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The Crisis and Policy Responses  
in the Labour Market in Central and Eastern Europe  
Country Report: Estonia

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# 1. The economic context before the crisis

Estonia is not just a small, open economy. It is something more than one of three “Baltic Tigers”, the name given to all three Baltic countries (Estonia, Latvia, Lithuania) by the end of the 1990s given their astonishing economic performance. But Estonia stood above its partners. The highest GDP growth rate of all the EU is an astonishing record for a country that was, according to the Western international community, occupied by the USSR.

The story behind these growth levels starts with a 1000% inflation rate. This is how Estonia was by 1991, on its first year of independence. That year the GDP flew down a 14.6% (Figure 1). Given such figures, as well as a poverty level and an unemployment rate impossible to measure, Estonia decided in 1992 taking the path of reform and stabilization. Between 1992 and 1995 the country created a new currency and pegged it to the Deutsche Mark through a currency board, achieving a reasonable macroeconomic stability in four years (Figure 4). At the same time, private property institutions were created, and public assets were quickly privatized. A flat-rate tax system was imposed in hope of generating a friendly environment for business to flourish, which actually happened. And all the efforts of the economy were directed to achieve a structural change. Nothing tells this story better than Figure 21: up to 1995-96 fostering service sector (particularly through small business) and reducing the share of agriculture were the key tendencies. Industry also saw its portion decreased but this tendency hides an internal transformation towards new goods. The increase of transport and logistics shows how the new industry and the whole country was willing to open to the exterior.

These only were the foundlings for growth. From 1994 to 2007 Estonia performed on the highest possible level. Once the bases were put, FDI (Figure 7) and fixed capital formation (Figure 3) began to come at quite high rates. “Estonia received more foreign investment per capita in the second half of the 1990s than any other country in Central and Eastern Europe.” (Laar 2007). At the same time, it was possible to continue with more serious privatization and liberalization, leaving fall the role of the government expenditure from 25% (1995) to 16.2% (2006) of GDP (Figure 6). This reduction was hand in hand with one of the lowest levels of public debt in the world *with a negative tendency* (Figure 10) and a budget surplus (Figure 11). The public sector was definitely getting its hands off the economy.

As shown by Figure 29, growth relied on capital factors as much as on private consumption. This is consistent with the levels of FDI and gross capital formation. However, the ‘residual’ is the main factor. Estonia had very significant gains to make from a very low position in technological and productivity levels, and transformation took place through gross capital formation as well as increase in education levels. However, this reliance on investment (particularly from abroad) conveyed a cost: the increase of external debt from 23% to 86.7% of GDP between 2001 and 2007 (Figure 9). In parallel, the current account balance maintained negative values until 2008 without exception. Fluctuation reflected a low point of the German Mark (1999-2001), but the effort for making exports grow was uneven and erratic, as it can be seen in Figure 13. Figure 12 shows that before 2008 the only significant change in the export basket was the increase of minerals, due to the exploitation of oil shale. The Estonian reserves of this fossil fuel provides around a 90% of the energy consumed by the country, which leaves Estonia in a dominant position in front of the usual provider of energy to Eastern countries, Russia. It was precisely from Russia that Estonia wanted to cut trade relations after the USSR collapse. Before 1992, Moscow bought around 92% of Estonian exports. Table 1 show how, in 2004, the main importers were Sweden, Finland, Germany and Latvia. But this was not enough diversification for Estonia, who pushed until 2008 for an even more varied export portfolio. Still, as it has been pointed out, the overall position of the trade account did not change structurally speaking.

Hence, in the side of demand, was the source of growth was shared between exports and domestic consumption? But Figure 8 shows a drop in household consumption as a percentage of GDP. Reality is: the volume actually increased in absolute terms. The relative decrease is due to the difficulties of trying to mix external-led and internal-led growth strategies. To understand this better, Figure 29 shows the sources for GDP growth in the expenditure side. The contribution of exports is erratic and, as the trade balance is negative, goes against the cycle. Both private consumption and gross capital formation keep performing as the main sources of growth in a parallel manner. This points out that, at least before 2008, Estonia may have been following ‘on paper’ an export-led strategy, but the roots of growth were at home.

In any case, the labour market got the benefits from growth particularly after the short 1999 recession. Since 2000 and until 2007, unemployment heavily fell: from 13.8% to 4.8% (Figure 15), putting Estonia at the best levels of EU27. Labour participation rate accompanied (Figure 16). And, from 2002, the performance of youth unemployment (below 25) was also quite positive, reaching a minimum of 10% in 2007 (Figure 19), well below the EU27 average. The gap between male and female unemployment also tended to stretch (Figure 22).

As it has been shown, TFP was the key factor in the supply side to explain growth. Taking a closer look to productivity shows the good performance of this variable in the 2000s. Figure 25 highlights how, if normalized by 100 for each country, Estonia have done very significant improvements on productivity. Figure 26 demonstrates its growth well above EU27 average, year by year, until 2007. Putting the entire picture together, more productivity, more education, more investment, high growth pointing to high expectations and a low starting point allowed real wages to spike. Figure 20 shows the evolution: both in gross and net terms, monthly wages doubled in six years. This was “the engine of the engine”, or the factor that allowed private consumption to foster growth hand in hand with domestic capital formation. Exports, in the meantime, kept themselves on a limb.

There are two ideas to understand why this may be a problem. First, the situation of Estonia in terms of productivity among its European fellows is somehow in the middle of two worlds. As shown in Figure 24, Estonia has been improving but it is still quite far from the EU27 average. It’s even far from Slovenia and below Slovakia. In Slovakia, real wages account for only a 55% of Estonia’s value. It may be interpreted that catching up in productivity has not been enough to beat potential competitors and to “allow themselves” to have such high salaries. And this was and is actually one of the main components of the current crisis.

Second, and intimately related to this, the jump in labour costs between 2004 and 2007 in every sector has definitely harmed Estonia’s capacity to export (Figure 13) as well as to compete domestically. Estonia remains economically, then, between the two same worlds that dominate its culture: the Nordic and the Eastern.

As a result of the wage rise, the strong profit growth that characterized Estonia during the 1995-2006 decade halted. During these eleven years GDP grew by 4.75 while the wage base increased by 4.1 times and profits by 5.72 times. In 1995, the profit-to-GDP ratio stood at 35.1%, whereas by the end of 2006 it had risen by 8 percentage points to 43.1% (Eesti Pank 2009, 15). But from 2006 “favorable loan conditions fostered growth in loan stock, which in turn increased demand for products and labour force. Labour supply became limited due to the gradual implementation of the free movement of labour force within the European Union. As a result, wage growth accelerated significantly, exceeding productivity growth. As wage fund growth was stronger than total productivity growth, by the end of

2008 the share of profit in end prices had decreased to the level of 1996 and raised concerns about the future competitiveness of Estonian companies.” (Eesti Pank 2009, 15). Figure 27 is the perfect summary of this story: productivity measured either per employee or per hour worked increased at a stable level until unit labour costs passed the “0%” line and plummeted in 2008.

Figure 21 also gives a hint on the next problem faced by Estonia’s economy right before the crisis: a housing bubble. Labour costs in construction were not the highest on the 2007’s peak by chance. Figure 14 draws the picture of a housing bubble reaching its maximum level at that same year. This bubble was fostered by the growth in wages, which allowed further debt increase from households. The effect was reflected in the volume of external debt (Figure 9), which practically doubled between 2006 and 2008 (when many of the underwritten liabilities could not be fully covered). Figure 2 also shows the peak of the bubble as a share of GDP. But it is even clearer in terms of employment by sector (Figure 21). Actually, this bubble explains a good share of the job destruction after 2008.

A housing bubble has sometimes a perverse effect in the job-skill match: it gives incentives to many young people to quit their studies and become a construction worker for a very good salary. Once the bubble bursts, these jobs are lost and the acquired skills are not useful any more. This happened in Estonia, but it only added a small element to a more general problem of mismatch. Estonia’s population educated themselves based on high per capita growth expectations, as if their economy were quickly catching up with Western Europe. The problem is that this catch-up has revealed itself as limited by salaries and labour costs’ increase. This leaves, again, Estonia between two different worlds, with a highly prepared population facing an internal devaluation, as it will be shown in the following chapters in detail. Added to this, a quick look at the long-term unemployment figures (Figure 17) shows how most of unemployed Estonians have been in that situation for more than a year. This is the other side of the skill mismatch: those who could not adapt to the new economy in the 1990s remained unoccupied. Figure 18 gives a clearer image of this as it shows how the young long-term unemployment decreases while the 50-74 strand increments its relative share.

The skill mismatch in Estonia is highlighted by an unusually high correlation between the probability of finding a job and the education level. For example, the gap between the probability of finding a job general secondary education and vocational/specific secondary education is huge: 0.62 vs. 0.39 (OECD 2012, 70). And it is in favor of those with general education. The vocational/technical education system is not responding to the market. Also, people with vocational education suffered more during the crisis whereas they have more strongly benefited from the recovery, indicating a pro-cyclical dynamic (OECD 2012, 70). In salary terms, vocational graduates are quickly catching up to their competitors. This gives a clue or where the mismatch lies: in the need for specialized technicians vis-à-vis other positions in the market.

Before moving forward, a brief demographic sketch of Estonia is useful to understand the broader population frame on which recent, present and future moves on the labour market may happen. Starting by the broad tendencies, between 2000 and 2007 the dependency ratio decreased (49.5% to 47%). In these years activity rate rose by 3.7%, and half of this growth was due to positive changes in age structure (Eesti Pank 2010b, 9). The increase in retirement age also had an influence on this.

Maybe a negative change in tendency may take place. After the incorporation of the “Singing Revolution generation” to the labour market is complete, dependency ratio is likely to increase. However, it will take at least half a decade until this process consolidates due to the fact that the new young people spend more time in the education system. Figure 26 gives an idea of what may happen

after. For the last two decades the youth (0-14) have been going down sharply while the oldest portion of Estonian society (65+) is growing its share. The inflow of population between 15-24 offset a possible drop in the labour force, but this inflow changed its tendency to negative by 2006. However, there seems to be an stabilization in the 0-14 string. If the slight increase keeps up, the possibility of a highly dependent society may be discarded. In any case, according to some authors an intergenerational unbalance is actually taking place. On this direction, Medijainen (2010) assesses that “to achieve intergenerational balance, an imminent and sustained tax rise to increase tax revenue by 9% should be enforced. Alternatively, the indexing of pensions could be made less generous or government net collective expenditures should be cut by approximately 23%.” (Medijainen 2010: 1). But, again, this problem does not seem urgent given the latter tendency stabilization.

Actually, the most relevant problem from the demographic side does not come from long-term tendencies, nor from emigration due to recent EU membership, as there is no significant sign of a brain drain. Moreover, the share of university-educated people has decreased among emigrants during the 2000s (Anniste et al 2012). The main population challenge lies in an ethnical division. During the USSR occupation Estonia received many Russian immigrants. These did not really integrate into Estonian society, keeping two separate spheres of interaction. This problem reproduces itself nowadays: “The relationship between the two main ethnic groups is commonly considered to be “normal”. There is no explicit inter-ethnic violence and open discrimination, although media channels may present quite different viewpoints depending on the language. In everyday life the ethnic groups are largely living on their own with a limited number inter-ethnic contact. Below the surface anti-Russian sentiments are still quite common among the Estonian-speaking population.” (Leping et al 2007, 9) This has important consequences for the labour market: in the 1990s and the 2000s there was a “rise of a substantial wage gap for males in favour of the Estonian-speaking population” (Leping et al 2007, 3) The gap is around 20%, and it persists even when controlling per education level, occupation, sector or language skills. As the 24.8% of the population is from Russian origin, this divide has a very substantial effect in employee’s income distribution. Moreover, “the income and employment opportunities of ethnic non-Estonians seem to be strongly determined by their command of the Estonian language and language competence is also crucial for obtaining Estonian citizenship” (OECD 2009, 16).

As a conclusion for this section, the main problems faced by the Estonian economy before the crisis where those related with an increase of labour costs and the subsequent halt in productivity that made Estonian products not only less competitive in terms of potential export but also to fight imports domestically, leading to the consequent (apparent) impossibility of turning the trade balance upside down, and summing a certain skill mismatch. Also, the ethnic divide between Russians and Estonians may be affecting the otherwise dynamic labour market. And finally, a housing bubble fueled by the increase in real salaries, the strong expectations and accessible credit left Estonian external debt at very significant level. But, all in all, the strengths of the country were able to offset the problems and left Estonia on a relatively position to confront the 2008 credit crunch.

## **2. The Political Context**

Estonian history in the second half of the 20<sup>th</sup> Century is marked by the fact that the country was occupied by the USSR until 1992. By then Estonia regained its full independence. It had no unemployment, but was full of poverty and hyperinflation. This extremely grave situation plus the existing political tradition in the country gave the first government to a centre-right coalition with a strong focus on liberal, orthodox economic policy. Prime Minister Mart Laar conducted in three years a

large and deep number of reforms that shaped the political economy landscape of the country until nowadays. The keys to track Estonian policy are:

- Macroeconomic stability as a major goal.
- A marked profile in favor of liberalization in all the aspects of economic and political life: labour market, business creation and competition, public debate, etc. Estonia is always in the Top 20 of any ranking of economic freedom. For the World Bank “Ease of Doing Business”, Estonia was the number 17 in 2007. It ranked 12 in the Index of Economic Freedom of HF and 14 for FI, and was the 27<sup>th</sup> most competitive country in the world for the WEF. Its institutional environment is focused on
- Implied in the former, a high level of dynamism and adaptation is required from both the private entities and the public realm under new circumstances.
- A strict control of public spending.
- A “Nordic” aspiration for growth and welfare.

It is around these axes that the public debate in Estonia organizes itself. Hence, the dominating parties fall in the centre-right side of the ideological spectrum. The pivotal actor is the Reform Party, who has been in most coalition governments in either one form or another since 1995. And since 2005 its leader Andrus Ansip holds the office of the Prime Minister. The free market-oriented character of the party has continued with the tradition initiated by Mart Laar. He now leads (although being recovering from a recent stroke) the Union of Pro Patria and Res Publica, a conservative party that forms coalition with the RP. The Centre Party is the third party in relevance. Centrist, social-liberal and slightly populist, it has been accused to keep links with Vladimir Putin and Russia. It has in fact a wide base of Russian voters in Estonia. In economic policy it tends to defend positions that are relatively at the left of the two other parties, but in European terms it’s not a leftist party at all. Actually, to find something close to a “Nordic social-democratic party” it has to be taken into account the SD, fourth in votes but rising in 2007 and 2011. And even in this case its approach is more third-way-like.

Given this party structure and a parliamentary democracy with a high threshold to get into the Parliament (5%) and a system that tends to leave only four to five parties inside the National Council, there “politics of coalition” are very common. This locks-in some policies, making them a constant in Estonian economic policy:

1. Balanced budget is a legal requirement. In theory, the Executive branch cannot submit an unbalanced budget to the Parliament.
2. Monetary policy is conservative. Or better said, it was before Estonia adopted the Euro in 2011. But it is important to remark it, as it helps to explain why internal devaluation is often considered as a valid strategy in the country.
3. Fiscal policy is based on a flat tax of 24% (with a tax exemption for the poorest part of the society, of course).
4. Employment protection and unemployment benefits are relatively low, but not *very* low: its protection level is above the “Baltic average” (Table 5), but below European levels.

For what it refers to the latter point, it is important to note the relatively low presence of trade unions in Estonian political life. Former Prime Minister Laar asserts that “During 1992 and 1993, the government supported the transformation of the Soviet-type trade unions into free trade unions. This created a dialogue between the government and the trade unions that averted larger protests and

demonstrations, particularly during the first painful period of reform.” (Heritage 2010). This spirit of dialogue hides in fact a low bargaining power of the Unions. Only a 10% of employees belonged in 2009 to a trade union, according to the Estonian Work Life Survey. This percentage is highly diverse among sectors, as it happens in most countries (36% for transportation, 31% for healthcare, 23% for education at the top). Only 6% of the companies above five employees have trade union presence. The number increases to 48% when considering big firms (more than 250 employees). Only one third of employees are covered by a collective agreement, and moreover: only 11% of all of them actually include a wage agreement. The increase in wages was not a product of trade union bargaining, but of mere growth and productivity.

Overall, Estonia could actually be labeled as a “liberal” country, as many observers and analysts do. However, an important part of its political aspiration relates to welfare, and the need of a certain degree of equality is not out of Estonian political attitude. A quick look at Figure 8 shows that the country has managed to reduce inequality below EU27 levels even with a free market-oriented policymaking.

When the crisis kicked in, the economic debate was focused on issues related to slightly slower growth and labour cost increase, as well as possible pernicious effects of the housing bubble what was already easing by 2008. But the size and depth of the crisis caught Estonia by surprise.

### **3. The crisis**

Between the second half of 2008 and the beginning of 2010, around 107,000 Estonians lost their jobs (Eetsi Pank 2012, 7). This indeed took the country by surprise. The words used by the Estonian Central Bank in its quarterly survey of the labour market are quite revealing. By the end of 2008 it was asserted “Estonia has little experience with cyclical economic behaviour” (Eesti Pank 2008b, 2). And it came as a such surprise because, despite the slowing patterns described in the last section, unemployment was at an historical minimum rate of 4% in the first half of 2008. Only 27,300 people lacked a job. Still, some signals could be already appreciated, but they were very mild (for instance, the number of people losing their job increased by 3pp between June 2007 and June 2008). But, as it happened all around the world, nobody expected a full collapse of the financial system.

The shock implied a loss of GDP in 2009 equivalent to that after the fall of communism: 14.1% (Figure 1). Construction sector took the hardest part, falling from 9.8% to 8.2% as a share of GDP in only a year. It should be noted that the tendency was already negative (a fall of 1.1pp between 2007 and 2008). On the other side, the decrease of gross fixed capital formation was very significant: from 30.3% to 21.4% (Figure 7).

Looking at the trade balance it may seem like the good performance of exports helped to offset the recession: Figure 13 shows how, for the first time, the balance changes its values to positive. At the same time, the share of exports over GDP increases. But in fact this move has much more to do with the decrease of imports, which dropped from 10.000M to 7.500M between 2008 and 2009. The most significant part of this gap refers to products that were not consumed any more as a result of recession, but arguably another portion was a loss of external products against more competitive (again) domestically produced goods.

In the domestic side, more tightly loan standards, falling real estate prices and a turnaround of consumer confidence ended the expansion of domestic demand (OECD, 2009). The bubble busted, as Figure 14 shows. A survey taken in the middle of 2009 by the market research company TNS Emor showed this loss of expectations as well as the velocity of the adjustment: by then, already 35% of Estonian companies had downsized their personnel costs, and another 35% expected to do so in the future (Eesti Pank 2009a). According to the same source, half of the employees were willing to accept cuts in wages or working hours.

But arguably the most important factor driving down internal demand was the wage adjustment that started in 2008. After the explained spike in labour costs, real wages declined in 2009 and only reached 2008 values four years later (Figure 20). The subsequent improvement in productivity took place between 2008 and 2010 (Figure 25), the latter year having one of the highest gains in productivity of the last decade (Figure 26). Consequently, labour costs decreased (Figure 27).

A significant part of this adjustment was possible thanks to the fact that profit-linked or productivity-linked bonuses convey a significant part of Estonian wages. According to a survey of the Estonian Central, in 2008 around 66% of manufacturing, construction, service and trade companies paid various bonuses. The share of these in absolute wages ranged from 14% in manufacturing to 23% in trade (Eesti Pank 2009b, 20).

Estonia arrived to 2010 having done a deep adjustment, with high unemployment but good growth perspectives. Unlike in other countries, for Estonia the second part of the European crisis is not a story of public debt and financial turmoil, but of wages, productivity and uneven recovery.

2010 saw a GDP growth rate of 3.3%, still not equivalent to pre-crisis levels. An important source of this spike was the mere change in inventories (Figure 28) for manufacturing companies, which shows that 2010 was actually a resume of the adjustment started the former year. Private consumption and investment were still not able to pull the economy. But in 2011 Estonia was back to pre-crisis levels of real output growth. Of course, it should be taken into account that the low level of absolute GDP favored this performance. Still, the Estonian improvement was superior to almost any European country. Now gross fixed capital formation provided an engine for a growth path. Also exports played a role between 2010 and 2011, although a diminishing one. It should be noted that Ericsson is one of the most important players in the manufacturing sector in Estonia. As the company was performing very well in these years, both industrial production and exports reflected an improvement.

In the labour side, unemployment rates took some time to recover. As the Central Bank warned, “the economic recovery will initially lead only to an increase in the number of working hours per employee, but not to a rise in the number employed. When resources are under-utilized it is easier to achieve output growth through productivity rises, calculated both per hour worked and per person employed.” (Eesti Pank 2010b, 2). And this is exactly what happened. In 2010 unemployment rates were beating records (Figure 15), but in the latter part of the year the drop began. It came the moment in which production growth had to pick up on new employees to keep it up. Hence, labour force participation rates went up again by 2010-2011.

