary stabilization, especially as it survived a number of crises<sup>6</sup> and essentially complied with the necessary conditions for long-term credibility of a "hard peg", in other words a constant, fixed exchange rate as in a currency union.<sup>7</sup> The conditions were met by (i) a fiscal policy that can be consistently regarded as sound – the budget deficit never exceeded the Maastricht threshold of 3 per cent of GDP, while in 2002–2007 even a budget surplus was achieved (Figure 6), (ii) an almost negligible stock of public debt relative to GDP – Estonia may be labeled as the "model student" in the Eurozone in this respect (Figure 7), although the debt relief after regaining independence has to be taken into account, and (iii) the willingness to cope with the challenges of the global financial crisis 2008/09 by a real devaluation of domestic wages and prices (Eurostat 2013a).

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<sup>5</sup> Cf. Sepp et al. (2002: 330–331); Wolf et al. (2008: 152); Schrader and Laaser (1994: 83–85).

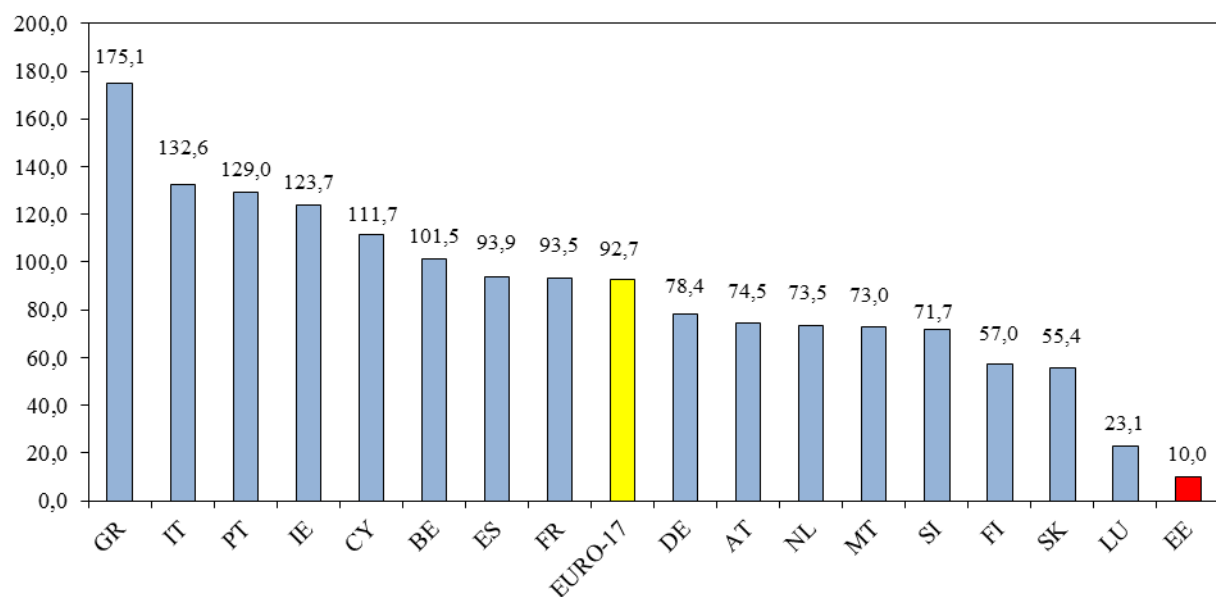
<sup>6</sup> Cf. Wolf et al. (2008: 153–158); Gulde-Wolf and Keller (2002: 275–277).

<sup>7</sup> Cf. Lane (2002: 22–23); Belke, Hebler and Kösters (2002: 9 and 16).

**Figure 6.** Estonian Government Deficit/Surplus 2000–2013<sup>a</sup>

<sup>a</sup>Net lending (+)/ Net borrowing (-) of general government under the EDP (Excessive Deficit Procedure) in per cent of GDP.

Source: Eurostat (2014g); own compilation.

**Figure 7.** Stock of Public Debt in the Euro-17 Area 2013<sup>a</sup>

<sup>a</sup>Government consolidated gross debt, in per cent of GDP; for the country codes see Figure 1.

Source: Eurostat (2014g); own compilation.

It may be an open question whether Estonia's integration into the Euro Area even matched the criteria given by the "optimum currency area theory",<sup>8</sup> but macro-economic stabilization can be regarded as successful.

<sup>8</sup> See Mongelli (2008: 2–3) for a brief overview of the various contributions to this rather heterogeneous field of macroeconomic theory. Classical criteria for an optimum currency area are factor mobility (Mundell 1961), economic openness (McKinnon 1963) and a distinct diversification of production (Kenen 1969). Newer

However, with its monetary and exchange rate policy system, Estonia was – and now as Euro area member is – not able to use a flexible exchange rate as a shock absorber to respond to real economic shocks in any case. This might endanger social stability in the long run since nominal devaluations are simply not possible – only real devaluations.

