

Economic Transition in Estonia. Background, Reforms and Results

1. Introduction

This chapter surveys and discusses the reforms that have reshaped the Estonian economy since the country regained independence in 1991. The reforms have dismantled the centrally planned economy and established a market-based economy. The main objective has been to develop the Estonian economy and improve living standards, i.e. to bring about higher income and more choice while ensuring adequate social protection.¹

With membership of the EU and most reforms effectuated, it is expedient to look back and evaluate the reform process and its economic consequences. We briefly describe the background for the reforms, i.e. the centrally planned economy that had emerged as a result of almost 50 years of Soviet dominance. The main reforms are discussed with an emphasis on the far-ranging decisions that were made at an early stage. We then review the economic developments during the last decade and seek to give an overall assessment of the consequences of the reforms. This leads on to a discussion of some points of contention and of areas where further reforms are needed.

While the consequences of the reforms put through in the larger transition economies in Central Europe (e.g. Poland, the Czech Republic, Hungary) are widely covered, the lessons to be learned from the smaller transition economies are less well appreciated. In Estonia's case, this is unfortunate, since the country has pursued a

Estonia in brief

- Area: 45,200 km²
- Population: 1.35 million (Jan. 2004)
- Population growth: -0.4% (2003-04)
- Capital: Tallinn (397,000 inhabitants, Jan. 2003)
- Gross Domestic Product per capita, adjusted for purchasing power: 42% of EU15 average (2003)

Sources: Statistical Office of Estonia, Eurostat (2004)

¹ The issue of economic development was also a dominant subject matter during the debate on EU membership. One pro-EU campaign poster showed, on the left, a large *jab* (yes) and a happy woman shopping in a well-stocked supermarket, while, on the right, an *ei* (no) was accompanied by a homeless man rummaging through a rubbish dump!

unique reform strategy based on a strong market-oriented focus and on adherence to very prudent monetary and fiscal policies.² Estonia has frequently been singled out as a country pursuing a big-bang strategy with early and bold steps in almost all reform areas. One might wonder whether this perception is correct. If so, has the policy been successful? Who are the winners and the losers? Which lessons can be learned for future reform?

Few surveys and narratives covering the overall process of economic reforms in Estonia have been published. Berengaut *et al.* (1998) focus on a number of early reforms in the Baltic States and discuss the implications of EU-membership. OECD (2000) compares the economic performances of the three Baltic States during the second part of the 1990s, but does not emphasize the transition element of reforms. Vensel & Wihlborg (2001) present a volume of articles that focus on enterprise restructuring, financial sector developments, and other selected issues, but do not attempt to give an *overview* of the economic reforms and developments. Laar (2002) combines an overview of the early reforms with personal experiences as a politician and a Prime Minister. Approximately once a year, the International Monetary Fund publishes a survey of the Estonian economy, e.g. IMF (2003c).

Our impression is that, taken as a whole, the economic reforms have been designed and implemented remarkably well. The overall reform strategy has been maintained since the inception of reforms – in spite of rapid changes of government. This generally positive assessment is underscored when one considers the often very difficult and uncertain environment in which reforms had to be undertaken, especially at the early stages. Compared to other countries emerging from the former Soviet Union, Estonia, together with the two other Baltic States, stands out with respect to democratic rights, economic reforms and improved living conditions.

The overall satisfactory record still leaves areas where one might question whether the reforms are appropriate. The privatisation of the very largest companies has in some cases been disorderly. While the government has exerted a laudable degree of macro-economic prudence, the current account deficits have generally been very large and could be a matter of concern in the medium term. The taxation of low-income earners appears excessive and might cause unemployment and societal

² Aslund (2002, p. 12) writes: “The possibly greatest success story, Estonia, has been comparatively poorly studied...”

fragmentation. The EU membership brings new opportunities, but also new challenges.

The chapter is structured as follows: Section 2 gives a brief overview of the Estonian economy before 1991. Section 3 goes through the Estonia reform policies and their economic significance. Section 4 presents data for Estonia's economic performance since its independence. Section 5 discusses a number of contentious and/or unresolved issues. Finally, section 6 offers some concluding comments.

2. Background

A brief review of developments before Estonia regained independence in 1991 will prove useful for the understanding of the reform process. The importance of initial conditions for transition reforms has recently been confirmed in case studies as well as in formal statistical analyses (e.g. Feldmann & Razeen 2001, de Melo *et al.* 2001).

Livonia, the area that constitutes Estonia and parts of Latvia, was incorporated into the Russian empire in 1721. Although an integral part of the empire, the area retained a large degree of self-government exercised by the dominating German nobility (Misiunas & Taagepera 1993). In many respects, the Estonian and Latvian areas functioned as laboratories in which policies could be tested before being implemented in the rest of the vast Tsarist empire. Serfdom was abolished in 1819, 42 years earlier than in the rest of Russia. The agricultural sector prospered during the 19th century, aided in part by the proximity to the large market in St. Petersburg and the construction of a railway between St. Petersburg and Tallinn. Estonia experienced some industrialisation and was a resort area for the wealthy St. Petersburg elite.