Another relevant factor is the entrance in the Euro area by the 1<sup>st</sup> of January 2011. However, the effect of this formal change was rather small compared to other countries, as Estonian kroon was pegged to the Euro since the common currency was born. Hence, the effects of coming into the Eurozone were

more related to reducing transaction costs and at the same time building a deeper link between the future of Estonia and the rest of the Euro area. But the Central Bank had conducted a strongly independent, inflation-focused work since its foundation. Hence, the ECB policy represented more a continuation than a halt or a change for Estonian macroeconomic position.

Unfortunately, the path of recovery did not consolidate in 2012 to the same extent. However, a 3.3% growth in an environment of world uncertainty is quite remarkable for a small open economy. This slowdown cannot be directly related to the financial situation of Estonia, neither in the public nor in the private side. Regarding the former, Estonia public debt, although increased, is still at very low levels and shows a sustainable path (Figure 10) thanks to the commitment to balanced budget that every Estonian government has had (Figure 11). In the private side, while it is true that Estonian private sectors embarked in a quite heavy leveraging process in the boom years, the deleveraging process is solid (Figure 9). Moreover, the high capitalization of the Estonian banking sector and the continuously improving funding base provide a strong ground for financing both companies and households (Eesti Pank 2011a, 16).

Hence, the lower growth rate in 2012 reflects a combination of structural problems with a very important labour component, as well as the deterioration of European and worldwide economic situation. But let's focus on the endogenous component, as it is more relevant for the scope of the present paper.

There are three key dimensions to understand the new (but in part inherited from the past) challenges faced by the labour market in Estonia: (1) the structural change in terms of relevant sectors for the economy; (2) the subsequent distribution of the costs provoked by this change; (3) the maintaining skill mismatch.

The path of contained labour costs (this is, wages) was somehow back in the pre-crisis track. Real labour cost growth exceeded productivity growth in both the fourth quarter of 2011 and the first quarter of 2012, resulting in a rise in real unit labour costs (Eesti Pank 2012b). However, the Central Bank also notes: "these developments are common in periods of slowing economic growth and will last until companies bring their labour cost growth in line with the weaker demand (...) the wage-productivity gap that emerged at the peak of the last economic cycle narrowed considerably in 2010–2011. In 2013–2014, real unit labour costs are expected to remain close to 2012 levels, meaning that the wage and productivity gap will not shrink any further" (Eesti Pank 2012b, 25). This may be more a desideratum than a solid premonition. Estonia remains trapped in the no-mans' land where it was at the beginning of the crisis. It is true that the structural change that took place during the last four years has in fact brought the economy back from the housing bubble:

- Construction sector lost 41% of its employment (OECD 2012)
- Conversely, employment grew in the field of computers, electronic and optical equipment. However, as this field of activity is not labour intensive, its contribution to employment growth was much smaller than to that of industrial production (Eesti Pank 2012a, 7).

But this means that the Estonian economy has deviated resources from domestic demand-based sectors to unemployment, and new labour capital has been directed to new sectors. The wage adjustment was and is necessary if there are no significant gains in productivity due to human capital factors. But

Estonian capacity to compete externally and domestically remains doubtful as the labour market is not able to provide at the same time cost-based and education-based gains in productivity.

Skill mismatch remains important in Estonia. Mobility from job-to-job has been low during the crisis (Masso and Krillo 2011). This is: the flows have been from one sector to out of the economy and from the incoming labour force to the new sectors. This is why the Central Bank assessed by the end of the last year that “unemployment is shrinking but it is becoming more and more structural. In other words, the qualifications and location of the unemployed do not match the needs of the labour market, as is also shown by the high rates of long-term employment and the large share of long-term unemployed in the total.” (Eesti Pank 2012b, 16)

As a consequence of this, the distribution of unemployment costs was sharply uneven and led to what may be considered now as a new path of structural unemployment. The dynamics of long-term unemployment do point in this direction. Initially, the share of long-term unemployment went down as an effect of more new unemployed people. But as Figure 17 shows, this dynamic sharply reversed in 2010 and currently about half of unemployed people have been in that situation for more than a year, keeping the pre-crisis levels. Conversely, Figure 18 shows a relevant change in the composition of long-term unemployed people: while the mid-aged workers (25-49) were decreasing its share, since 2008 this tendency is reversed. These are the dismissed employees from the construction and the low-productive, domestic-based manufacture sectors. And one of the most worrying collectives in the whole Estonian labour force: there is a quite significant difference between having half of your unemployed population being without a job for more than a year if the unemployment rate is 5% or if it is 10%, as it happens currently in Estonia.

Moreover, as the OECD assesses, “the adjustment of the labour market during the crisis fell disproportionately on the youth, the low educated and ethnic non-Estonian, all groups that had benefited from strong employment growth in the construction sector during the period 2000-07.” (OECD 2012). While youth unemployment re-adjusted with the 2011 expansion and arguably it has never been high compared to European standards, the non-Estonian collective finds itself in a much worse situation. According to the Estonian Central Bank, 42% of the long-term unemployed did not speak Estonian at all (Eesti Pank 2012a, 11). The ethnic divide that hampers a better performance of Estonian labour market prevails and may well be increased due to the boom-bust dynamic.

These structural problems have distributional consequences. The share of population living below the absolute poverty line, i.e. with expenditures below the subsistence minimum increased from 6.5% in 2007 to 11.7% in 2010, and among children it increased from 9.4% to 18.1%. (OECD 2012). The population under risk of poverty is significantly located among the unemployed, as show by Table 2.

## 4. Policy Responses

The policy response to the crisis in Estonia has had much of path dependency. There are no visible critical junctures or significant turnarounds in the policy path, probably helped by two facts: (1) the crisis did not bring radically new challenges to the country but more deepened in current problems, as it has been shown regarding the labour market; (2) the party in power has been the same since 2005. Moreover, the policy differences between the main Estonian parties are rather low even to European standards. All this produces a political response that goes in

line with a consistent move towards liberalisation and fiscal consolidation, although some interesting changes towards a deeper welfare state have been put in the table by the government. A field-by-field review of the most relevant reforms proceeds.

### *Fiscal policy*

Unlike the rest of Europe, Estonia was already into austerity when the crisis kicked in. A continuously balanced budget and a despicable level of public debt are the main features of Estonian fiscal behaviour. However, in 2011 additional austerity measures reached an astonishing 9% of the GDP distributed in several years. The current crisis has then reinforced the fiscal consolidation path followed by the country. There is a Budget Strategy in place that determines the main guidelines for the fiscal policy in 2013-2016. The commitment of this document with medium and long-term balance is out of any doubt. Cuts in teachers' and doctors' salaries, as well as other public servants and the overall current expenditure of ministries and their policy fields have been commonplace in Estonia.

Also tax rises were introduced. The flat rate tax was supposed to be lowered to 18%, but this was a pre-crisis plan. In 2009 social security contribution was raised from 35% to 39.2% for the employer, and from 2% to 4.8% for the employee. (Eesti Pank 2010b, 21). However, the plan is to cap social insurance contributions in 2014 to EUR 4.000 per month in order to improve wage competitiveness and in line with some external recommendations (OECD), which consider that although the ratio of taxes to GDP in Estonia is much lower than the EU average, it is more inclined towards labour taxes than the average is (OECD 2012). Also, the authorities are drafting the possibility of lower the flat rate tax to 20% by 2015. This is: the tax increases, particularly those related to labour, were temporary and deemed to disappear and to be substituted by tax cuts in the coming years.

Indirect taxes, particularly excise taxes on tobacco and alcohol, were also increased as a collecting mechanism.

One important component of Estonian fiscal policy is environmental taxes and emission quotas over contamination. These quotas are an important revenue source for the government, and according to the Central Bank a significant portion of 2012 and 2013 expenditure came from these.

Another external source for Estonian public finances during the crisis years have been European structural funds. Since 2007 the country was supposed to receive EUR 4.500M. in five years. This agreement was prior to the crisis, and it only was a happy coincidence for Estonia that dates matched with the financial crash. This capital supposed an important injection in a country whose nominal GDP is around EUR 27.000M, and it has been used to finance new investments falling in the capital account and not in the current account, preventing future deficits generated by a fictitious dependence on these transfers.

Finally, an independent fiscal council is expected to come into action during the current year. This council will function as an external agency mainly controlling the relation between the

economic cycle and the fiscal actions, aiming to a less pro-cyclical dynamic as recommended by the OECD.

### *Labour market*

The labour market is the field that has witnessed more changes since the beginning of the crisis. The measures taken may be divided in two groups: a wide package has been devoted to improve the level of protection of employees as a way to fight against unemployment. But an even wider group of reforms are dedicated to introduce higher flexibility in the market. The combination gives something similar to the ‘flexicurity’ paradigm advocated by the European Commission, the OECD and many other international organizations.

In the protective side, most of the measures (but not all of them) were short-term solutions:

- Unemployment duration criterion was lowered from six to three months for young people and from twelve to six for the rest of the population in 2010. But in 2011 the previous levels were restored.
- During 2009 wage subsidies were introduced in order to ‘save jobs’ from what was considered as a momentary drop in demand. This policy accounted for 0.24% of Estonian GDP in 2010, coming from previous levels of 0.05%. In 2011 these subsidies were scaled back.
- In 2009 the parties came to an agreement for increasing the size and reach of unemployment benefits, which are currently among the least effective in OECD countries. However, this increase was suspended due to the fiscal situation and is supposed to enter into effect during this year (2013). The 2013 budget contemplates an increase of the monthly unemployment benefit from 65 EUR to half of the minimum wage (145 EUR).
- Regarding fixed term contracts, the importance of these in the Estonian labour market is rather low compared to other European countries. And the new changes made them even less useful as they only serve to cover very specific situations. This marks a path towards less contractual options and a more unified scheme for employment protection.
- Finally, it should be noted that in Estonia internship programmes are a very effective entry to the labour market. Between 40% and 50% of their participants do get a job after the period. Based on this, training grants and transport compensation have been increased since the third quarter of 2009 from EUR 959 up to EUR 2 500 per contract (OECD, 2012).

However, ALMP only account for 3.3% of the Estonian GDP, quite a low level when compared to other developed countries (OECD 2012).

On the flexibility front, different changes aimed to build a more efficient labour market, with capping the nascent grow of NAIRU as a main goal:

- One of the first measures was to allow the reduction in the number of working hours, which made easier to find alternatives to dismissal for companies.
- A severe modification in available types of contracts introduced flexibility in the system, simplifying layoff process.
- Moreover, the Act reduced the notice period and the amount of severance payments all across the board. The maximum severance pay (employees with 10+ years of tenure) was cut from fourth months to three months. And more importantly: the responsibility for the severance payment is now a shared burden between the employer and the Unemployment Insurance Fund. More specifically, the unemployment insurance premium will drop from 2.8% to 2% for employees and from 1.4% to 1% for employers. This is in line with the already mentioned intention of making Estonian tax system less labour-focused; a fiscal devaluation strategy intended to achieve higher competitiveness.
- Finally, stronger requirements for unemployed people to receive benefits in terms of active search were introduced. The main requirements are to comply with an individual action plan for finding a job agreed between the person and the public employment service in the first month; to follow this same plan keeping constant contact with the UIF, accepting suitable offers and engaging into independent employment search.

Complementary to all these measures, a deep reform in the public employment service has been conducted. The two existing organisms (Labour Market Board and Unemployment Insurance Fund) were merged between 2009 and 2011. The goal was “to consolidate the management of benefits and the provision of employment services to improve the effectiveness of public employment services, increase the resources, and share responsibility with social partners” (OECD 2012, 59). Also, the collective bargaining actors have been inserted into this new board, as the supervisory body has members from the three main actors (trade unions, employers and the government). The interconnection between unemployment insurance and active labour market policies has deepened now. For example, it is possible to use insurance premiums to finance employment services (OECD 2012, 59). Also, a “temporary Employment Programme” finances additional labour market services and benefits according to current labour market needs (OECD 2012, 59). Finally, in the line of electronic public administration pursued by Estonian State in all fronts, the whole job-searching and additional tools are being put online.

As a general evaluation, it is more or less safe to affirm that Estonia is moving towards flexicurity, although the flexibility component seems to prevail over the security one as the welfare state is not fully developed in the country.

### *Social security*

Changes in social security regarding taxes and employment have been included in the last two sections, and may be summarized in a sentence: an initial increase in contributions is expected to drop shortly in order to remove pressure from labour costs. Parallel to this, retirement age is being pushed from 63 to

65. The gradual change is expected to be fully applied by 2026, and will not start before 2017 (1/4 year of increase per year passed). The goal is to ensure the long-term sustainability of the PAYG system.

On a side note, there has been introduced a three-year pension contribution for parents who break with their career for taking care of their children, intended to encourage fertility rates and improve replacement rate situation (OECD 2012, 39).

### *Education*

As skill mismatch is one of the main elements of the current structural unemployment pattern in Estonia, reforms in the education system have attracted many of the policy efforts in the last two-three years. These reforms have focused in two fields, those that are more closely related to the labour market: higher education and secondary vocational education.

The major change has taken place in higher education. Free university studies have been introduced in Estonia. Moreover, there is a new means-tested income support system that will help students to cope with living costs. This is complemented with a student loan system in which financial institutions provide the loan to students having the Government as the final guarantee actor. However, “loans are targeted only to students who are studying full-time and who can provide two guarantors or other assets as collateral” (OECD 2012, 77).

Also, the funding system for higher education institutions is deeply changing: “[from now] funding for higher education will mostly depend on a set of performance indicators (taking into account the volume, the quality and the efficiency of study programmes) approved by parliament and agreed on a three-year basis between the government and the tertiary education institutions” (OECD 2012, 29). Until now the distribution of funds was based on a 34-indicator system that reduced the relation between students’ choices and market requirements, hence deepening skill mismatch at the upper level of the labour market.

For the secondary vocational education, there is a systematized group of proposals to improve the connection of these programmes with the market requirements:

- Require all teachers to have two months of industry experience during the last five years (OECD 2012, 27).
- Modernizing the curricula to make them more outcome-based.
- Introducing a system of accreditation for these schools to ensure their quality.
- Two programs to reincorporate dropouts to vocational education (TULE & KUTSE) have been activated and are intended to be expanded in the coming years.
- Also, a program for providing vocational education to young people from 16-29 years of age who have a basic education or lower educational level is supposed to be activated from 2014.

Given the existing gap favoring people with general secondary education versus vocational professionals, these reforms should reverse the unnatural tendency, making a better fit between education and market.

Specific measures are also proposed to deal with the integration problem of the Russian minority. All of them focus on assimilation. As they are stated in the Estonia 2020 Strategy from the Estonian Government:

- Paying a 30% bonus to teachers teaching in Estonian language in Ida-Viru County.
- Implementation of teaching subjects (history, geography from 5th grade) in Estonian in Russian-speaking basic schools in order to ensure Estonian language skills at level B1, enabling further studies.

In the third education front directly related with work placement, human capital and skill matching, lifelong learning, the changes have not been abundant. Some fiscal benefits for employers and employees that participate in such programs have been introduced, and the Estonia 2020 Strategy aims to an increase from the current 12% of workers embarked in lifelong learning to a quite ambitious 20% in a decade. Still, the specific tools to achieve such a goal are still to be proposed.

### *Concluding*

The policy action of the Estonian government during the crisis has had three main features: fiscal conservatism (although some stimulus was provided during the first months of the crisis), improving the match between the state-provided services and regulation and the market needs introducing flexibility, and slight advances in the construction of a safety net in the form of social provisions. The consequences of these policies are difficult to measure, but an attempt will be made in the following sector.

## **5. The consequences of the policies**

### **Economic outcomes**

In terms of pure growth, Estonian efforts to improve the country's efficiency may be evaluated as irregular in their results. After the deep drop in real GDP growth in 2009, the (compared to previous performance) rather timid values of 2010 and 2012 leave 2011's more promising rate as an outlier. Moreover, several analysts prevent a growth level much in line with the lower band of the spectrum. For example, Kattai (2010) shows that macro model simulations expect the potential growth rate to fall in the future, staying around 4% in 2013-2014-2015 in absence of deeper shocks.

This tendency has a correlate in the labour market. The Estonian Central Bank estimates the increase in Estonian structural unemployment on 2 percentage points. This is not an effect of the policies, but with no doubt constitutes the main challenge for Estonian policymakers.

Regarding the insurance level of these unemployed persons, less than a half of registered unemployed people (and only 26% of the total of the unemployed) received benefits, leaving around 64.500 people out of the system. The figures were much higher and better before the crisis. The new structural, long-term unemployment leaves more people out of a system that does not seem to be able to keep them.

The introduction of flexibility in the organization of working time not only slowed down the employment destruction: it also smoothed the recovery. During the recession, hourly productivity dropped less than productivity per employee. This is: more output was taken per hour worked. When recovery came the most efficient path for companies was re-increasing these working hours that were lost and that now seemed to be more productive. In 2008, the average worked hours per employee and year were 1.791. In 2009 it had dropped to 1.748. And in 2011 it was 1.807.

Despite this slower recovery, it is arguable that the positive effect of this flexibilization was worth the cost. According to the Estonian Central Bank: "Had the number of working hours remained the same,

the number of the employed would have dropped below 550,000 as early as the first quarter of 2009. In the third quarter of 2009, at the bottom of the economic decline, the number of the employed would have fallen by 122,000 instead of 69,000, or 1.8 times as many (see Figure 3). The unemployed would have numbered nearly 130,000 a year earlier, in the first quarter of 2009, and in the first quarter of 2010 they would have exceeded 167,000” (Eesti Pank 2011a, 7).

The productivity gains may be slightly correlated with these measures, but it is more feasible to link them to the mere effect of job destruction focused on the less productive sectors as well as on the wage moderation favored by the light weight of trade unions and the tax adjustments in social security contributions.

Also on the good side, the degree of liberalization and the new measures are partially responsible for a quick recovery, offsetting the productivity/working hours effect. In this same fashion of efficiency gains, the reform of the Labour Market Service and Benefit Act aimed to improve public employment services are likely to have diminished search problems in the labour market. Now the system is more centralized and, more importantly, the integration between unemployment benefits and active search is deeper, which provides stronger incentives and tools for the job search of unemployed people. According to studies such as Martin and Grubb (2001), these measures may improve the exit rate from unemployment to employment by 30%.

However, not all the effects are positive. It is arguable that this increase in flexibilization will facilitate the adjustment through dismissals in future demand-led recessions, and may have had an effect in 2010 spike. This would not be a problem per se if the safety net provided by the Estonian government were strong enough. But that is not the case. As exposed, unemployment benefits are not wide in Estonia, and its reach capacity has been diminishing in the last years. Together with an increase of structural unemployment, more flexibility could lead to a cycle in which every future recession adds high temporary unemployment and some of it remains in the structural side, creating an increasing hysteresis effect. Moreover, as the OECD assesses, the current policy arrangement for unemployed people contemplates different sources of separated support for them: direct unemployment insurance, subsistence contributions and welfare-related help. As they are separated and, as stated, the first one is not able to cover more than a quarter of the whole unemployed population, people tend to move to the other programmes (for instance, the disability scheme in Estonia is sometimes used as a support or primary income source by unemployed people). These alternative sources, by their nature, do not include activation and skill-enhancement opportunities (OECD 2012). Hence the breach of the flexible flow. Finally ALMPs in the country do not seem to be enough to break this possible vicious circle, although they have clearly improved compared to pre-crisis levels.

On a side note, a perverse consequence of the increase of public expenditure in internship programs is to extend their use as a mechanism to keep underpaid and overqualified workers.

### *Skill Mismatch*

The changes in higher education and the promises for reforms in the secondary vocational education system are expected to generate a better link between education outcomes and what market demands. However, it is too soon to witness such changes: reforms aimed to affect skill mismatches take long time to show results by the own nature of education. One of the last reports on skill mismatching for the country is based on an OECD survey pointing to around 22% of workers who self-reported as skill mismatched (OECD 2012). A significant reduction in this percentage is expected. But beware of the

intimate relation between this problem and the overall decision facing Estonia's economic structure. If in the long term Estonia becomes a more productive but less costly place (in wage terms), the skill matching will require a significant reduction of the percentage of higher educated workers, now at a high 25%. Secondary vocational education will have to catch up providing technical profiles. If, by contrary, Estonia follows a "Nordic" or "German" path, productivity gains are key and the higher education scheme will have to be highly flexibilized and integrated with the vocational education to provide intermediate profiles to the market.

### *Equality*

The distributive effects of the policies may be considered as mixed. On one side, the flexibilization and the public sector cuts have a clear negative result for the lower layers of the society. These layers are identified with those who have fewer tools to compete in a market-oriented environment. But on the other side the increase of public support in certain aspects compensate the effects of the flexibilization. More specifically, the deep reform in tertiary education may have effects in both directions.

Starting by changes in the labour markets, the related increase of structural unemployment penalizes those who cannot be competitive. As unemployment benefits are being improved, the safety net may be slightly stronger. However, there is still strong resistance to make it more integrated with subsistence and disability benefits and to reduce the criteria to access to it. Hence, little gains on redistribution are expected on that side. Table 3 shows how the amount of people receiving unemployment benefits decreased much faster than unemployment rate did, putting numbers to the qualitative fact of that every crisis will have a certain, significant number of people left behind.