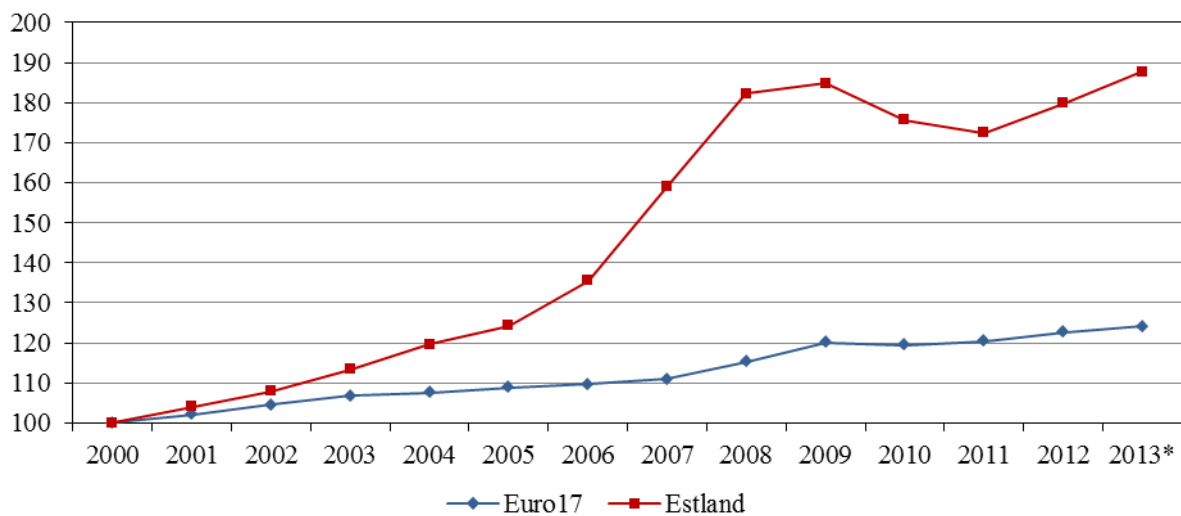
Therefore, it is at least debatable whether a fixed exchange rate to an anchor currency is the appropriate exchange rate system during a process of economic catching-up that is accompanied by profound structural changes. From a long-term perspective, it is potentially doubtful whether wage and price falls can work without limits as internal shock absorbers when the potential international competitiveness of a poor country is limited at any rate.

Certain scepticism is warranted because of the nature of structural changes in the wake of a growth process. If a relatively poor country has an economic structure that is focused on producing raw material- and labour-intensive goods with relatively little use of technology and human capital, it predominantly competes with developing and emerging economies on the global markets. These are competitive conditions with generally low prices for standardized products as the main driver for competitiveness and no monopolistic pricing scope to the upside. A member of a hard currency union hardly stands any chance of winning such price wars. Moreover, in this “race to the bottom” the country cannot improve its own competitiveness through a nominal devaluation. Therefore, devaluation in real terms, i.e. falling or at least stagnating wages and prices for such products, is the only instrument to maintain competitiveness. This will hardly help, though, to lower the income gap in relation to the other members of the currency union. Quite the contrary: a reduction in the per-capita income gap even calls for an appreciation in real terms. This, however, would not hurt the competitive position of the relatively poor country only if, at the same time, its product range were to change towards higher value-added products with a higher input of technology and human capital which, according to the theory of monopolistic competition, would provide scope for price gains. The resulting increase in productivity would allow for real appreciation, helping to lower the income gap in relation to highly developed member countries of the Euro Area. For Estonia, this means that membership in the hard currency union of the euro is no obstacle to its process of economic catching-up, but only if the country experiences a structural change accompanied by high productivity gains.

## **5. STRUCTURAL WEAKNESSES**

### **5.1 The Productivity Problem**

The development of Estonian unit labour costs in the 2000s displays the fact that the country lost competitiveness towards the Euro Area on average (Figure 8). Unit labour costs have risen faster in Estonia since the 2000 than in other Euro countries, thus making Estonia less competitive. It becomes obvious that during the period of demand driven growth, fueled by cheap credits from European banks, Estonians lost sight of saving the country’s international competitiveness. In the course of the economic crisis unit labour costs shrank temporarily but at present they are rising again.

**Figure 8.** Nominal Unit Labour Costs in Estonia and the Euro Area 2000–2013<sup>a</sup>

<sup>a</sup>Index values 2000 = 100; nominal unit labour costs = (total compensation of employees / total employees in persons) / (GDP in market prices, chain-linked volumes / total employment in persons). —  
\*Estimates for Estonia by Eurostat.