Regarding the subsistence allowance, its role as a poverty reduction mechanism is limited: it covers only one quarter of median household income (one of the lowest levels in Europe) and between 2008 and 2011 its use spoke among low-income families. It is a mere complementary tool that does not create any equality of opportunities at all.

Finally, the capped social insurance contributions will likely provide tax relief to "those who are relatively well-off, and whose labour supply is less elastic" (OECD 2012, 42), deepening this pattern.

Not even free tertiary education is likely to act as a redistribution mechanism unless the scholarship scheme is improved. The current level of EUR 135 is obviously insufficient to cover the expenditures of a student, and this will force students who do not have parental support to work. But actually full dedication is a requirement for having access to free tertiary education. At the same time, improvements in tertiary education only guarantee more equal opportunities if further investment is devoted to childhood education. Wide and deep research show that investing in primary education ensures equality of opportunities to an extent that investment in tertiary education cannot achieve. There may be a trade-off involved in offering free higher education, as it keeps resources that may be devoted to improve childcare and primary education.

On the ethnical side, as it has been remarked, no clear improvements in the situation of Russian minority are witnessed or expected. Estonian government keeps insisting on the assimilation model with little positive results, and the breach is maintained through generations.

Overall, the enforced policies are likely to have encountered effects: they may improve the capacity of the labour force to adapt to changes in the market, but there are plausible loopholes that will prevent

structural unemployment to reduce. Moreover, there is a possible cost in terms of inequality that only a deepening in the “security” part of “flexicurity” paradigm can solve.

## **Political**

Opinion polls and more importantly vote action show relatively stable support for the policy path taken by the Estonian government. The leading Reform Party has improved its electoral results between 2007 and 2011 gaining 0.8pp and 2 seats (Table 5). However, it should be noted that the Social Democrats and the Green Party have witnessed a much higher increase. The SDs jumped from 10 to 19 seats with a program based on a more moderate, state-led approach to the economic policy. Always within social-liberal parameters (which ensures continuity in the policy action), the increase of support to these parties may be pointing to a growing popular demand for a stronger safety net. The rise of the SD and the Greens is the most significant change during the crisis years in the political realm, as it may imply a restructuring of Estonian policies more in the line of the European party systems, with more differentiated policies in the redistribution cleavage. Also, the Centre Party is being increasingly isolated in the National Council. Together with the fading out of the People’s Union of Estonia, a move away from populist parties may be taking place in the country. However, the Centre Party still retains a wide support base, including Russian population.

Also, the internal devaluation process (that summarizes gains in productivity through wage moderation, inflation control, fiscal devaluation and consolidation) was conducted in the framework of meeting the goals to become a member of the Eurozone. This helped the articulation of nation-wide coalitions, as the final goal was common to every citizen.

According to the Eurobarometer, the overall sentiment of Estonian population towards the crisis remains positive and increasing in optimism. Particularly striking are the figures when compared to the EU27 average. Only a 19% of all the Europeans consider that their situation will improve in 2013, while 32% of Estonians do so. The worries of the Estonian population focus on inflation despite of being on a controlled level since 2010 (Figure 4). This is a historical worry of Estonian population and provides a solid base for inflation-targeted policies accompanied by macro stability and fiscal stabilization.

Although no generalized protests have taken place in Estonia, two strikes happened in 2012. Both of them relate to public workers in two pillars of the welfare state. In March the public teachers demanded a 20% wage rise. According to OECD statistics, Estonian teachers are among the least paid in advanced countries. Summing this to the accumulated moderation during the austerity period, the teachers considered that a rise was indispensable. The Ministry ended up promising a 7% increase from this year of 2013. Also, the minimum wage for education professionals was promised to increase to EUR 700 from EUR 608, and the final rise was even bigger: EUR 715.

The second strike took place among medical workers. In October 2012 they conducted a sustained protest that ended up with a favorable agreement for the sector: doctors, nurses and caregivers obtained a rise in their minimum salaries by 11%, 17.5% and 23% respectively. This increase is supposed to come into force in the second quarter of 2013.

The result of these two strikes may be understood as aligned with the slight but significant change in voting patterns described at the beginning. It may be argued that, from a long-term perspective, the crisis in Estonia has activated the redistribution cleavage among a certain part of the population who is

willing to defend a stronger presence of the state in the public and economic life. However, this has taken place within the narrow limits of Estonian politics, always refrained to macroeconomic stability and the need of being a flexible, adaptable country.

## 6. Conclusion

The political dynamic drafted in the last section is nothing but one more expression of the dilemma defined since the beginning in the present text: Estonian people, both as voters and as participants of the labour force, remain within two possible options. Their economy was born as a small, dynamic, liberal and open device focused on attracting foreign investment and adapting to the circumstances. The bet worked well, and a middle class was created on the way. Salaries increased and educational levels also improved, but productivity gains were not sufficient to give the jump from East to North. At the same time, the welfare state did not provide sufficient security to account for efficiency losses such as structural unemployment. And finally, a housing bubble also appeared, hampering productivity even more and generating a significant group of potential long-term unemployed people. The crisis pushed these people from “potentially” to “actually” unemployed.

Estonian policy response maintained within the limits marked by twenty years of democratic tradition: further fiscal consolidation and amplified flexibilization of the labour market. But structural reforms were added to the package. These were directed to diminish the skill mismatch (particularly regarding the highly educated under or over-qualification) and to make the non-employment insurance system (including ALMPs) more efficient and secure, but without a significant extension of its reach. The welfare state advanced without doubt on these two fronts, but this was combined with a decided internal devaluation including fiscal cuts (that are now proposed after a momentary rise due to budgetary needs) and, more importantly, wage moderation. Trade unions outside the welfare sectors did not play any opposition role, and population focused their worries on inflation and unemployment. Wage moderation seemed to be a fair price to pay for keeping the model up. The problem is that the model is somehow between these two worlds.

Estonia is not the first country to find itself in such a situation: all nations find themselves there at some point in their ascension. What is particular about Estonia is that they actually believe to belong to the Nordic countries. It is somehow implicit in the national discourse that they should be like Finland is nowadays. The comparison with the Finns is recurrent as before the Second World War both countries shared economic indicators. This “conscience of belonging” has guided Estonian economic policy choices since their independence. And in the middle of this path the biggest economic crisis in the last seven decades hit the country and the continent. The option taken by the Estonians makes clear that they are not willing to renounce to their goals, but it is equally clear that the available choices are tough. The labour force seem to be willing to accept the internal devaluation, but their aspirations for a higher life standard have been reflecting in internal consumption in the last two decades, being also the main engine for growth as it swallowed what was generated by foreign investment. Estonia does not have a pattern of export-led growth and although an improvement in the current account may contribute to future growth, it is compatible with high domestic consumption only through very significant improvements in productivity. These improvements, so far, have not taken place in the country in a sufficient amount. And wage contention can substitute them only partially, wiping out at the same time the promise of increasing internal demand.

Making compatible export-led growth and high domestic consumption is usually not compatible, and may be done only in the German way, achieving high productivity through human capital improvements and high salaries but keeping them stable once a level has been reached. The crisis leaves Estonia with a higher structural unemployment and a worse skill mismatch, but also with a more flexible and secure labour market. If Estonia wants to follow this route, they are to keep their wage moderation, go back to the high investment track and devote their improvements in welfare state on human capital.

It is in the equilibrium between flexibility and security, capacity to adapt and to generate a sustainable path of productivity growth, where the Estonian labour force will try to find its way to growth and development.

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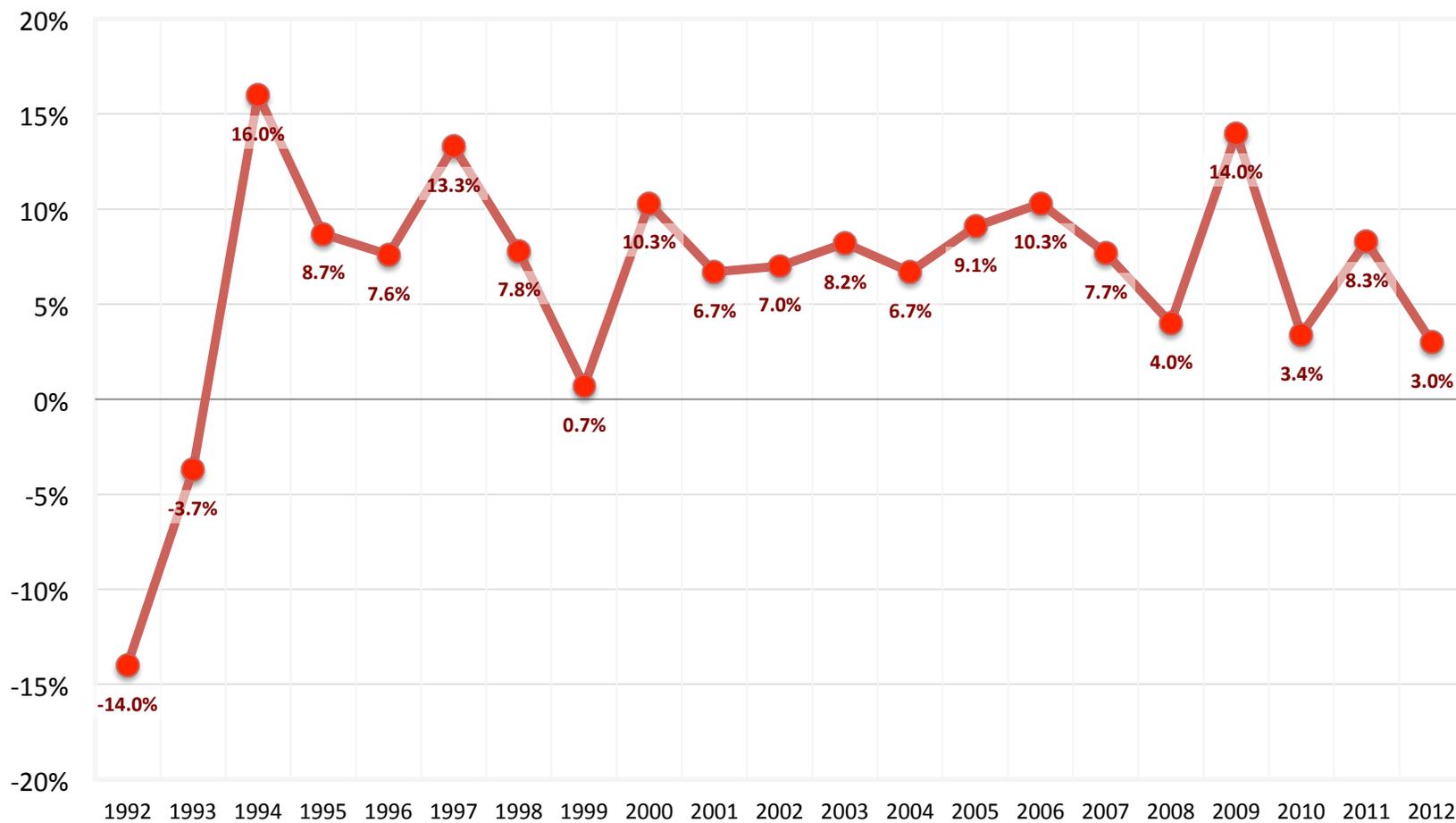
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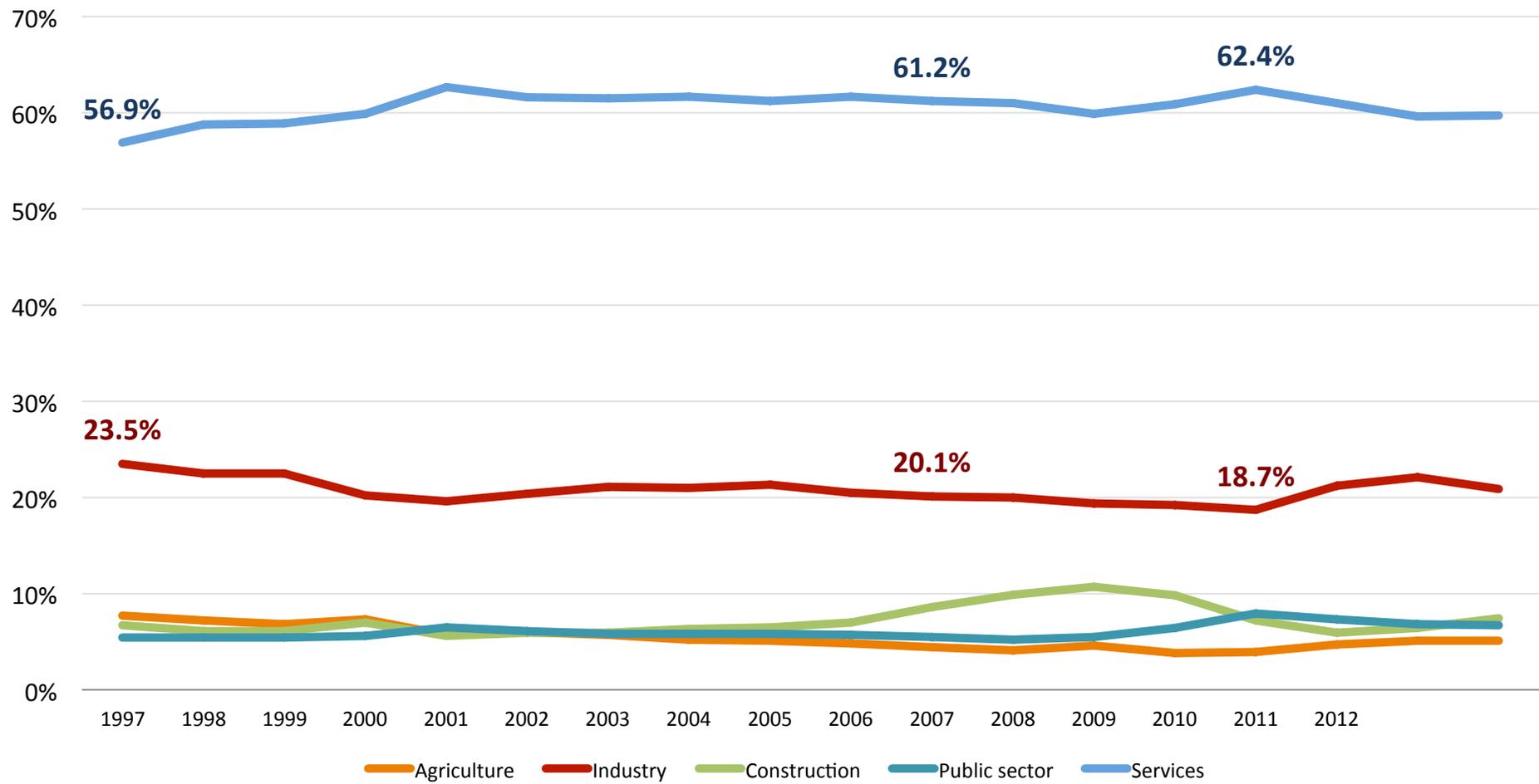
## Data Appendix

Figure 1: GDP Growth



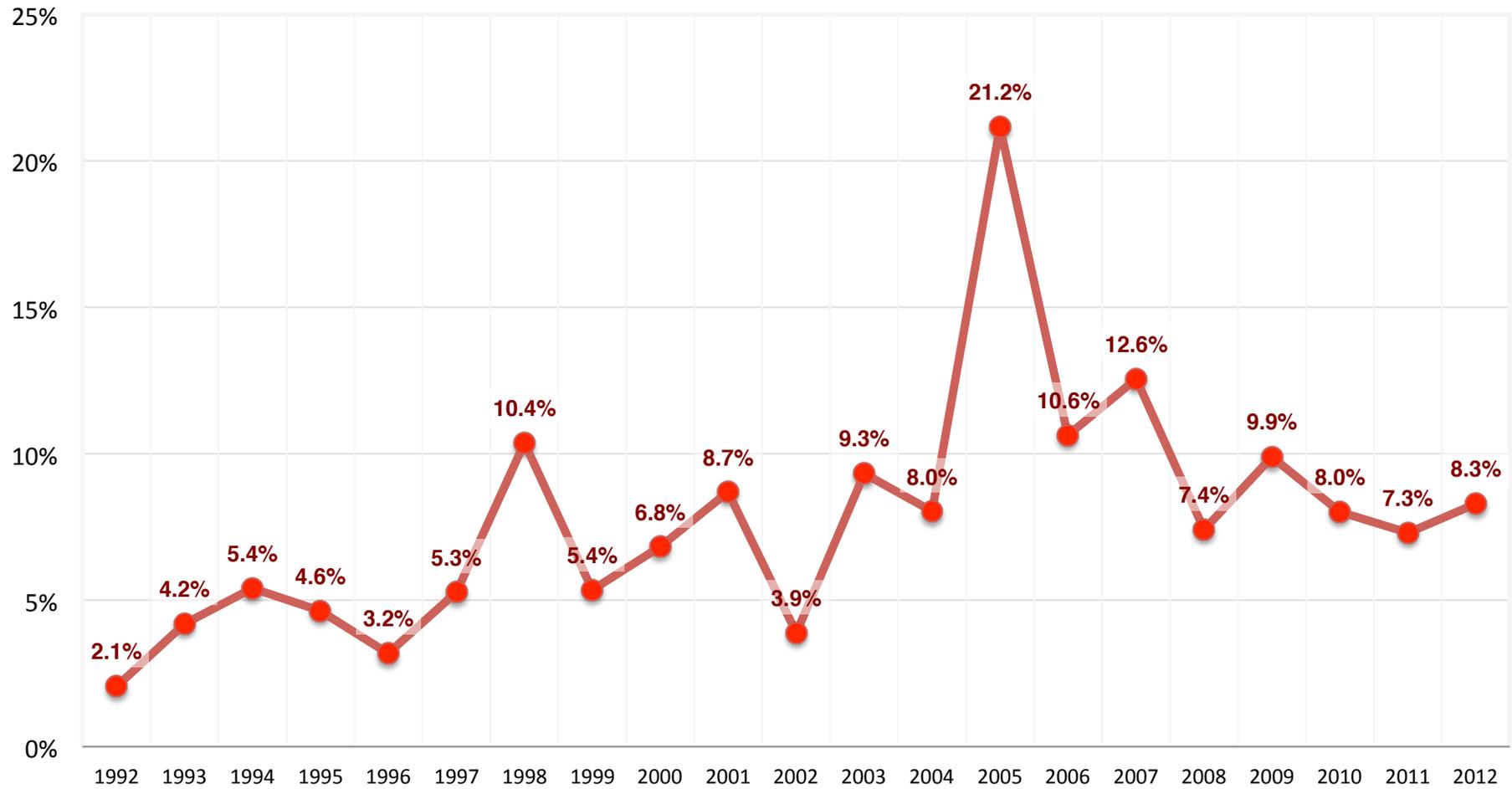
Source: Statistics Estonia

**Figure 2: Evolution of the GDP Distributions by Sector**



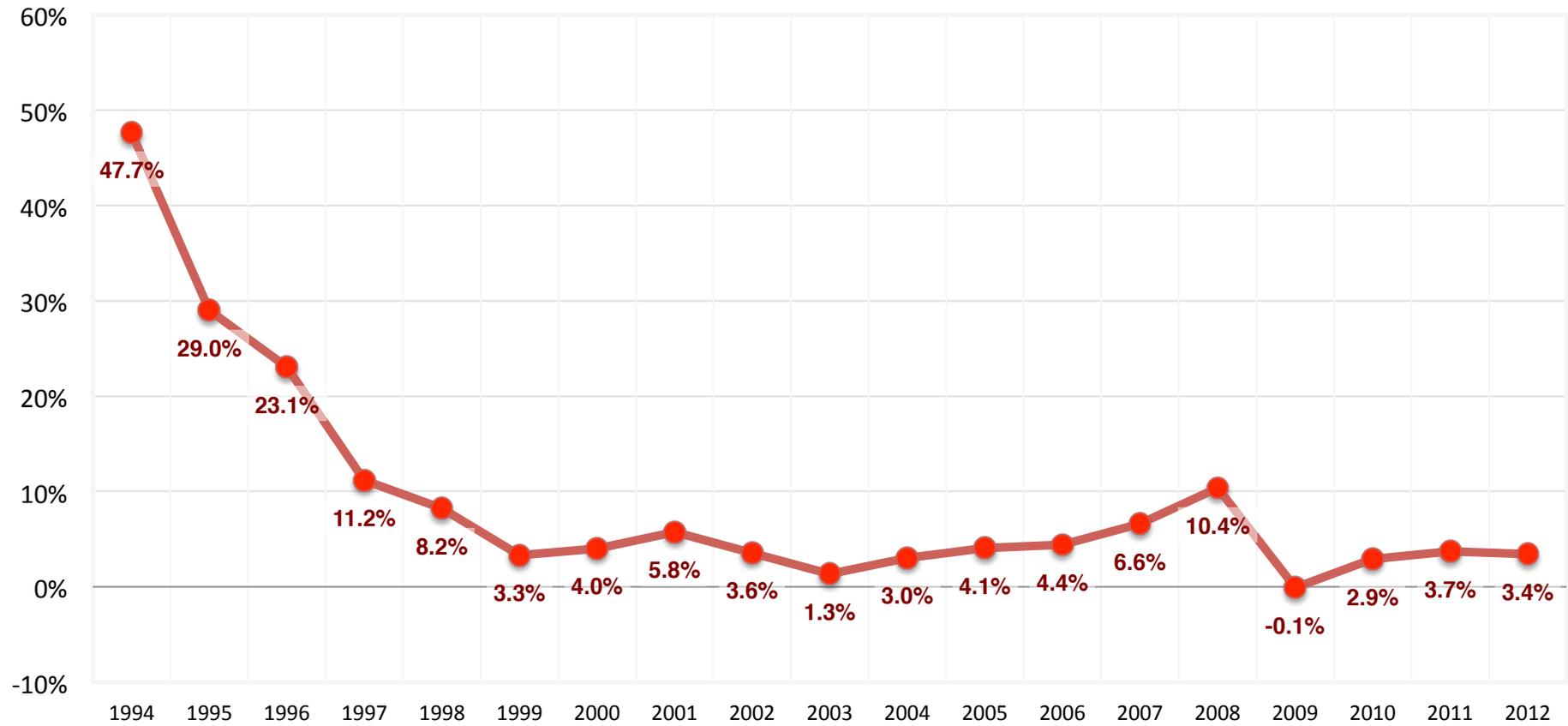
Source: Statistics Estonia

**Figure 3: Foreign Direct Investment as a Percentage of GDP**



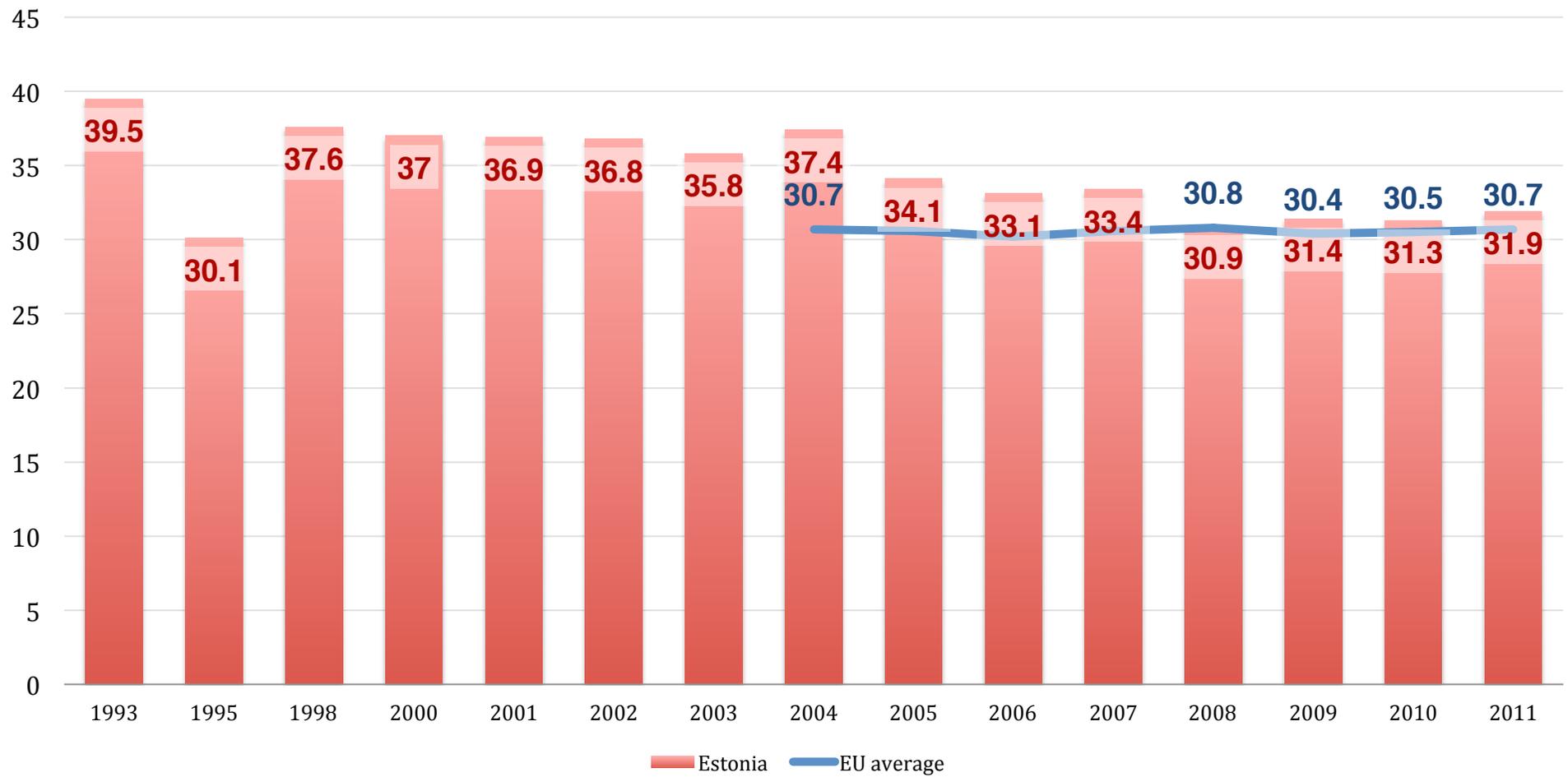
Source: Statistics Estonia

Figure 4: Inflation



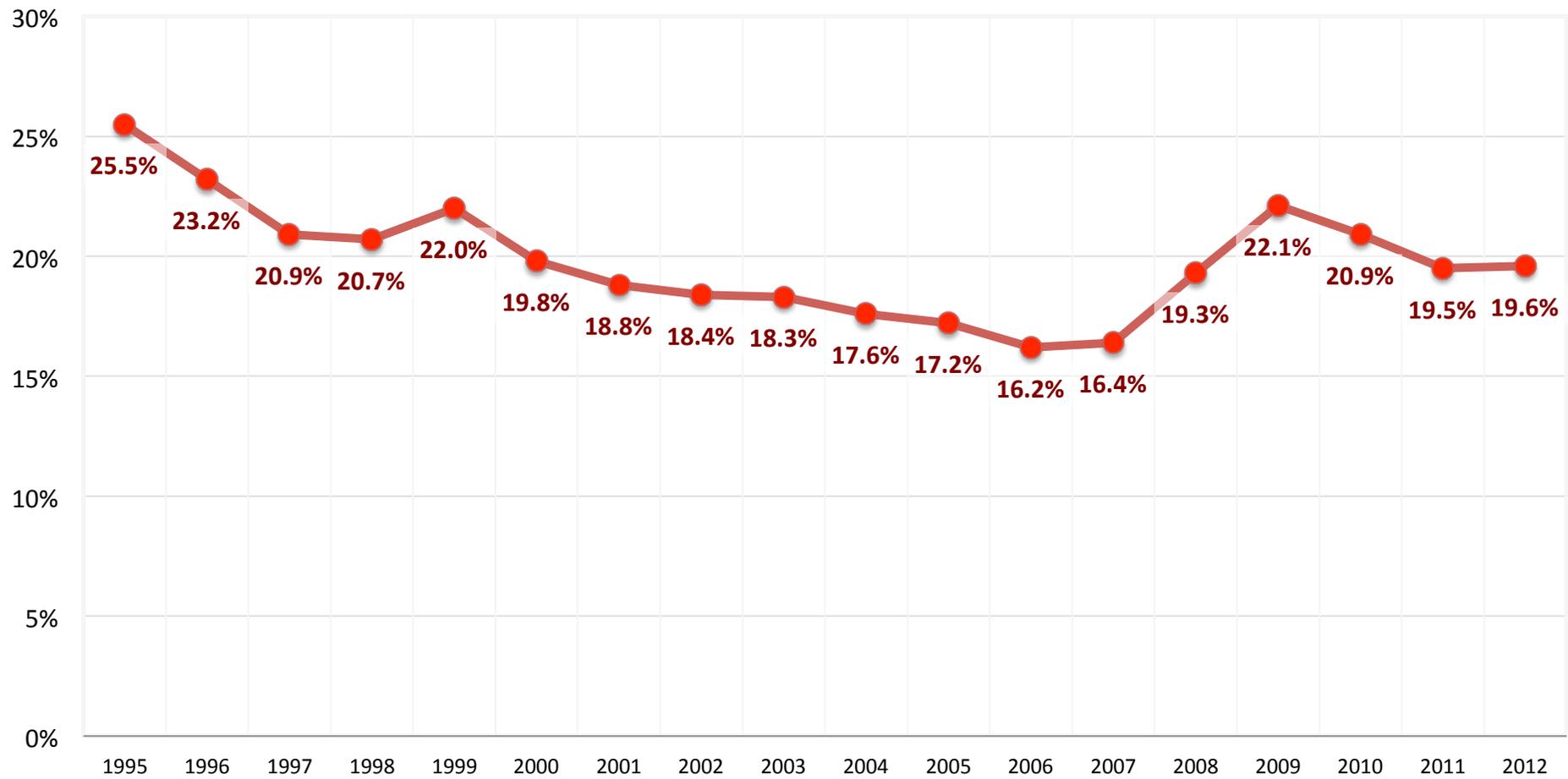
Source: Statistics Estonia

Figure 5: Gini Coefficient



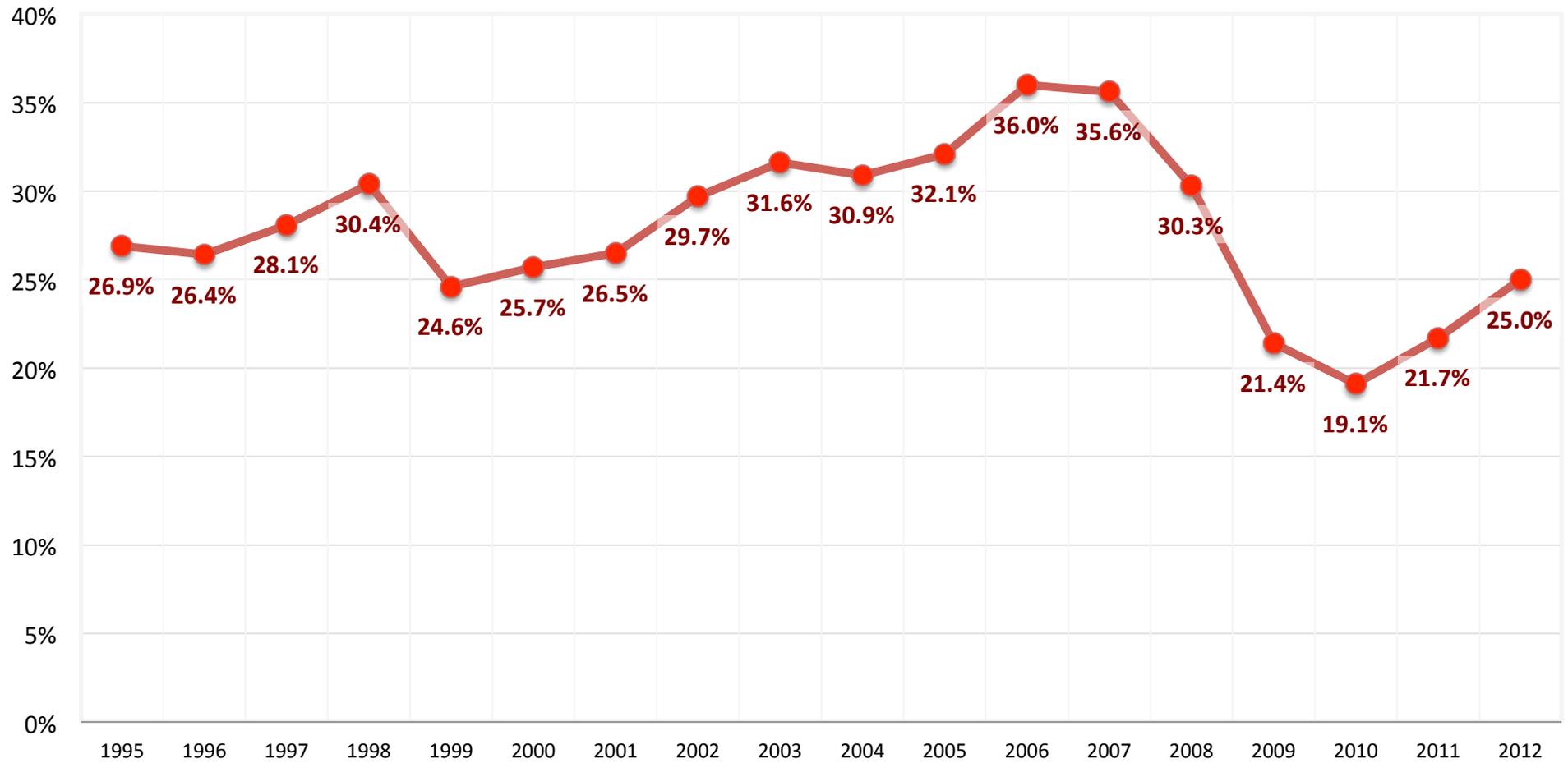
Source: Statistics Estonia and Eurostat

**Figure 6: Government Expenditure as a Percentage of GDP**



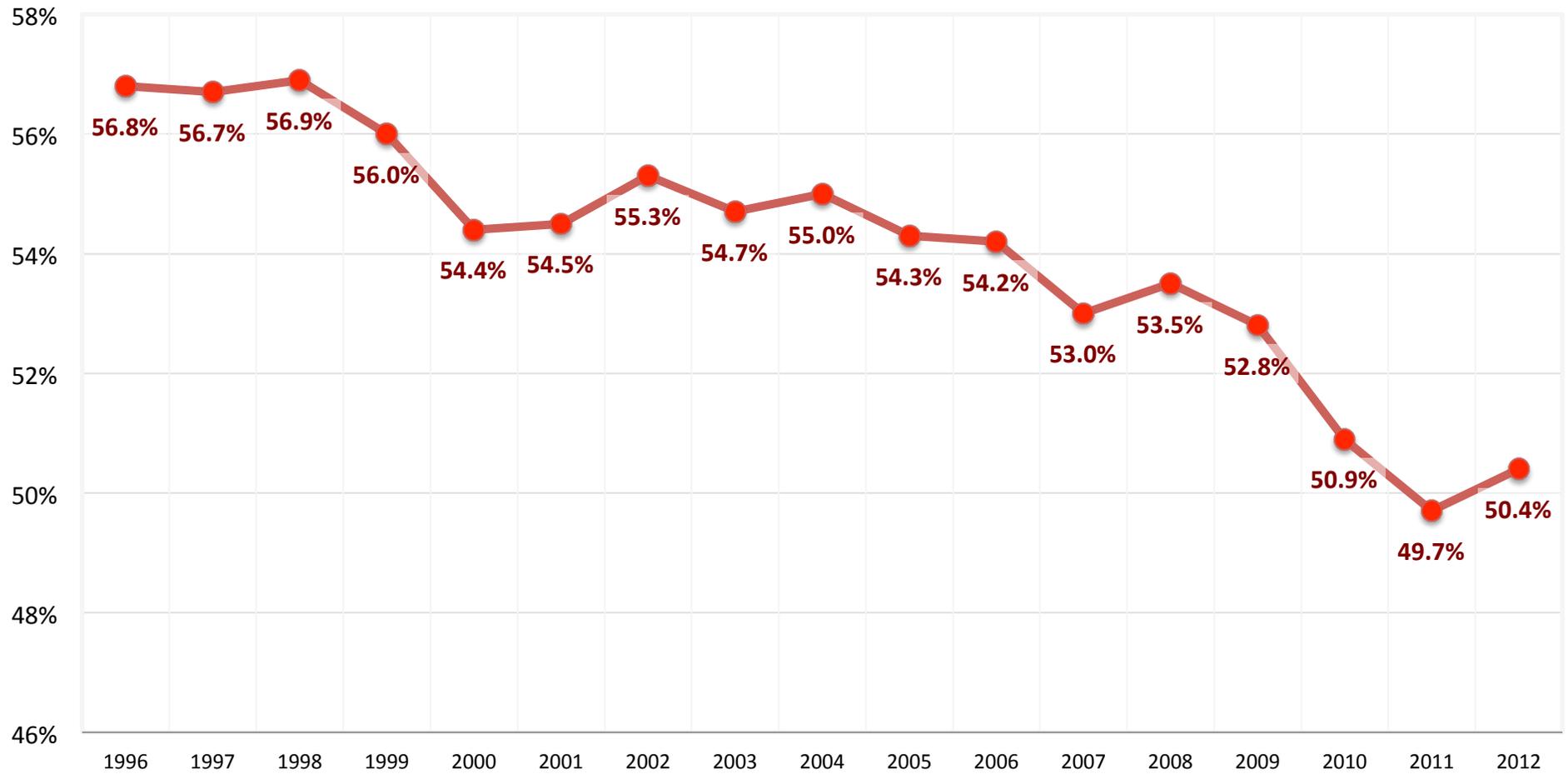
Source: Statistics Estonia

**Figure 7: Gross Capital Formation as a Percentage of GDP**



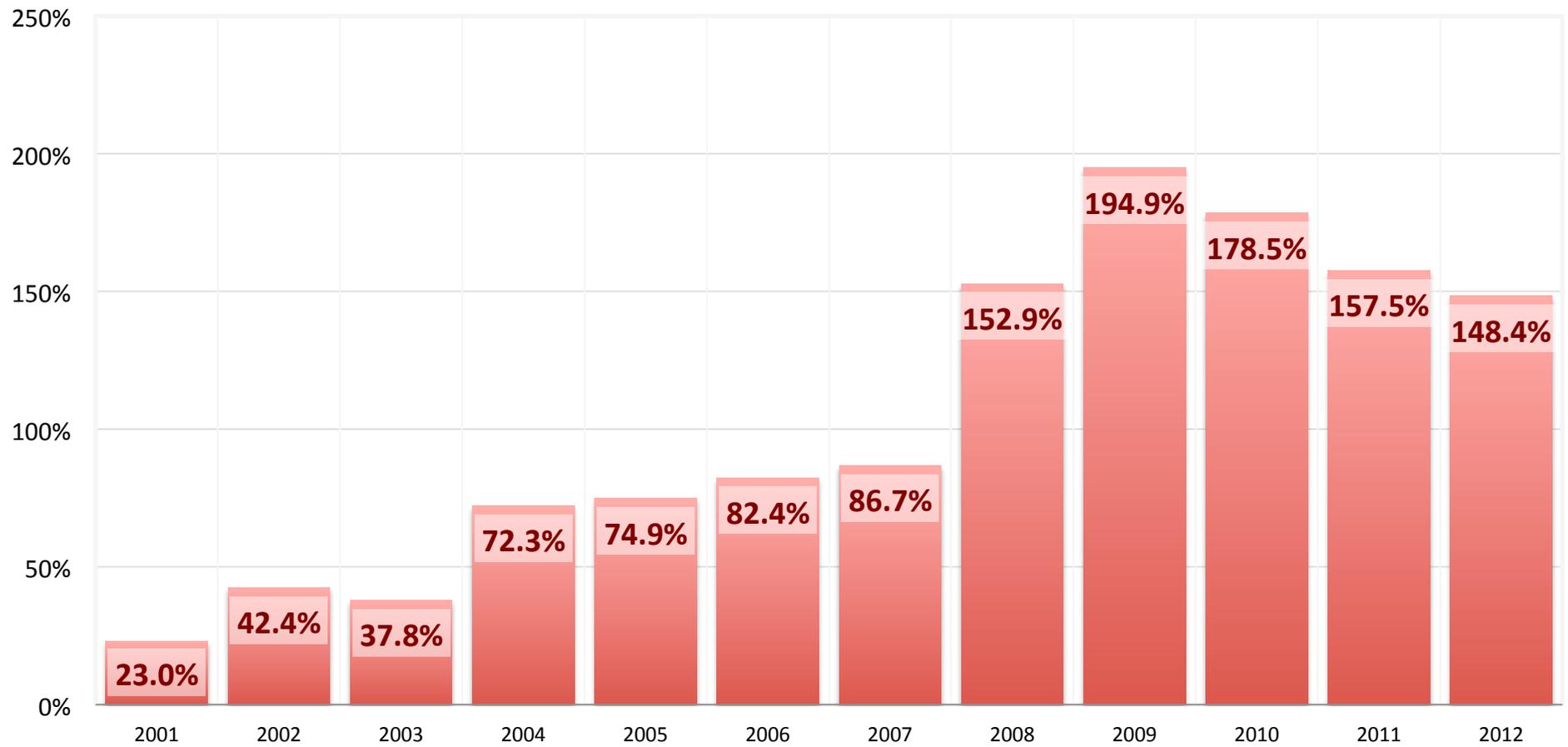
Source: Statistics Estonia