*Source:* Eurostat (2014h); own compilation and calculations.

The Achilles' heel of the Estonian economy is structural in nature and consists in a technology gap compared to leading advanced economies in the EU. Estonian industrial production and the country's services sector continue to deploy a relatively low degree of technology and human capital, which is reflected in a correspondingly low level of productivity, allowing for low wages only. The analysis reveals that Estonian labour costs are the lowest in the Euro Area but the same applies to Estonian labour productivity (Figure 9). And low labour productivity remains a massive obstacle to the Estonian efforts to catch-up with the wealthier Euro countries: The Estonian economy's very low productivity level and only modest productivity gains are unlikely to make the country a candidate for a real appreciation in the near future. Estonia evidently failed to overcome the structures of a low-wage country with a low value-adding product range in the first decade of the new millennium. Estonia never experienced a structural change allowing the country to move up the European income hierarchy by virtue of productivity gains (Appendix 1).

The structural shortcomings of the Estonian economy can be seen in the country's sectoral employment structure (Appendix 2): Compared to the Euro-17's average Estonia has a high primary sector share (6.4 vs. 4.8 per cent) due to the size of agriculture and forestry. The same is true for the secondary sector (27.4 vs. 22.5 per cent) with above average shares of manufacturing and construction. Estonian manufacturing is dominated by labour-intensive industries at the low end of industrial development, with products displaying only low or middle income elasticities.<sup>9</sup> They comprise food products, textiles and clothing as well as furniture and timber products. In contrast, the Estonian industry lacks a considerable productive capacity of investment goods with a high value-added and a demand for highly qualified workers. Important investment goods industries, such as the automotive industry, machine-building and electrical engineering, only play a minor role or are even not in place.<sup>10</sup> With respect to the – by Euro-17 standards – small Estonian tertiary sector (65 vs. 73 per cent) the perspectives for a

<sup>9</sup> See the method developed by Donges et al. (1982: 55–57).

<sup>10</sup> Also see Raudjärvi (2013: 150–151) who shares this view.

growth stimulus are not substantially better. In the (private) service sector, low income jobs with low qualification requirements located in wholesale and retail trade, transportation and storage and also in accommodation and food service activities account for a major share of service employment.

**Figure 9.** Real Labour Productivity and Labour Costs in the Euro Countries 2013<sup>a</sup>



<sup>a</sup>Index values, Euro-17 = 100; Ranking follows declining labour productivity by country; for the country codes see Figure 1. – Real labour productivity per hour worked defined as real output (deflated GDP measured in chain-linked volumes, reference year 2005) per unit of labour input (measured by the total number of hours worked). – Total labour costs in industry, construction and services (except public administration, defense, compulsory social security). — \*Labour productivity for 2012.

Source: Eurostat (2014i, j); own compilation and calculations.

## 5.2 Low-tech Exports

Structural weaknesses can also be seen in terms of Estonia's foreign trade structures. A factor intensity analysis of Estonian sectoral trade patterns and international competitiveness corroborates that during the 2000s a shift towards technologically advanced products –so called Schumpeter-products– did not take place. Labour-intensive and raw-material-intensive products still comprise of about 65 per cent of Estonian exports with positive RCA values signaling Estonia's comparative advantage (Table 2). The shift towards rawmaterial-intensive products signals that the export of standardized labour-intensive products has no further development potential due to the strong competitors primarily from Asia. In contrast, immobile Schumpeter-products grew by 8 per cent points thus contributing significantly to a total Schumpeter share of about 26 per cent. Given a Schumpeter share of 60 per cent of a highly industrialized country such as Germany, the Estonian high tech exports are still lagging behind. The RCA values of Estonian Schumpeter trade continue to be negative and indicate that Estonia's trade in technology-intensive goods is not very competitive – with "high tech made in Estonia" remaining the exception – despite all improvements made in the value-added content of Estonian export commodities. For instance: Estonia's relative strengths in merchandise trade are hardly unchanged in the category of labour- and raw material-intensive goods.<sup>11</sup>

<sup>11</sup> Cf. Eesti Pank (2013: 28).

The export recovery observed over the past several years has not been accompanied by a significant increase in the technology content of Estonian exports, which means the structural weaknesses still prevail to this day. The situation is very similar in the Estonian services sector: while there are tendencies for rising exports of high-value financial or communications services, exports are still dominated by traditional transport and tourism services.