**Figure 8: Household Expenditure as a Percentage of GDP**



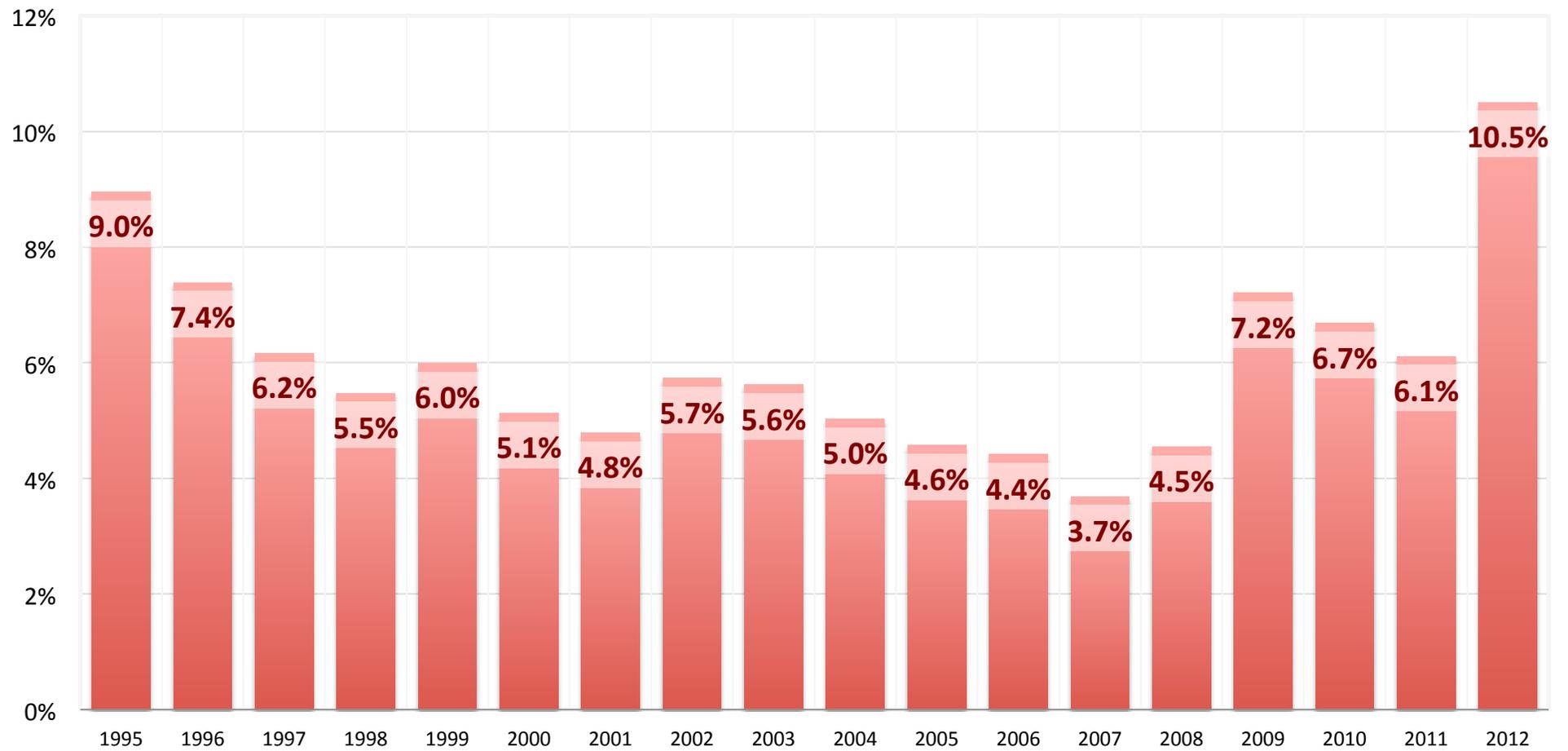
Source: Statistics Estonia

**Figure 9: External Debt as a Percentage of GDP**



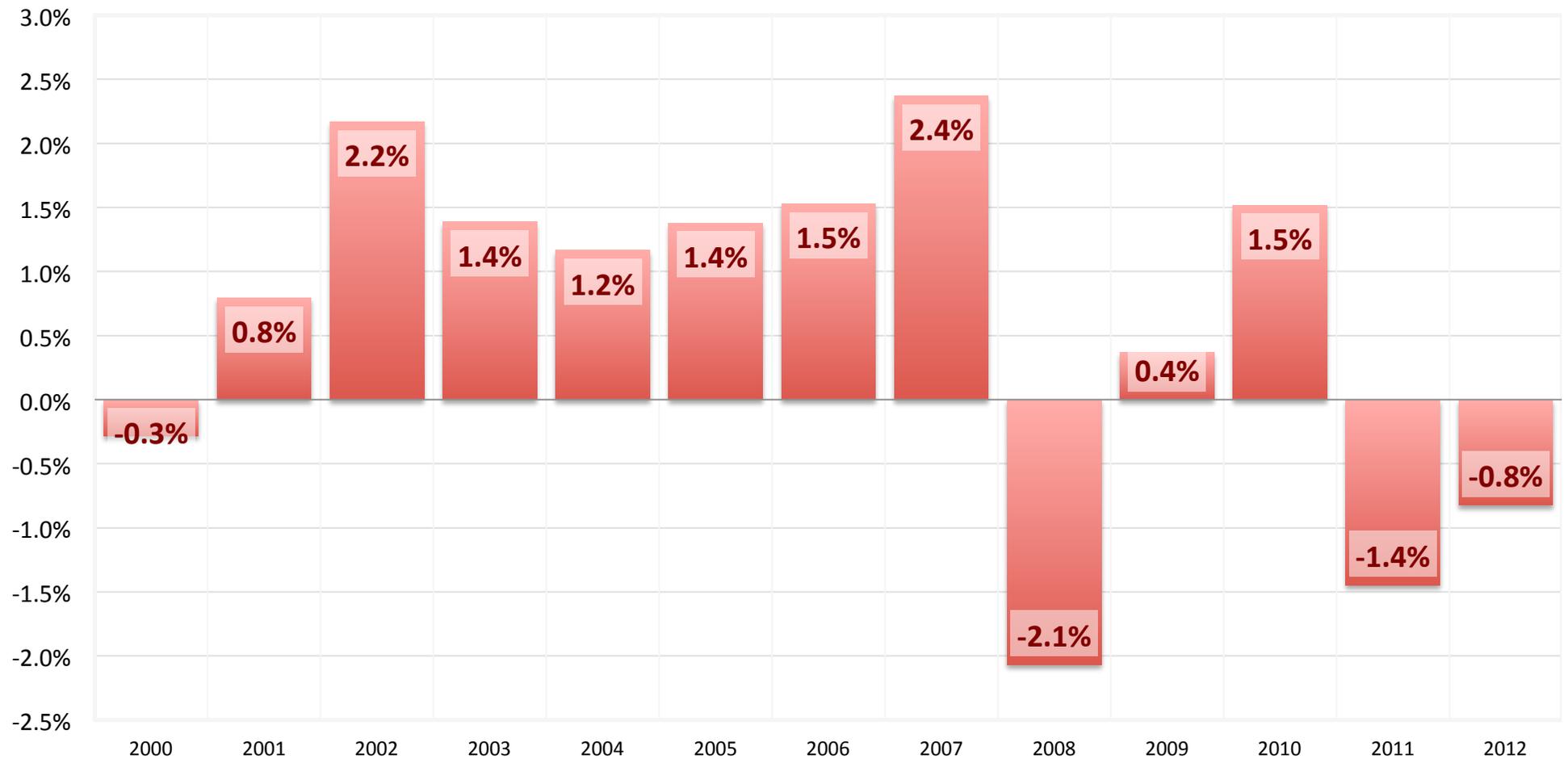
Source: Statistics Estonia

**Figure 10: Public Debt as a Percentage of GDP**



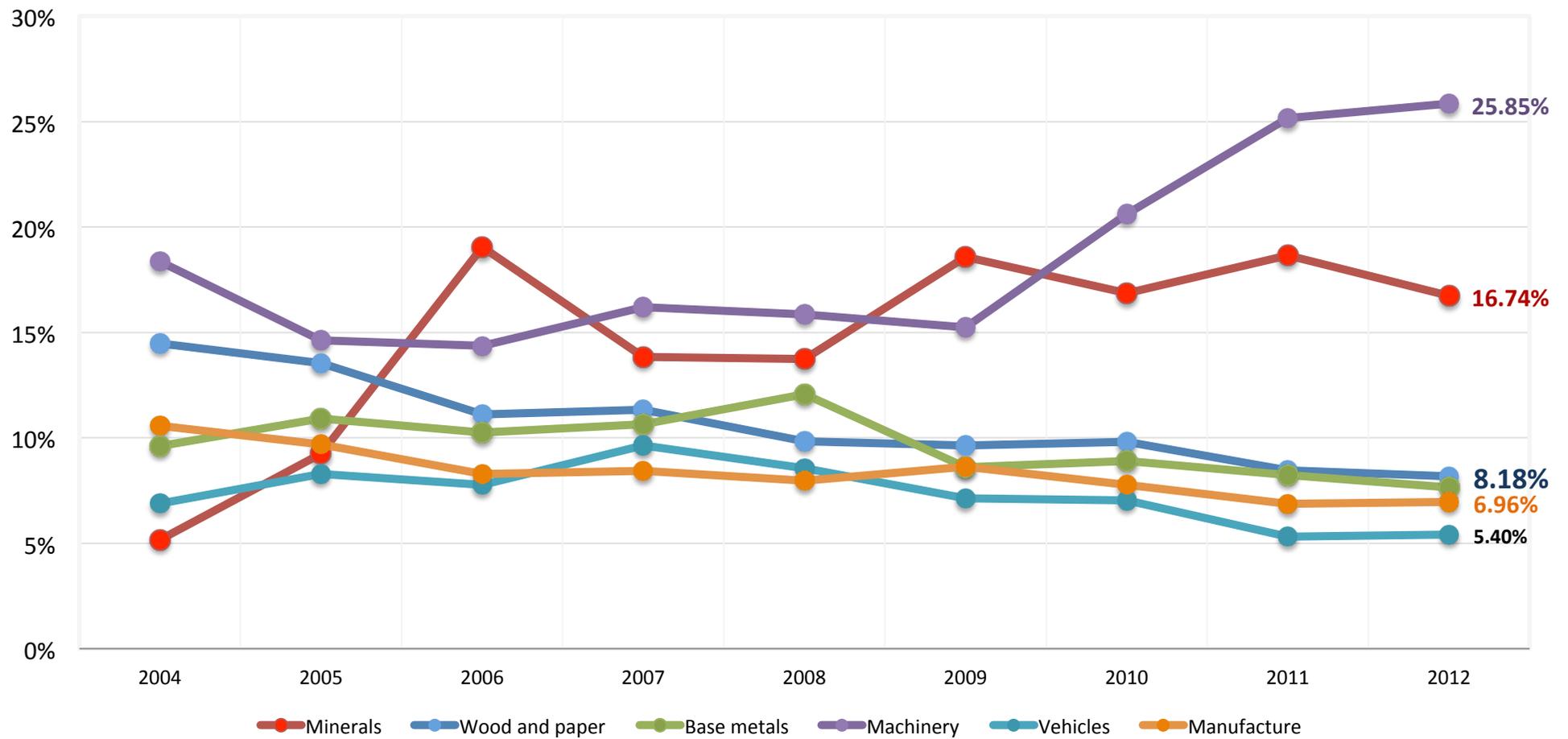
Source: Statistics Estonia

**Figure 11: Budget Deficit as a Percentage of GDP**



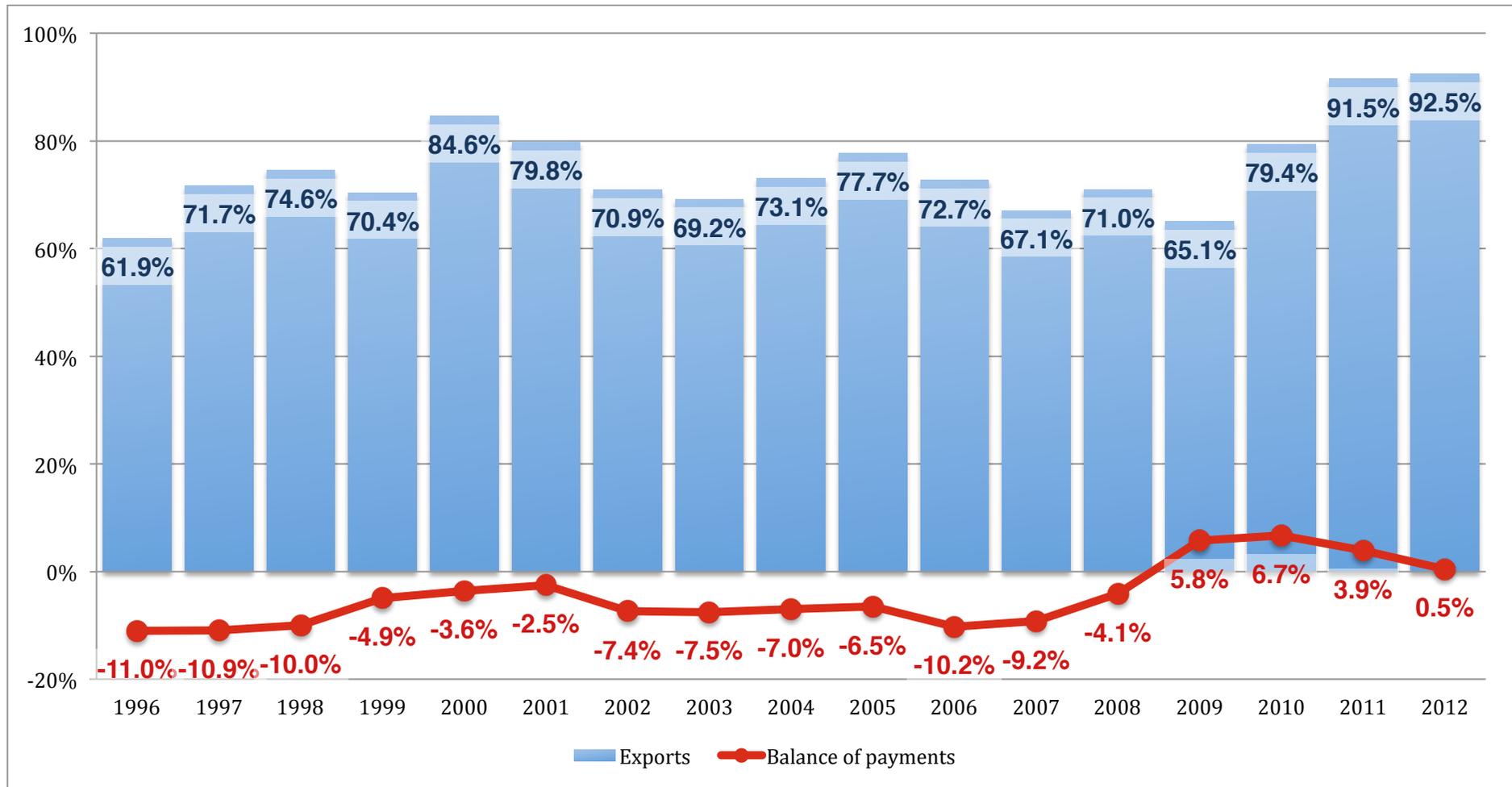
Source: Statistics Estonia

Figure 12: Main Exported Goods as a Percentage of All Exports



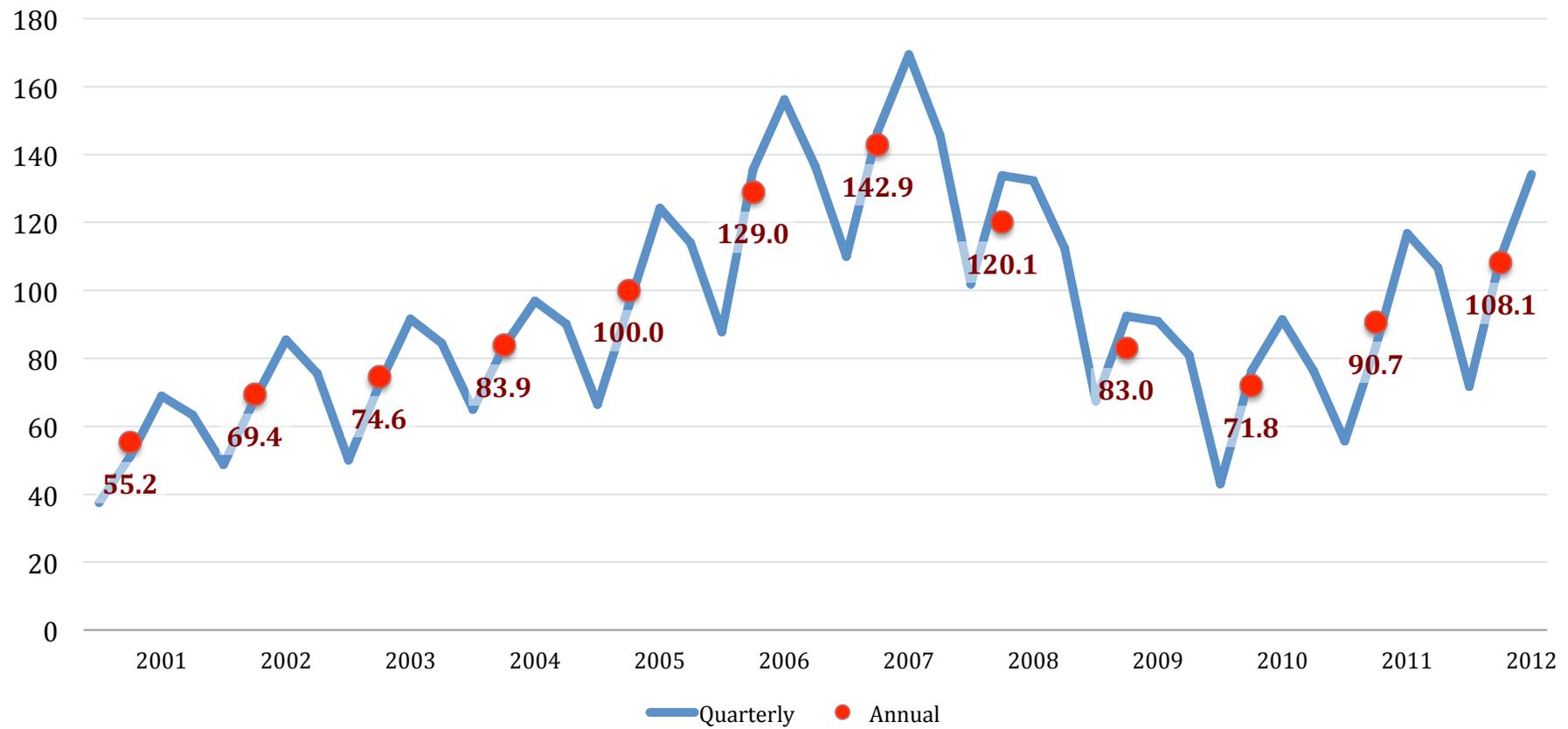
Source: Statistics Estonia

Figure 13: Exports (as a percentage of GDP) and Current Account Balance



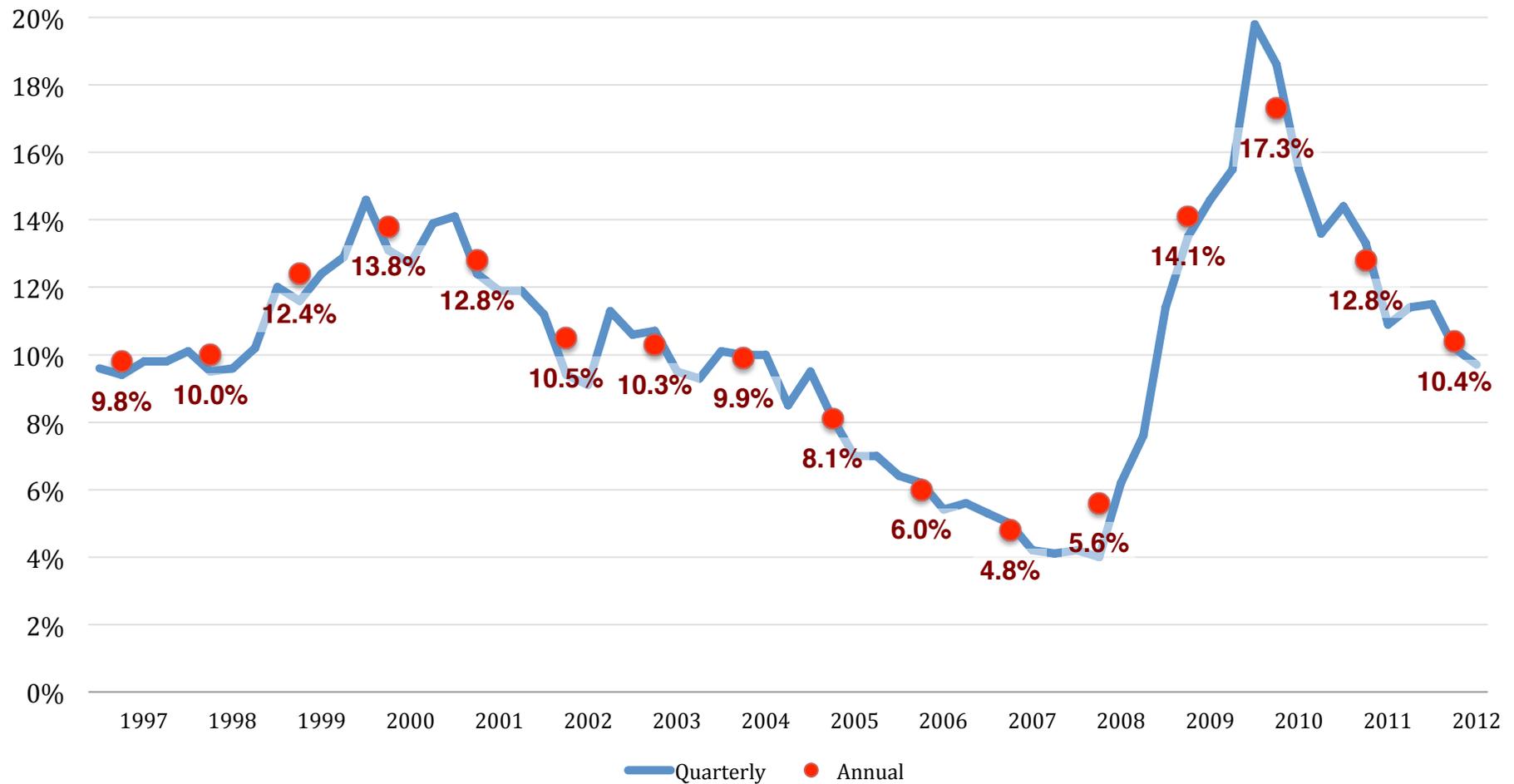
Source: Statistics Estonia

Figure 14: Construction Index (2005=100)



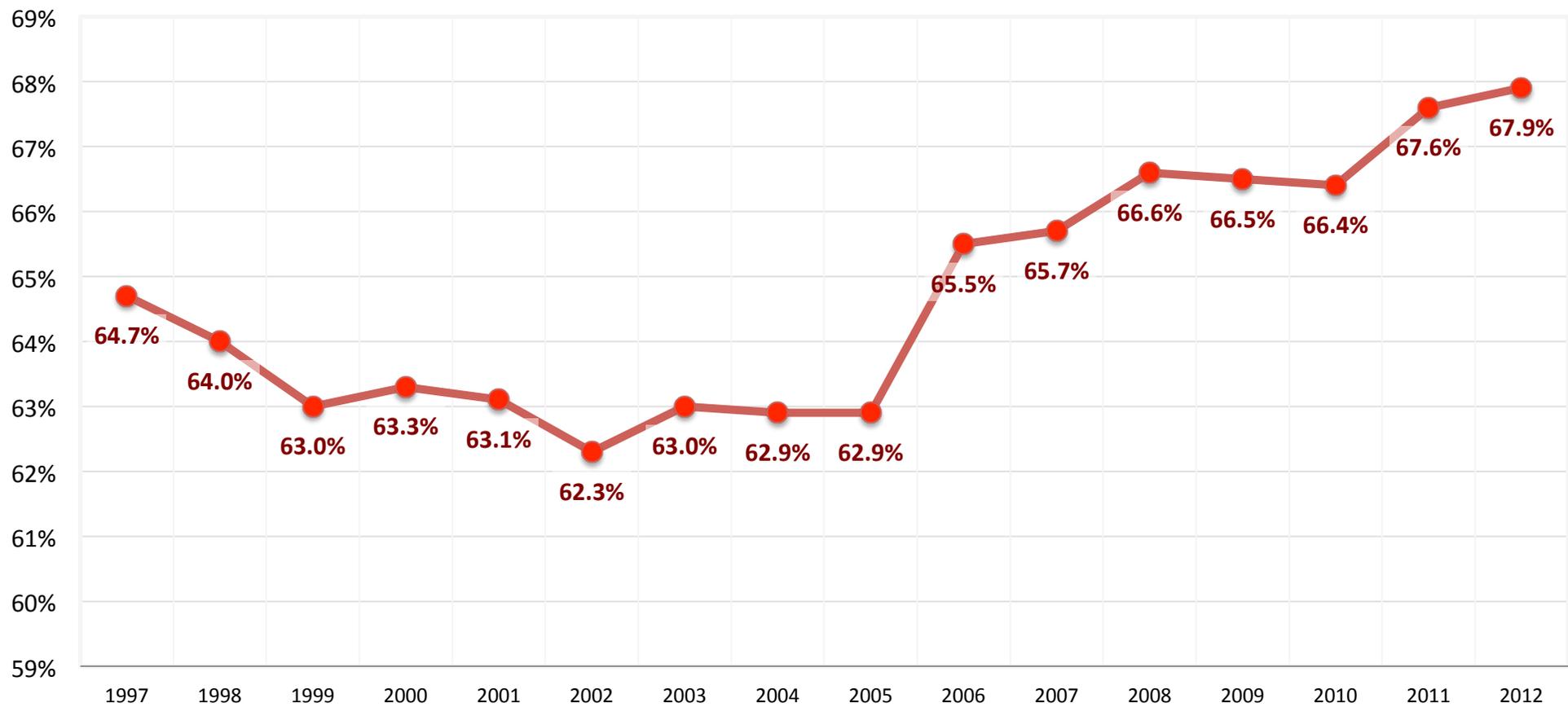
Source: Statistics Estonia

Figure 15: Unemployment Rate



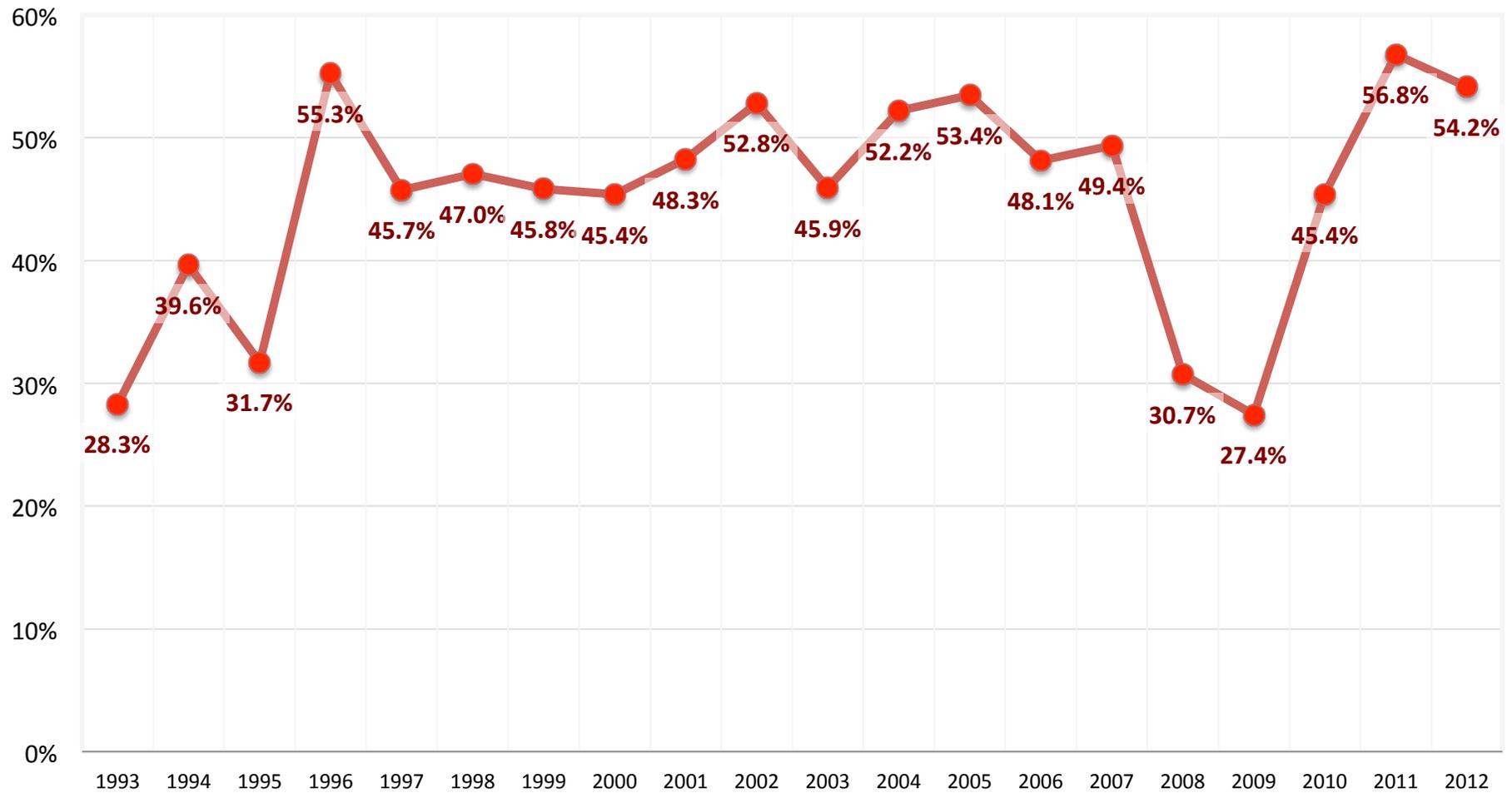
Source: Statistics Estonia

**Figure 16: Labour Participation Rate**



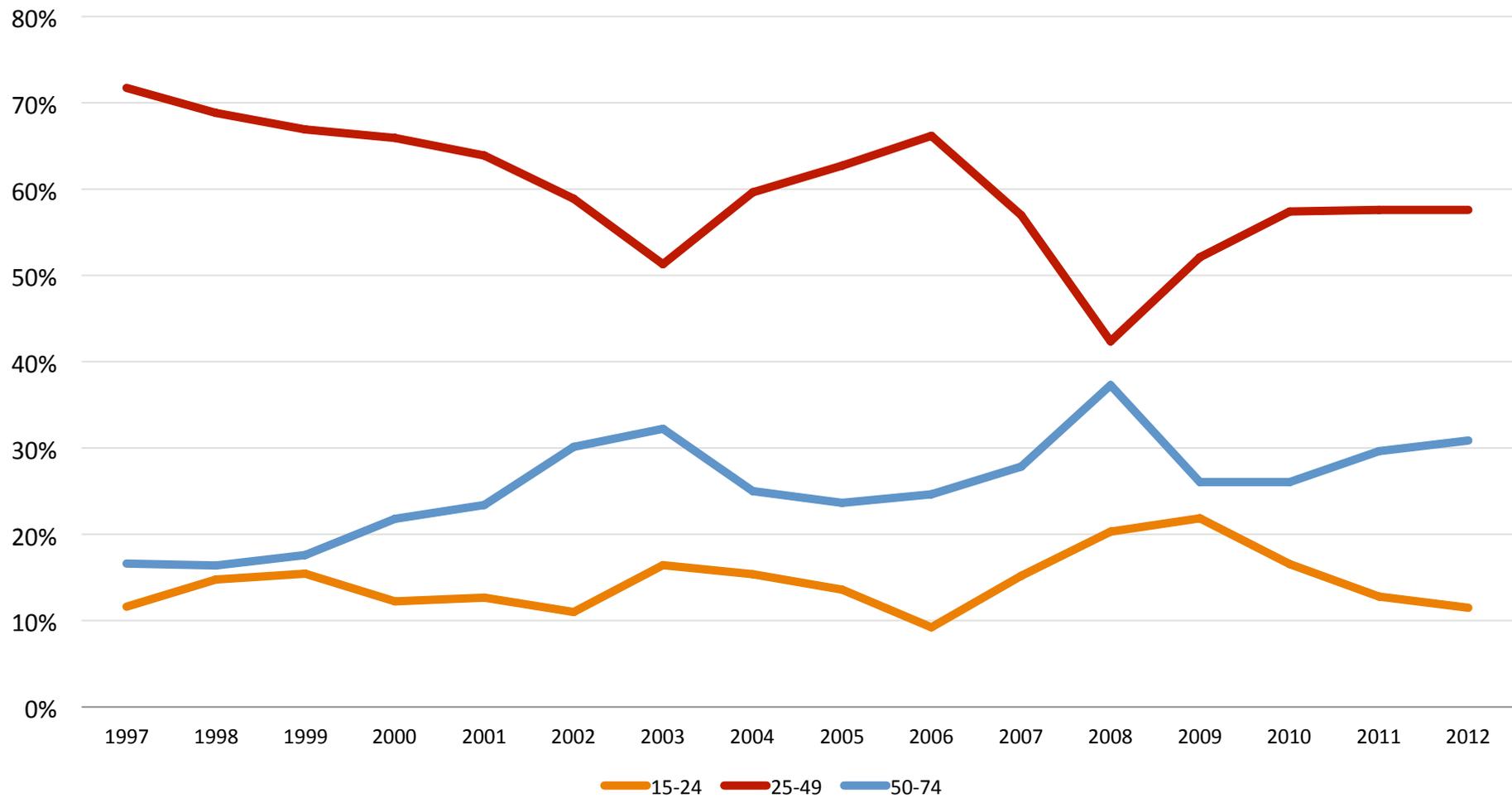
Source: Statistics Estonia

**Figure 17: Long-Term Unemployment as a Percentage of Total Unemployment**



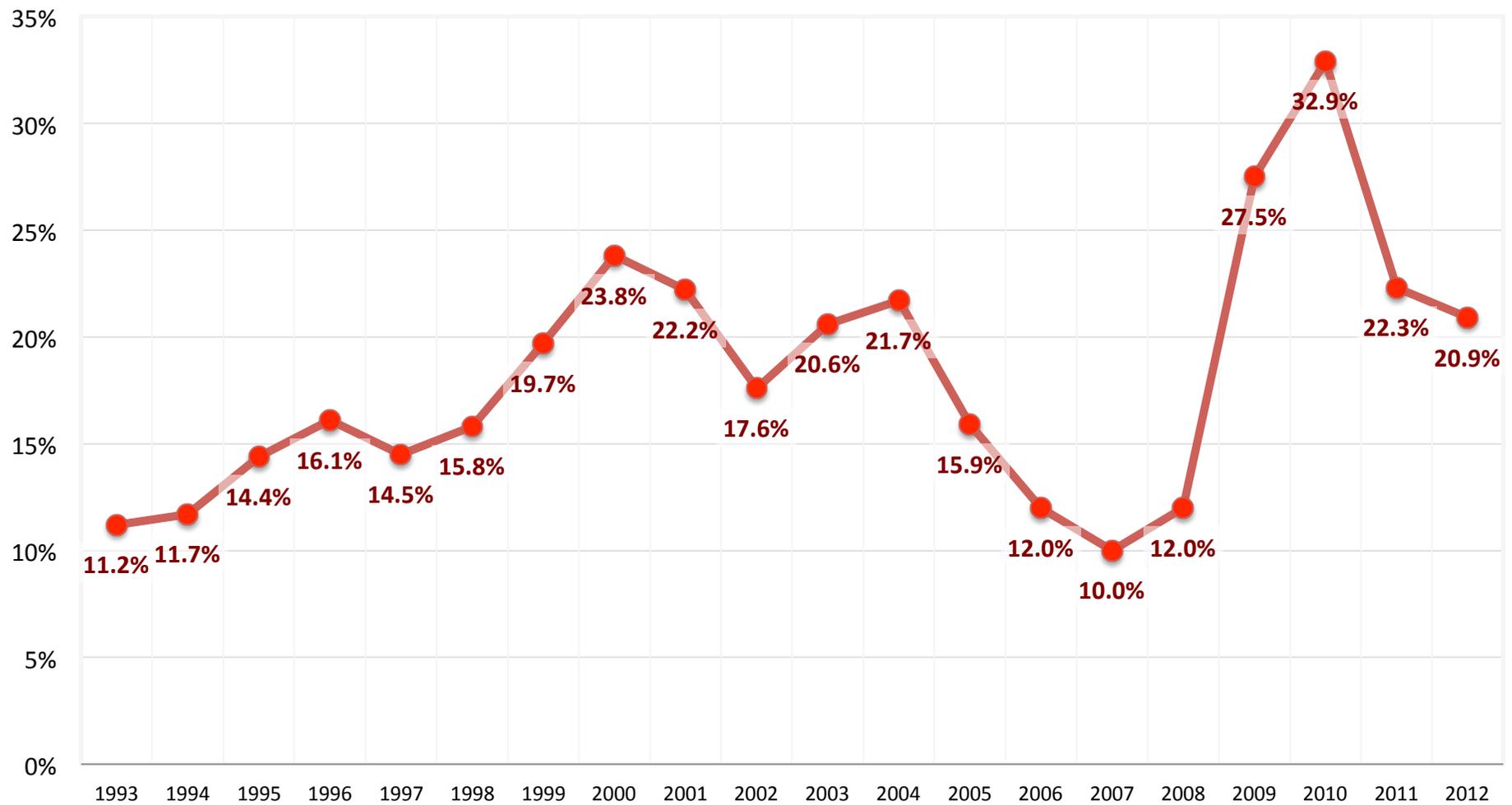
Source: Statistics Estonia

Figure 18: Distribution of Long-Term Unemployment per Age Groups



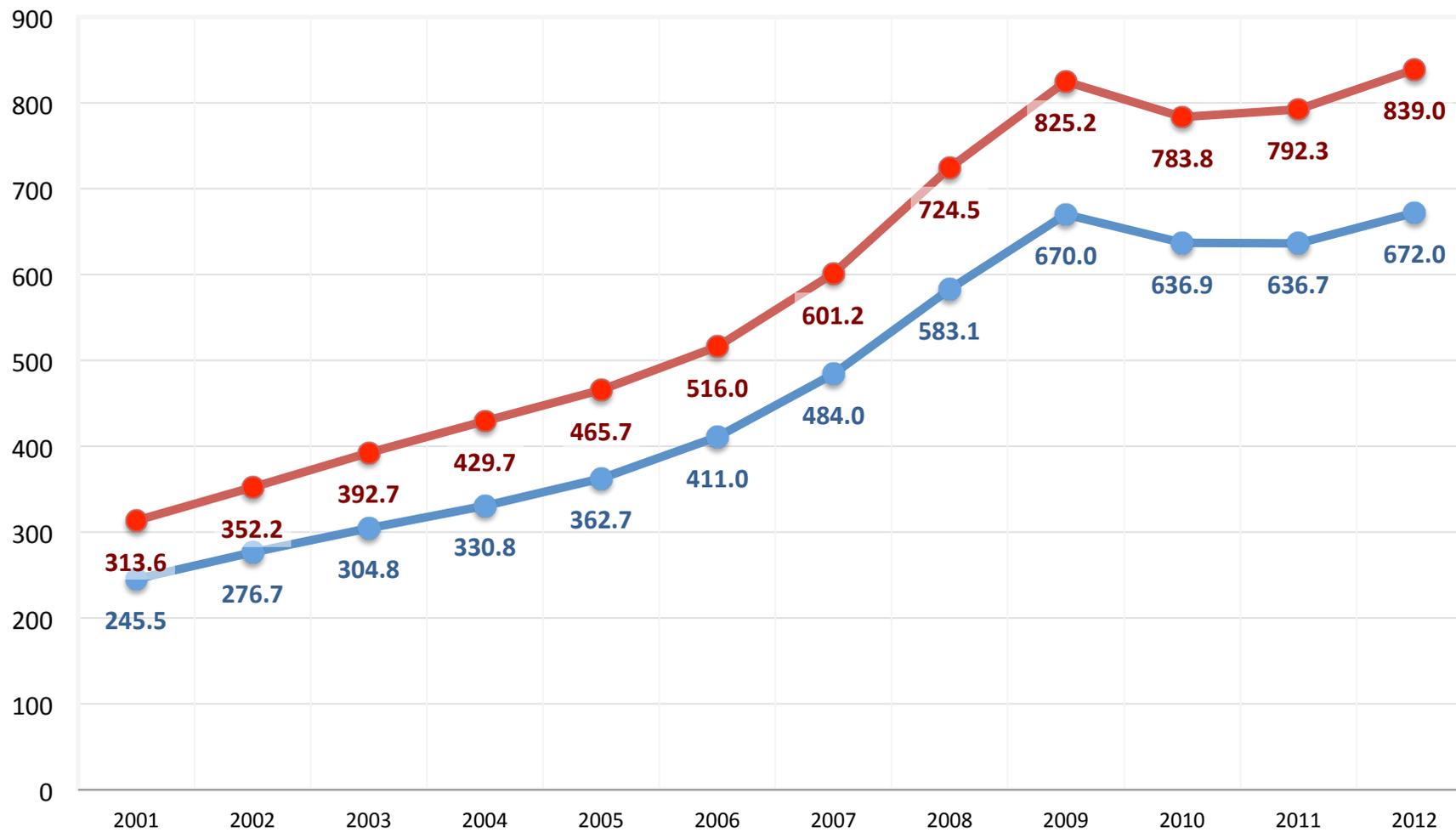
Source: Statistics Estonia