**Table 2.** Foreign Trade Patterns and International Competitiveness of Estonia According to Factor Intensities 1999–2001 and 2010–2012<sup>a,b</sup>

	1999–2001	2010–2012
<b>Raw material-intensive products</b>		
Exports	10.0	31.4
Imports	14.9	29.8
RCA	–0.40	0.06
<b>Labour-intensive products</b>		
Exports	63.1	33.5
Imports	39.6	23.1
RCA	0.47	0.37
<b>Capital-intensive products</b>		
Exports	9.1	9.2
Imports	10.6	12.0
RCA	–0.15	–0.27
<b>Mobile Schumpeter-products</b>		
Exports	10.7	10.3
Imports	17.6	17.1
RCA	–0.49	–0.52
<b>Immobile Schumpeter-products</b>		
Exports	7.0	15.7
Imports	17.4	18.0
RCA	–0.90	–0.13

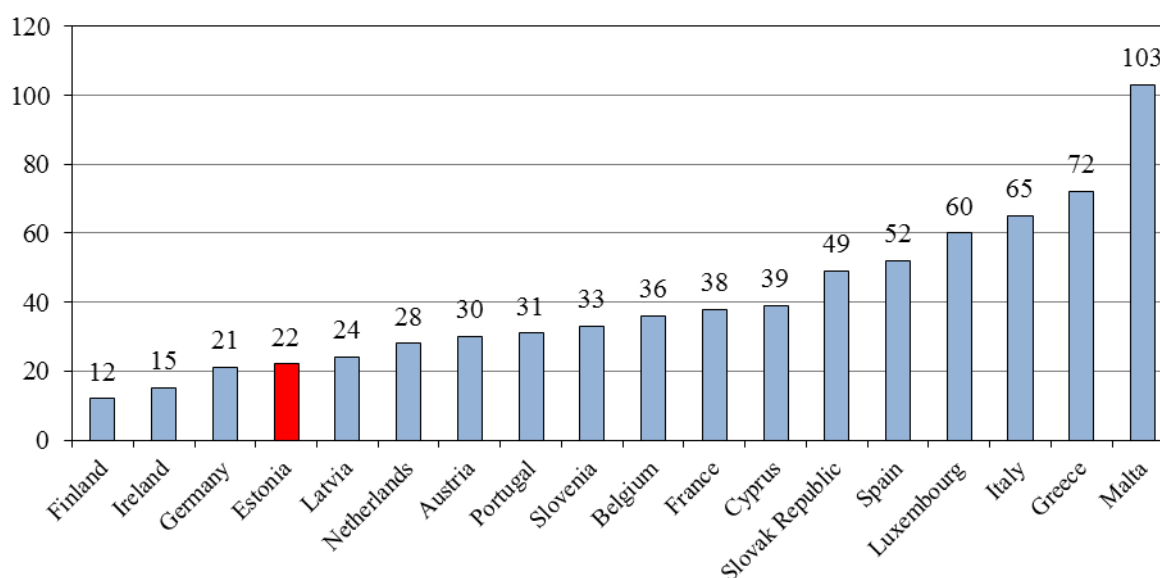
<sup>a</sup>In per cent of total exports or total imports (special trade); averages for the years 1999–2001 and 2010–2012. —<sup>b</sup>RCA-values for commodity group  $i$  have been calculated by virtue of the following formula:  $RCA_i = \ln[(Export_i : Import_i) : \sum Export_i : \sum Import_i]$ ; positive RCA-values indicate competitive advantages; assignment based on SITC 3 (cf. Appendix 3).

*Source:* Eurostat (2013b); Heitger et al. 1992 (43–45); own compilation and calculations.

## 6. IMPROVING THE BUSINESS ENVIRONMENT

Despite these structural weaknesses there is some evidence that Estonian policy has already made appropriate settings to overcome the observed structural deficiencies. With respect to the Europe 2020 targets, which aim at strengthening the international competitiveness of the EU countries, Estonia has improved its performance in the course of the 2000s years. In 2012 the expenditures on Research and Development had more than tripled, thereby exceeding the Euro-17 average, although Estonia still missed the target of 3 per cent and the expenditure path levelled out again (Appendix 4). In case of tertiary education the number of people educated clearly exceeded the target of 40 per cent in 2013 (Appendix 5).

Furthermore, the World Bank's Doing Business ranking paints the picture of enterprise-friendly settings: Estonia attained rank 22 out of 189 countries in 2013 (World Bank 2013). Comparing Estonia with the Euro countries solely the country even attained rank 4 – close behind Germany (Figure 10). Nevertheless, space for further improvements is still left, especially regarding protecting investors, resolving insolvency, starting a business and getting electricity (ibid.).

**Figure 10.** Doing Business Ranking of the Euro Countries 2013<sup>a</sup>

<sup>a</sup>The Doing Business Ranking of the World Bank comprises 189 countries.

Source: World Bank (2013); own compilation and calculations.

Moreover, a rather positive evaluation of Estonia's competitiveness is given by the World Economic Forum's Global Competitiveness Index (GCI): Estonia climbed up to rank 32 in 2013 resp. to rank 9 in a Euro country comparison (World Economic Forum 2013). The report highlights Estonia's educational system, the quality of the goods and financial markets, the flexible labour markets, its technological readiness as well as the country's stability-oriented fiscal policy (ibid.: 29). But at a more in-depth look the GCI also reveals some shortcomings: Infrastructure deficiencies (electricity supply, air transport), the country's missing capacity to attract or retain talent, an absence of industrial clusters, a small value chain breath and the insufficient availability of scientist and engineers (Appendix 6).

## 7. POLICY CONCLUSIONS

Without doubt, Estonian policy makers succeeded in developing a functioning market economy in the course of the last two decades. With good reason the Estonian market economy served as a benchmark for other transformation economies as well as a model euro crisis countries should follow in their efforts to regain fiscal stability. However, Estonia did not manage to catch-up economically with the average of the euro countries. Estonian incomes still rank at the lower end of the Euro Area, accordingly the social security system only provides a basic coverage against unemployment, old-age poverty and sickness.

The Achilles' heel of the Estonian economy is of structural nature due to a technological gap towards the leading industrialized countries. The majority of Estonia's manufacturing and service industries continue to produce on a relatively low technology and human capital level that is again mirrored in a rather low productivity. Naturally, the low productivity justifies no better than low wages and salaries. Without any significant improvements of its economic structures Estonia will be caught in a poverty trap and is endangered by a race to the bottom because on markets of standardized goods and services the competition by emerging and developing economies will further intensify.

What has to be done? In the long run, internal devaluations are not a suitable instrument to raise Estonian competitiveness. Due to Estonia's membership in the hard currency area of the euro, the country had to be rather a candidate for internal appreciation if the catching-up process should gain momentum. In this respect the euro membership requires the development of competitive economic structures in Estonia, coming close to a benchmark country like Germany. The challenge for the Estonian economic policy is to create a suitable business environment to support this kind of structural change. The country itself is too small to rely on home markets or homemade technologies — it needs the global integration of its economy.

Fortunately, there is evidence that Estonian policy has already made appropriate settings. With respect to the Europe 2020 targets, which aim at strengthening the international competitiveness of the EU countries, Estonia has made visible progress in the course of the 2000s years. Furthermore, Estonia's performance in the World Bank's Doing Business Ranking and in the World Economic Forum's Global Competitiveness Index is promising. Particularly, foreign direct investment is needed that could give a technological push and help to integrate Estonian locations of production at the top of global value-added chains. Structural change in favor of competitive Estonian products and services with a high content of technology and human capital would revive the catching-up of the Estonian per capita income and thereby foster the further development of social security in Estonia. Thus a level of social stability could be achieved that would ensure the people's support of the Estonian market system also in the long run.



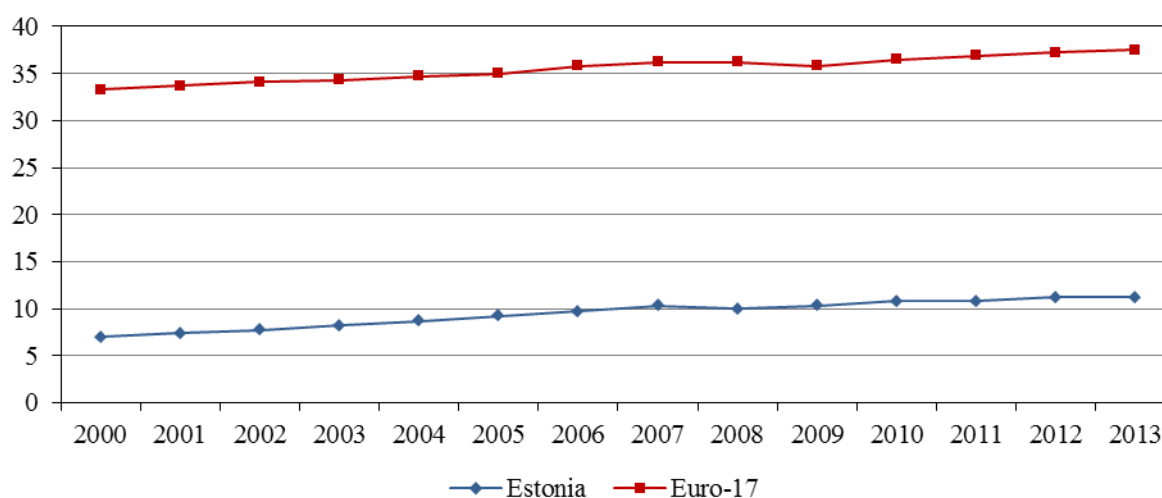
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## APPENDICES

### Appendix 1. Real Labour Productivity in Estonia and the Euro Area 2000–2013<sup>a</sup>



<sup>a</sup>Euro per hour worked; real labour productivity per hour worked defined as real output (deflated GDP measured in chain-linked volumes, reference year 2005) per unit of labour input (measured by the total number of hours worked).