**Figure 19: Youth (15-24) Unemployment Rate**



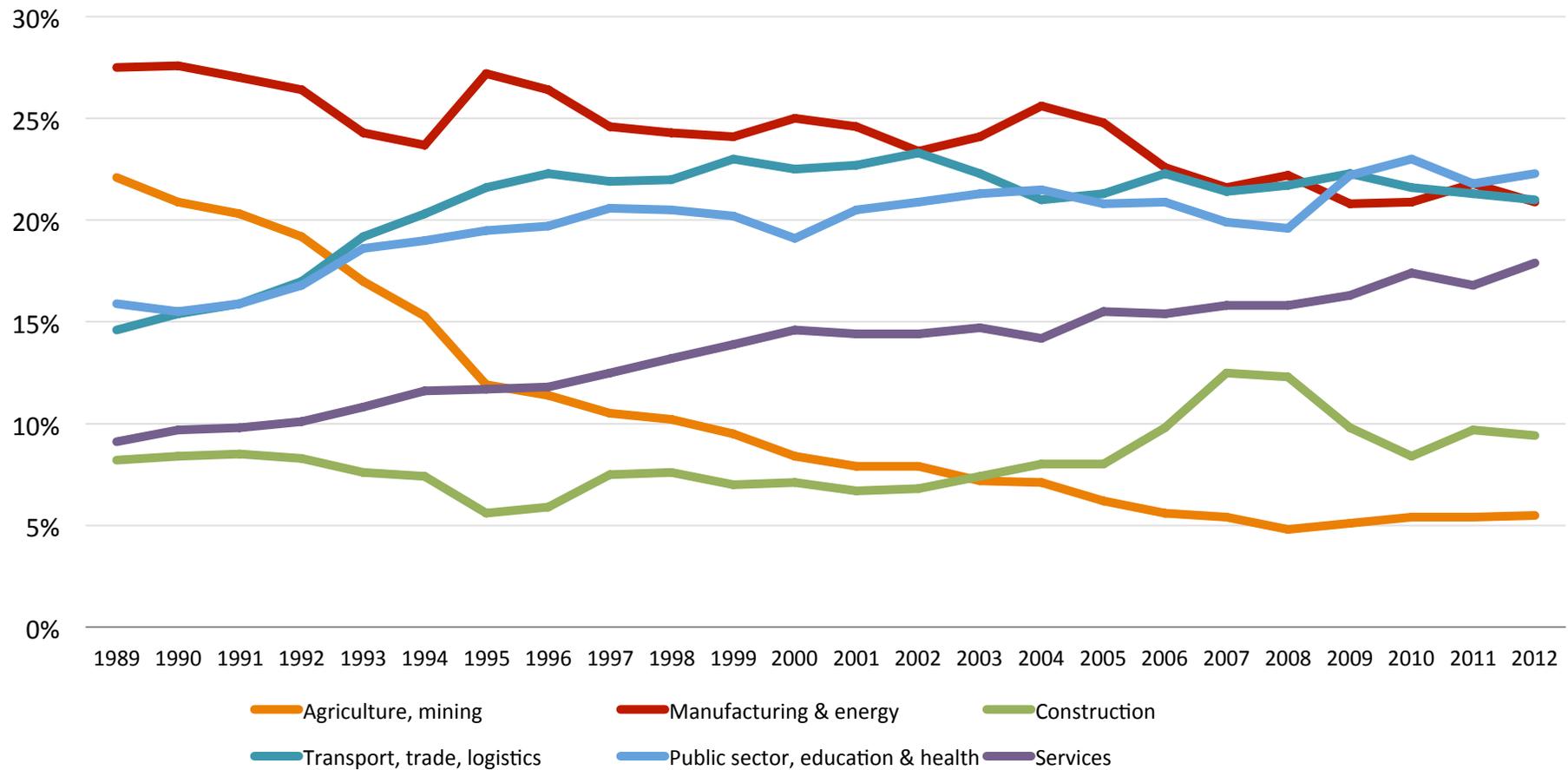
Source: Statistics Estonia

Figure 20: Evolution of Real Wages (monthly EUR)



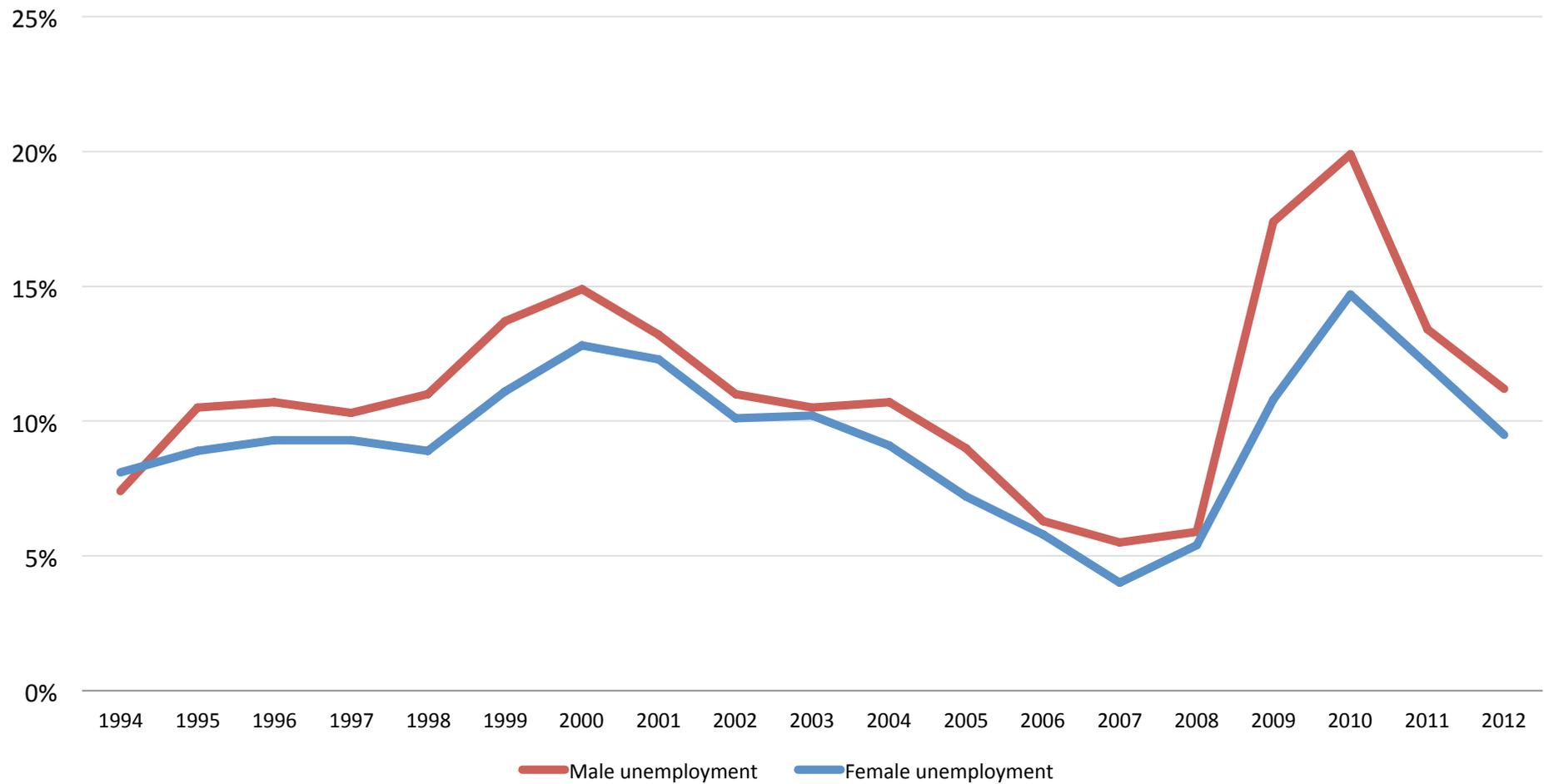
Source: Statistics Estonia

Figure 21: Employment by Sector

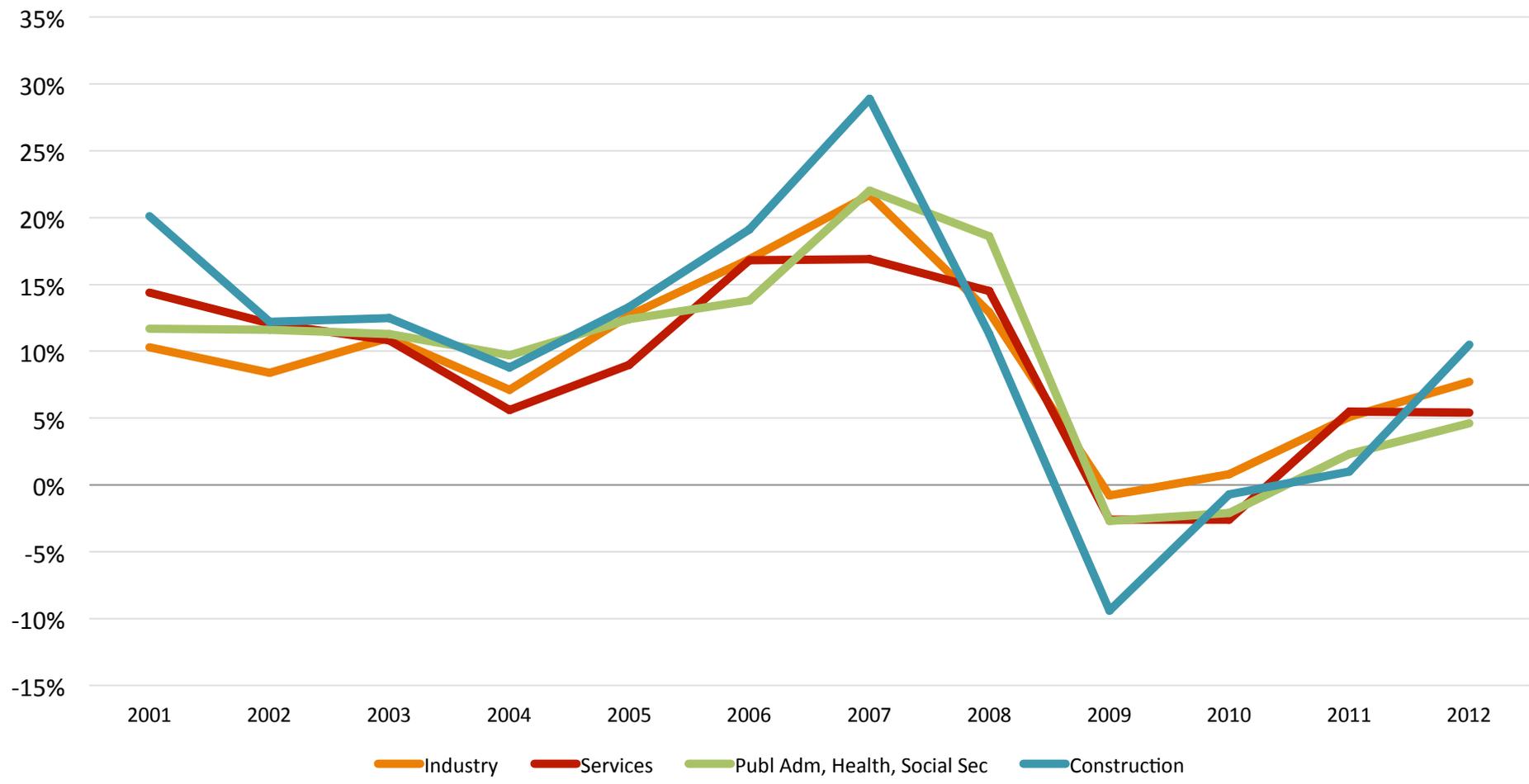


Source: Statistics Estonia

Figure 22: Unemployment Rate by Gender

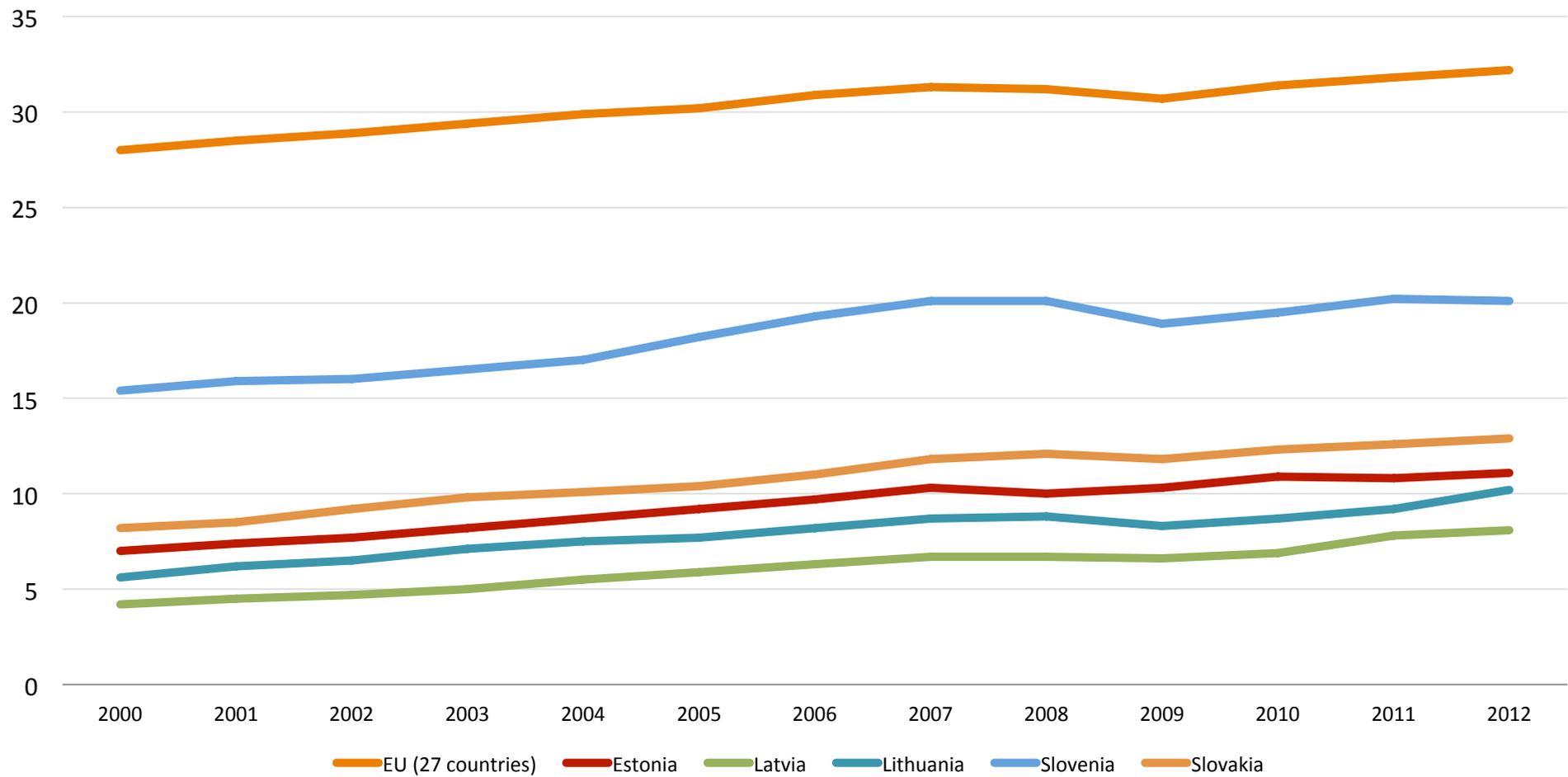


Source: Statistics Estonia



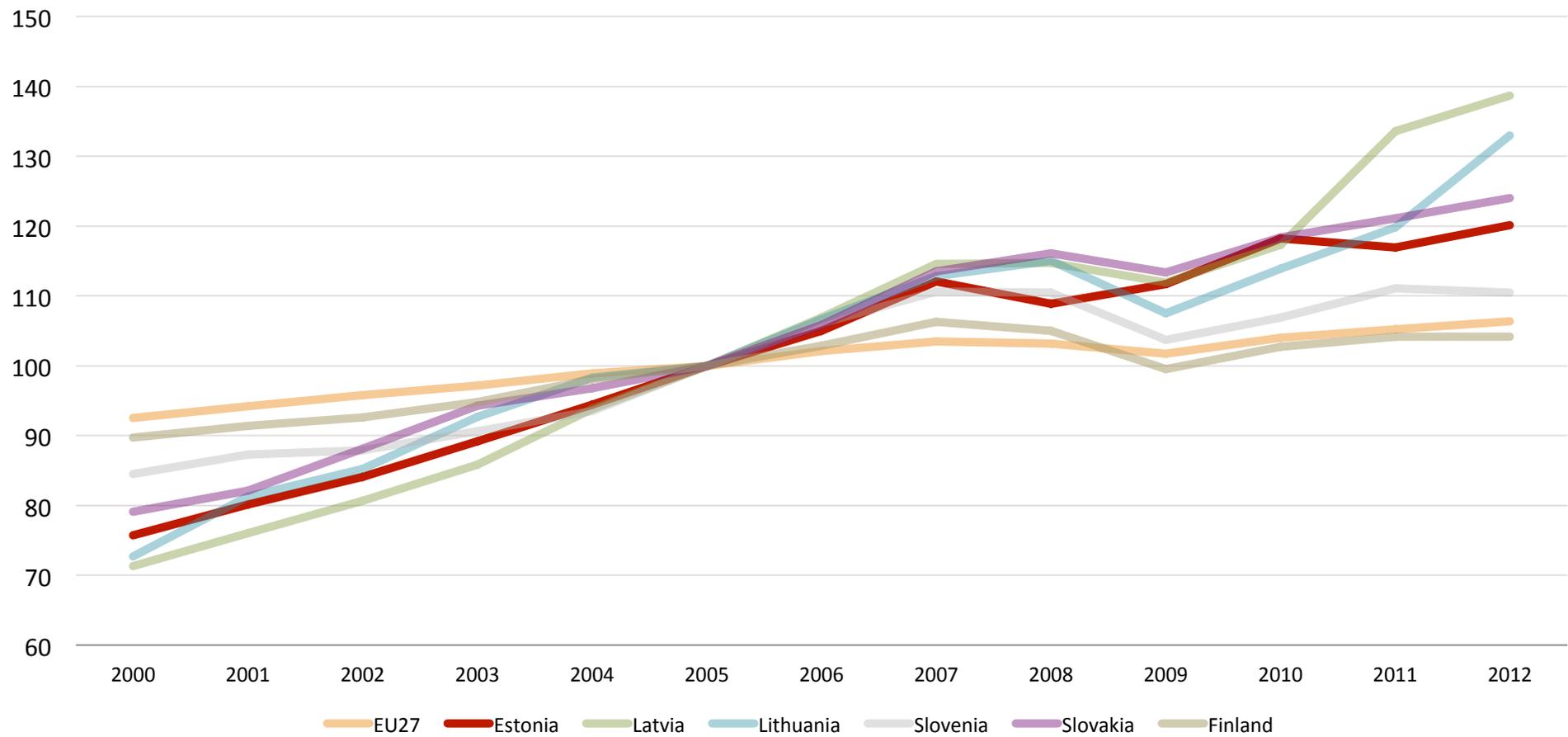
Source: Statistics Estonia

Figure 24: Productivity (EUR/worker/hour)