Source: Eurostat (2014i); own compilation.

### Appendix 2. Sectoral Employment Structure in Estonia 2013<sup>a</sup>

	in 1 000	share in % <sup>b</sup>
<b>Total</b>	<b>619.3</b>	<b>100.0</b>
<b>Primary Sector</b>	<b>39.7</b>	<b>6.4</b>
Agriculture, forestry and fishing	26.2	4.2
Mining and quarrying	4.8	0.8
Electricity, gas, steam and air conditioning supply; Water supply; sewerage, waste management and remediation activities	8.7	1.4
<b>Secondary Sector</b>	<b>169.4</b>	<b>27.4</b>
Manufacturing	115.0	18.6
Construction	54.4	8.8
<b>Tertiary Sector</b>	<b>404.6</b>	<b>65.3</b>
Wholesale and retail trade; repair of motor vehicles and motorcycles	85.0	13.7
Transportation and storage	42.5	6.9
Accommodation and food service activities	23.7	3.8
Information and communication	19.9	3.2
Financial and insurance activities	10.3	1.7
Real estate activities	9.9	1.6
Professional, scientific and technical activities	29.3	4.7
Administrative and support service activities	25.1	4.1
Public administration and defence; compulsory social security	45.8	7.4
Education	51.1	8.3
Human health and social work activities	34.8	5.6
Arts, entertainment and recreation	16.6	2.7
Other service activities	10.6	1.7

<sup>a</sup>Employed persons from 15 to 64 years in the 2<sup>nd</sup> quarter 2013. — <sup>b</sup>Employed persons in % of total employment.

Source: Eurostat (2014k); own compilation and calculations.

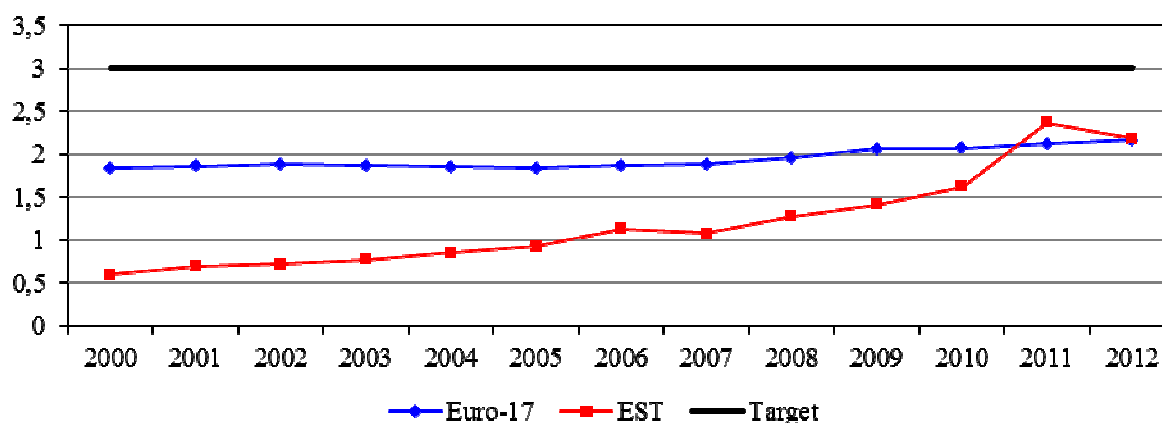
### Appendix 3. Assignment of Commodities According to Standard International Trade Classification (SITC) to Commodity Groups of Specific Factor Intensities<sup>a</sup>

Commodity groups	Commodity division no. according to SITC rev. 2
Raw-material-intensive products	0, 2 except 26, 3 except 35, 4, 56, 57
Labour-intensive products	26, 6 except 62, 67, 68, 8 except 87
Capital-intensive products	1, 35, 53, 55, 62, 67, 68, 793
Mobile Schumpeter-products	51, 52, 58, 59, 75, 76, 77
Immibile Schumpeter-products	54, 71, 72, 73, 74, 78, 791, 792, 87

<sup>a</sup>The assignment scheme originally is based on SITC rev. 2 and has been converted to SITC rev. 3.

Source: Klodt (1987), Heitger et al. (1992: 43 ff.); own compilation.

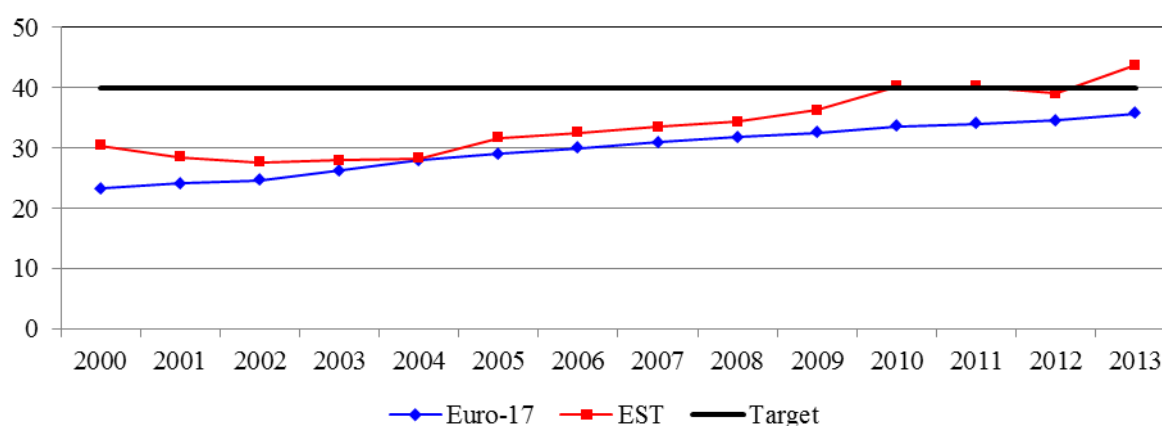
### Appendix 4. Europe 2020 Target: Expenditures on Research and Development in Estonia and the Euro Area 2000<sup>a</sup>



<sup>a</sup>Gross domestic expenditure on R&D (GERD) as percentage of GDP.

Source: Eurostat (2014l); own compilation.

### Appendix 5. Europe 2020 Target: Tertiary Educational Attainment in Estonia and the Euro Area 2000–2013<sup>a</sup>



<sup>a</sup>Share of the population aged 30–34 years who have successfully completed tertiary-level education.

Source: Eurostat (2014m), own compilation.

## Appendix 6. Estonia's Ranking in the Global Competitiveness Index 2013/2014 – Overview and Highlights –

Indicators	Ranking <sup>a</sup>	Indicators	Ranking <sup>a</sup>
<b>Overall</b>	<b>32</b>		
<b>Basic Requirements</b>	<b>23</b>	<b>Efficiency enhancers (cont.)</b>	
1. Institutions	27	7. Labour market efficiency	12
<i>Burden of government regulation</i>	11	<i>Flexibility of wage determination</i>	2
<i>Organized crime</i>	12	<i>Pay and productivity</i>	8
<i>Business Costs of terrorism</i>	13	<i>Hiring and firing practices</i>	19
<i>Judicial independence</i>	20	.....	
.....		<i>Country capacity to attract talent</i>	96
<i>Strength of investor protection</i>	57	<i>Country capacity to retain talent</i>	97
<i>Protection of minority shareholders' interests</i>	64	<b>8. Financial market development</b>	<b>35</b>
<b>2. Infrastructure</b>	<b>40</b>	<i>Venture capital availability</i>	30
<i>Quality of port infrastructure</i>	17	.....	
<i>Mobile telephone subscriptions/100 pop.</i>	17	<i>Financing through local equity market</i>	59
.....		<b>9. Technological readiness</b>	<b>29</b>
<i>Quality of electricity supply</i>	68	<i>Mobile broadband subscriptions</i>	12
<i>Quality of air transport infrastructure</i>	87	<i>Fixed broadband Internet subscriptions</i>	21
<b>3. Macroeconomic environment</b>	<b>22</b>	<i>Individuals using Internet</i>	25
<i>General government debt</i>	7	.....	
.....		<i>Int'l Internet bandwidth</i>	66
<i>Inflation</i>	78	<b>10. Market size</b>	<b>99</b>
<b>4. Health and primary education</b>	<b>29</b>	<i>Exports as a percentage of GDP</i>	9
<b>Efficiency enhancers</b>	<b>30</b>	.....	
<b>5. Higher education and training</b>	<b>23</b>	<i>Domestic market size index</i>	106
<i>Internet access in schools</i>	3	<b>Innovation and sophistication factors</b>	<b>35</b>
<i>Secondary education enrollment</i>	19	<b>11. Business sophistication</b>	<b>51</b>
<i>Quality of math and science education</i>	26	<i>Local supplier quality</i>	25
<i>Tertiary education enrollment</i>	30	.....	
.....		<i>State of cluster development</i>	80
<i>Quality of management schools</i>	54	<i>Value chain breadth</i>	86
<b>6. Goods market efficiency</b>	<b>30</b>	<b>12. Innovation</b>	<b>31</b>
<i>Trade tariffs</i>	4	<i>Quality of scientific research institutions</i>	25
<i>Imports as a percentage of GDP</i>	9	<i>PCT patents</i>	26
<i>Prevalence of foreign ownership</i>	10	<i>Capacity for innovation</i>	28
<i>Effect of taxation on incentives to invest</i>	13	.....	
.....		<i>Availability of scientists and engineers</i>	95
<i>Buyer sophistication</i>			
<i>Total tax rate, % profits</i>	136		

Source: World Economic Forum (2013: 180–181); own compilation.