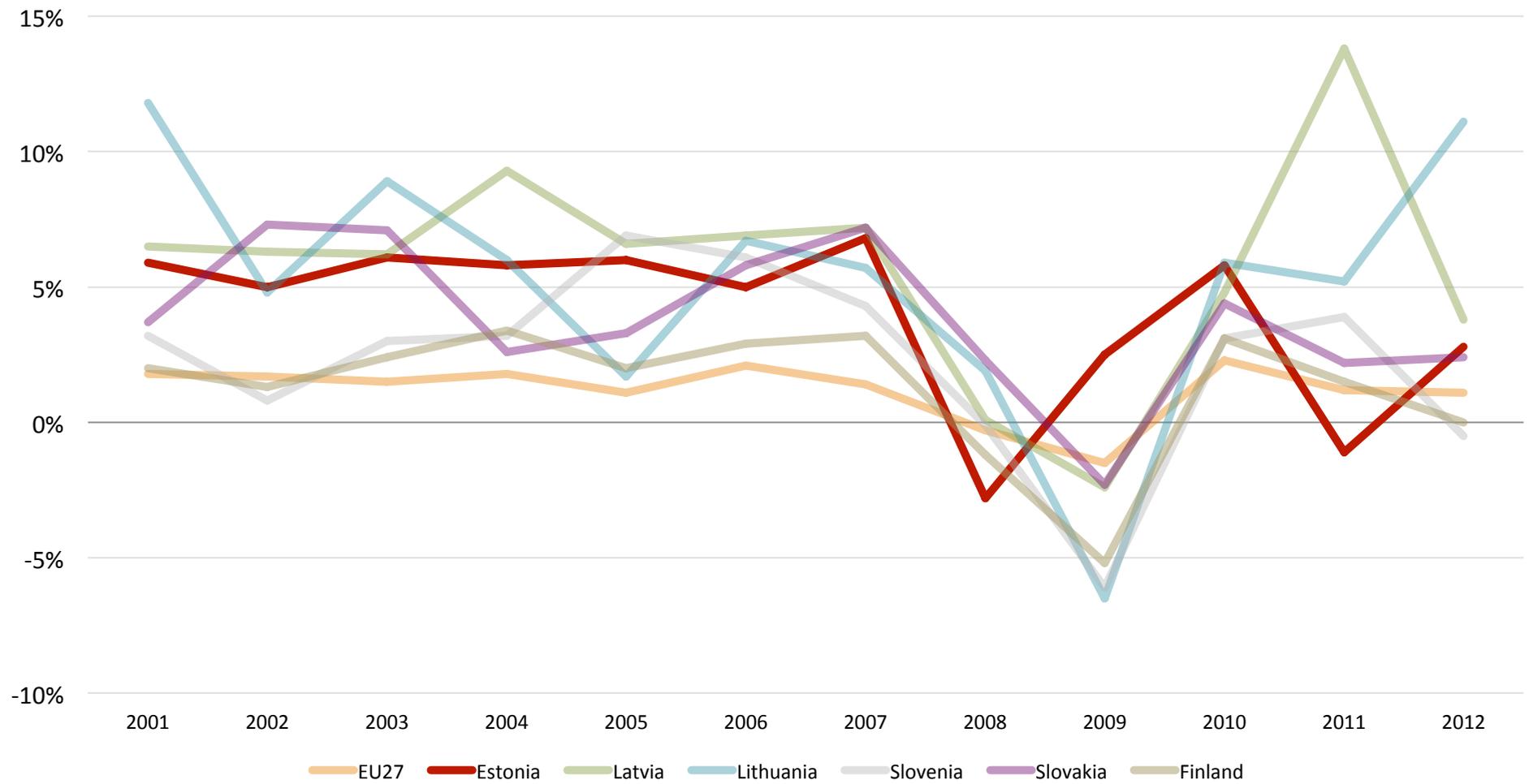
Source: Statistics Estonia

Figure 25: Productivity Evolution (2005=100)



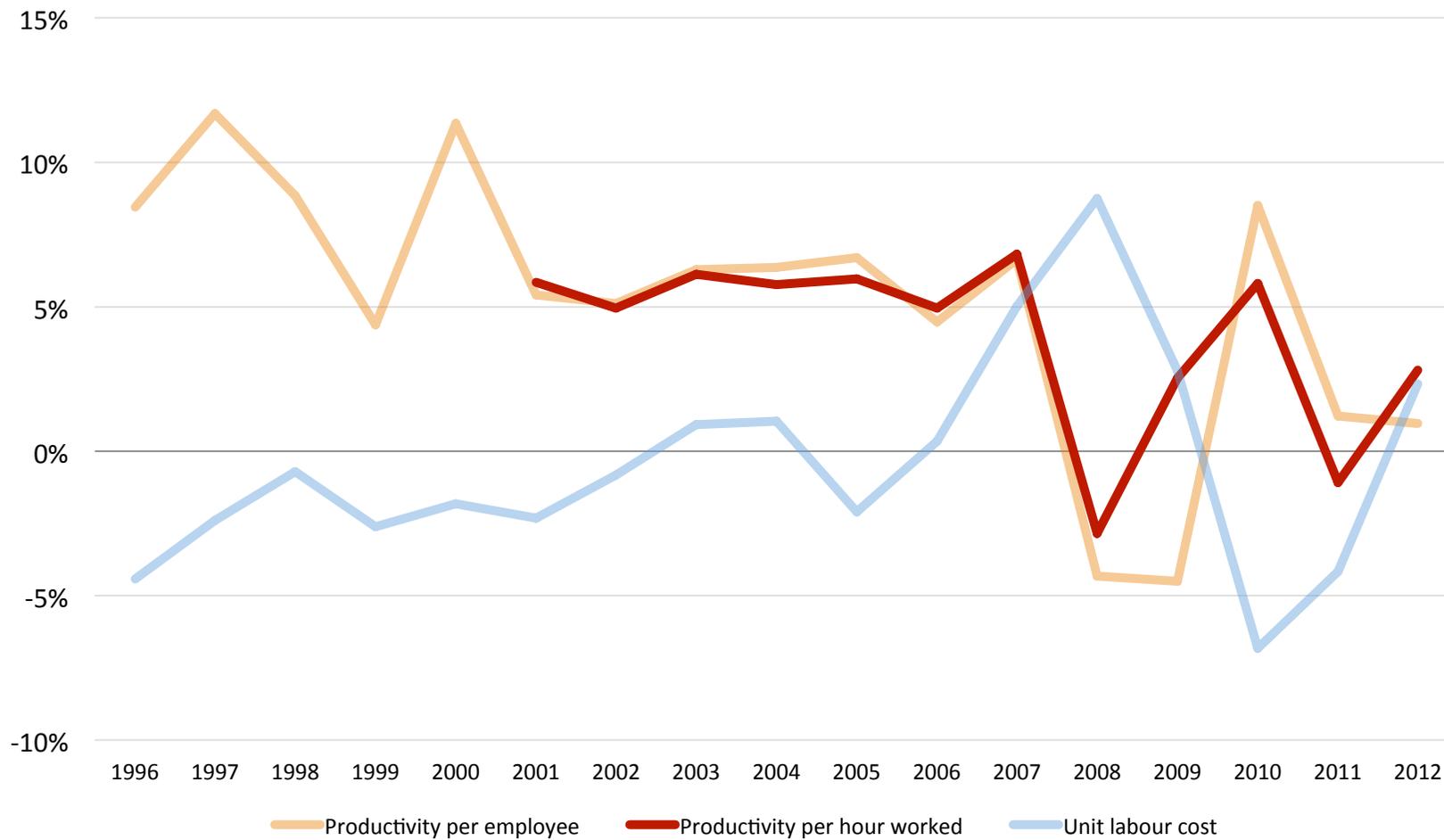
Source: Statistics Estonia

Figure 26: Productivity Annual Growth Rate



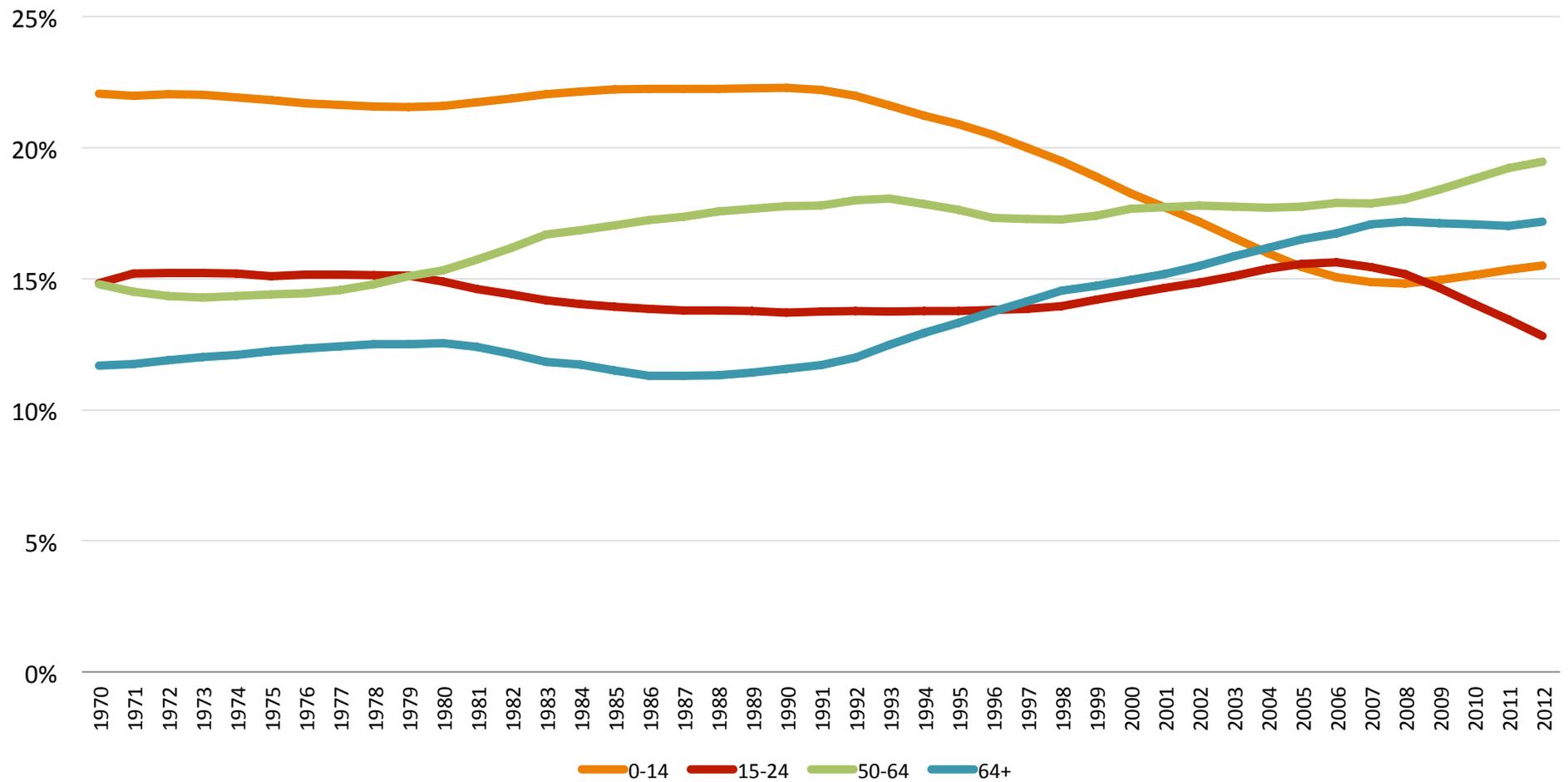
Source: Statistics Estonia

**Figure 27: Productivity Annual Growth Rate: comparing with unit labour costs**



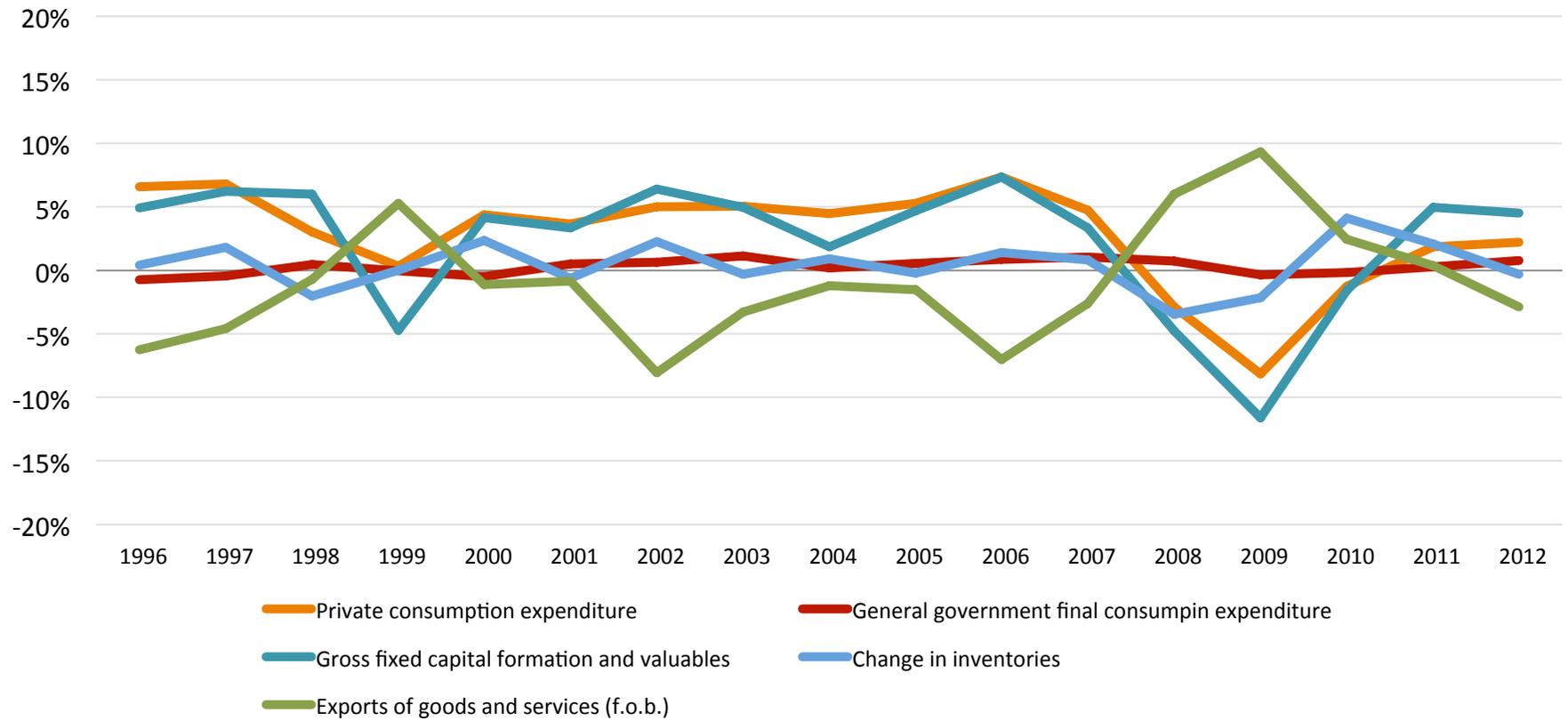
Source: Statistics Estonia

Figure 28: Population per Age: Younger and Older Groups



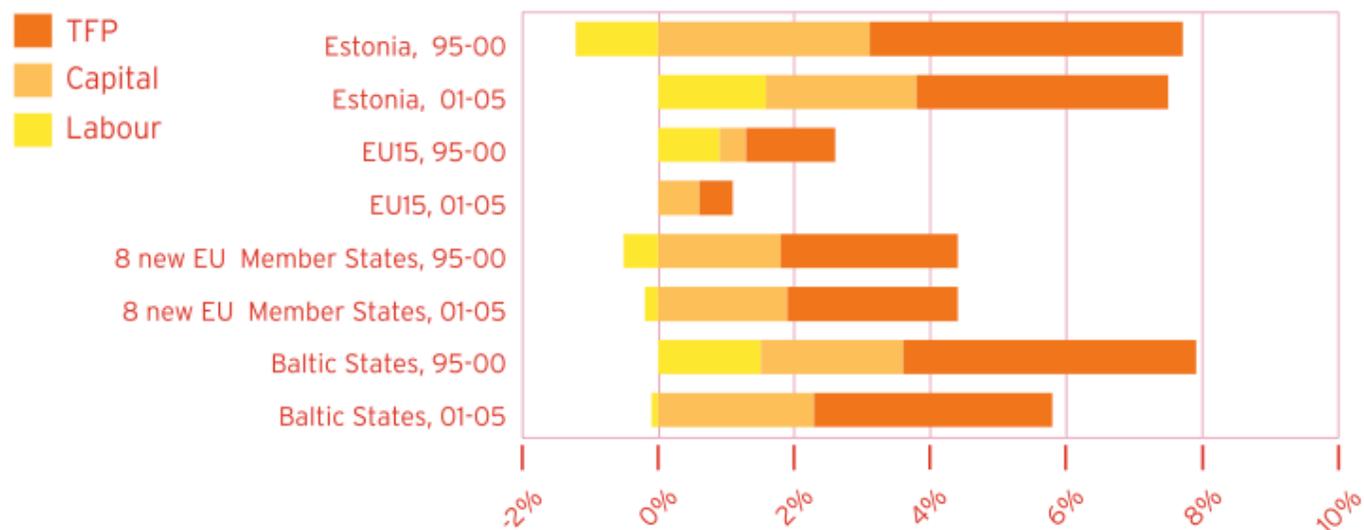
Source: Statistics Estonia

**Figure 29: Sources of GDP Growth (Expenditure)**



Source: Statistics Estonia

**Figure 29: Sources of GDP Growth**



**Table 1: Main Countries Importing from Slovakia as a Percentage of Total Imports**

	2004	2005	2006	2007	2008	2009	2010	2011	2012
<b>Sweden</b>	15.26	13.08	12.26	13.31	13.81	12.59	15.61	15.62	15.92
<b>Finland</b>	22.67	26.39	18.02	17.7	18.39	18.52	17.01	15.08	14.53
<b>Russia</b>	5.6	6.48	7.84	8.83	10.39	9.27	9.66	10.93	12.08
<b>Latvia</b>	8.51	9.1	9.06	11.51	9.96	9.45	8.88	7.97	8.74
<b>Lithuania</b>	4.53	4.63	4.88	5.91	5.67	4.75	5	4.57	5.38

<b>US</b>	3.18	3.08	6.62	4.17	4.81	4.22	3.78	6.24	4.66
<b>Germany</b>	8.23	6.09	5	5.21	5.07	6.1	5.2	4.58	4.51
<b>Norway</b>	3.26	2.87	2.65	3.37	3.3	3.17	3.43	3.01	3.36
<b>Netherlands</b>	2.89	2.42	2.37	2.68	2.29	2.47	2.32	2.66	2.45
<b>Denmark</b>	3.24	3.15	2.57	2.72	3.25	3.47	2.49	2.55	2.37
<b>UK</b>	3.81	3.54	2.47	2.79	2.68	2.02	1.97	2.01	2.1
<b>Belgium</b>	1.15	1.31	1.01	1.02	1.19	1.9	1.28	1.2	1.84
<b>Italy</b>	0.85	0.79	0.72	1.06	1.24	1.13	0.92	1.61	1.43
<b>Poland</b>	1.06	1.17	1.18	1.46	1.89	1.75	1.63	1.52	1.41
<b>Nigeria</b>	0.02	0.22	0.37	0.08	0.81	2.91	1.89	3.26	1.41
<b>France</b>	1.5	1.23	1.34	1.35	1.36	2.3	2.46	2.63	1.35
<b>Turkey</b>	0.62	0.81	1.07	1.28	1.82	0.9	1.14	1.23	1.28
<b>Spain</b>	0.68	0.74	0.6	0.57	0.69	0.64	0.74	1.36	1.1
<b>Ukraine</b>	1.68	1.38	1.53	1.48	1.66	1.11	1.01	0.88	0.95
<b>Mexico</b>	0.02	0.04	0.02	0.08	0.32	0.06	0.05	0.05	0.88
<b>China</b>	0.6	0.54	2.74	0.81	0.63	0.85	1.28	1.69	0.81

Source: Statistics Estonia

**Table 2: Risk of Poverty Per Labour Category as a Percentage of Total Population**

	<b>Wage employee</b>	<b>Self-employed</b>	<b>Unemployed</b>	<b>Retired</b>	<b>Inactive</b>
<b>2000</b>	9		49.5	18.1	27.9
<b>2001</b>	9.1		46.9	21	27
<b>2002</b>	8.7		48.4	20.6	28.3
<b>2003</b>	9.1		49	19.4	30.9

<b>2004</b>	5.4	31.1	60	22.8	29.2
<b>2005</b>	5.7	31.1	59.5	28.7	28.8
<b>2006</b>	6.2	28.2	61.7	36.9	30.1
<b>2007</b>	5.8	29.5	60.6	43.3	29.1
<b>2008</b>	6.9	24.4	55.2	37.9	28.4
<b>2009</b>	5.4	19.5	46.7	17.9	26.9
<b>2010</b>	6.1	29.2	52.1	14.9	30
<b>2011</b>	6.7	26.7	55.5	19.6	31.7

*Source: Eurostat*

**Table 3: People Receiving Unemployment Benefits**

<b>2003</b>	8651
<b>2004</b>	14888
<b>2005</b>	12238
<b>2006</b>	8990
<b>2007</b>	8011
<b>2008</b>	15402

<b>2009</b>	57617
<b>2010</b>	61012
<b>2011</b>	32127
<b>2012</b>	26189

*Source: Statistics Estonia*

**Table 4: Average Duration of Unemployment Benefits (Days)**

<b>2003</b>	146	<b>2004</b>	144	<b>2005</b>	140	<b>2006</b>	135	<b>2007</b>	160	<b>2008</b>	188	<b>2009</b>	200	<b>2010</b>	187	<b>2011</b>	179
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*Source: Statistics Estonia*

**Table 5: Number and share of valid votes cast for political parties**

<b>Political Party</b>	<b>Number of valid votes cast</b>	<b>Share of valid votes cast in %</b>
<b>Estonian Reform Party</b>	164,255	28.6%
Estonian Centre Party	134,124	23.3%
Fatherland and Res Publica Union	118,023	20.5%
Social Democratic Party	98,307	17.1%
<b>Party of Estonian Greens</b>	21,824	3.8%
<b>People's Union of Stonia</b>	12,184	2.1%
Russian Party in Estonia	5,029	0.9%

*Source: Estonian Ministry of Interior*