## Kokkuvõte

### Struktuursed nõrkused Eesti sotsiaalse edenemise takistusena

Eestit tunnustatakse laialdaselt kui mudelnäidet edukast üleminekust sotsialistlikult majandussüsteemilt turumajandusele. Eestis on välja arendatud funktsioneeriv turumajandus, kuid ometi on Eestil raske rikkamatele eurotsooni riikidele majanduslikult ja sotsiaalselt järele jõuda. Sellest tulenevalt on sotsiaalkaitse Eestis üsna nõrk. Sissetulekute ja sotsiaalkaitse olukorra parandamiseks on vaja ületada Eesti majanduse struktuursed nõrkused, mis peegelduvad madalas tootlikkuse tasemes. Eestile on poliitiliseks väljakutseks vajalikke struktuurseid muutusi toetava ärikeskkonna loomine.

Käesoleva artikli eesmärgiks on näidata, et EL standarditele vastava funktsioneeriva turumajandussüsteemi loomine on vajalik, aga mitte piisav tingimus rikastele riikidele pikas perspektiivis majanduslikuks ja sotsiaalseks järelejõudmiseks. Küsimus seisneb selles, millised sotsiaal-majandusliku arengu takistused Eestis esinevad ja millise poliitikaga saab neid ületada.

Artiklis tuuakse esile, et kahe aastakümne jooksul toimunud Eesti üleminek funktsioneerivale turumajandusele on kahtlemata teetähiseks mitte ainult siirderiikidele, vaid mudeliks ka kriisi sattunud eurotsooni riikidele fiskaalse stabiilsuse taastamiseks. Samal ajal on problemaatiline Eesti võimekus saavutada majanduslikult eurotsooni riikide keskmine tase. Sissetulekute tasemelt on Eesti eurotsooni viimaste hulgas. Sellest tulenevalt suudab Eesti sotsiaalkaitse valdkonnas pakkuda ainult minimaalsel tasemel kaitset tööpuudusest, vanadusest ja terviseprobleemidest tingitud vaesuse ärahoidmiseks.

Eesti majanduse Achilleuse kannaks on tehnoloogiline mahajäämus juhtivatest tööstusriikidest. Tootmine enamikus kaupu ja teenuseid pakkuvates Eesti majandusharudes toimub endiselt suhteliselt madalal tehnoloogilisel ja humaankapitali tasemel, millest omakorda on tingitud üsna madal tootlikkuse tase. Madal tootlikkuse tase õigustab palkade madalat taset. Majanduse struktuuri oluliselt parandamata ootavad Eestit ees üha tõsisemad probleemid, kuna standardiseeritud toodete ja teenuste turgudel intensiivistub pidevalt arengumaadest lähtuv konkurentsivõime.

Pikas perspektiivis ei ole Eestile kriisi ületamisel edu toonud sisemine devalveerimine Eesti majanduse konkurentsivõime tõstmiseks sobiv poliitinstrument. Samas tähendab kuulumine euro kui tugeva vääringu tsooni, et Eesti peab olema valmis rikastele riikidele järelejõudmiseks vajalikuks sisemiseks hinnatõusuks. Eurotsooni kuulumine nõuab Eestis juhtivate tööstusriikide nagu Saksamaa tasemele lähenevate konkurentsivõimeliste majandusstruktuuride väljaarendamist. Eesti majanduspoliitika peab kujundama selliseid struktuurseid muutusi toetava ärikeskkonna. Eesti on liiga väike riik, et loota koduturule ja riigis endas loodavatele tehnoloogiatele – Eesti vajab oma majanduse globaalset integratsiooni.

Õnneks on Eesti majanduspoliitikas asjakohased seaded selgelt nähtavad seoses EL poolt 2020. aastaks seatud liikmesriikide konkurentsivõime suurendamise eesmärgi saavutamiseks tehtavate ettevalmistustega. Eesti soorituse hinnangud Maailmapanga “Doing Business” ja Maailma majandusfoorumi “Global Competitiveness Index” alusel on lootustandvad. Eriti vajalikud on välismaised otseinvesteeringud, mis annaksid Eesti majandusele tehnoloogilise tõuke ja viiksid selle globaalsetes väärtusloome ahelates tippu. Ainult kõrgel tehnoloogilisel ja humaankapitali tasemel kaubad ja teenused võimaldavad läheneda EL keskmisele tasemele

SKP loomises inimese kohta ja tõsta palkade ja sotsiaalse kaitse taset. Mõlemad on vajalikud, et inimesed pikas perspektiivis toetaksid Eesti turumajanduslikku arengut.