Estonia proclaimed its independence in 1918 after the Bolshevik take-over in Russia, but went through two years of conflict before Soviet Russia accepted Estonian independence. In spite of political complications, Estonia enjoyed rapid economic growth during the interwar period. Land reforms improved the farmers' conditions, but the country also prospered from small-scale industrialisation and the development of oil shale mining. With the independence, almost all economic links with the eastern neighbour were severed, but trade was rapidly reoriented towards markets in the West (Ahde & Rajasalu 1993).

Estonia remained poorer than most Western European countries, but the difference in production levels and living standards was not striking. In the early 1930s, per capita national income in Estonia was approximately 60% of that in

Sweden (Central Statistical Bureau of Latvia 2002: 19).³ The difference was even less obvious in comparison to Finland, Estonia's northern neighbour. Household income and living standards in Estonia were only slightly lower than those in Finland, or possibly at the same level (Hagfors & Kuus 1993).

After having been seized by the Soviet Union in connection with the Second World War, Estonia became an integral part of the Soviet economic sphere (Ahde & Rajasalu 1993). All means of production were nationalised, including manufacturing, service industries, and housing. Farms were collectivised and centralised in increasingly large units. New investments were placed in heavy industry, textiles, and military production. Communism meant central planning, i.e. the firms' production and prices were decided in annual plans. Consumer prices were fixed for extended periods. Still, the planning system paid little attention to consumer preferences and profitability, and the results were periodic shortages and low product quality (Gros & Steinherr 1995, chp. 2).⁴

It is difficult to assess the economic performance during the post-war period from 1950 to 1990. Soviet statistics were to a large extent used for propaganda purposes, and the methodology differed from western standards. Official Soviet data showed that the Estonian economy grew rapidly in the post-war period. The Net Material Product (basically production excluding services, net of capital depreciation) grew at least twice as fast as overall production in Finland (Ahde & Rajasalu 1993, figure 1). However, there is little reason to trust the impressive official growth rates. Data from the World Bank suggest that the Estonian production in 1990, adjusted for differences in purchasing power, was approximately 30% of the Finnish.⁵ In addition,

³ The Latvian per capita income was comparable to the Estonian, while the Lithuanian was approximately 35% lower.

⁴ The insistence on maintaining fixed prices in the communist economies with central planning is somewhat puzzling. It led to queues and inefficient use of resources. For example, low rents caused permanent housing shortages and starved the sector of resources, which led to low housing standards. Keeping prices fixed in spite of changes in consumer demand and production costs was likely ideologically motivated and intended to demonstrate the superiority of the communist economic model (Gros & Steinherr 1995, chp. 5).

⁵ Production data for planned economies are calculated using different measures than in the West, differ from source to source, and are generally unreliable. World Bank (1996: 189) asserts that in 1987 the Estonian Gross National Product (GNP), adjusted for purchasing power, amounted to 40% of the Finnish. World Bank (1993: 125) gives an estimate of the Gross Domestic Product (GDP) in 1990, which implies that the Estonian production amounted to approximately 25% of the Finnish. (GNP comprises GDP plus factor payments earned abroad. In this case the difference between the two measures is negligible.) Ahde & Rajasalu (1993) give numbers for the Estonian GDP in 1987 ranging between 10% and 25% of the Finnish GDP (using, respectively, parallel and official exchange rates). Data for production in planned economies are in many cases overstated (Aslund 2002, chp. 4). One reason is that the planned prices were essentially arbitrary

the economic structure was severely distorted. The military and paramilitary forces, the security police etc. absorbed a disproportionate share of the resources. Data for household income reveal that at the end of the 1980s the average Estonian household's purchasing power was at most 20-25% of that of a Finnish household, probably significantly less (Hagfors & Kuus 1993). The supply of services and private consumption goods was very limited, shortages prevailed, and the product quality was generally low.

The relative backwardness of the Soviet Union became increasingly evident, and Mikhail Gorbachev was appointed general secretary of the Communist Party in 1985 with a mandate to modernise the stagnating economy (Gros & Steinherr 1995, chp. 1). Small-scale private businesses ("co-operatives") were allowed within the service sector. An enterprise reform with the goal of decentralising decision-making came into effect in 1989. As a result, enterprise managers gained influence over the setting of wages, while prices remained determined in the plan. The result was large wage increases, which cut the firms' surplus and hence their tax payments. Government finances deteriorated and the Soviet authorities began to finance the budget deficit by printing money. The result was an increasing amount of money chasing the same amount of goods. In economies with market-determined prices the result would have been (higher) inflation, but in the Soviet Union the consequence of the monetary overhang was "repressed inflation," i.e. shortage of essentially all goods (Gros & Steinherr 1995, chp. 5)

From 1990 the Soviet economy was shrinking fast, shortages were endemic, and trade among the republics was disrupted. This spread to Estonia and made everyday life more difficult. Indeed, the economic prospects were bleak, but there were some bright spots. Gorbachev's *glasnost* had made possible increased contact with the outside world. Decentralisation had opened up for increased self-governance, also with respect to economic matters. In December 1989, a price reform let the prices on many products float, the state trading monopoly was abolished, and privatisation of small enterprises was initiated. A budget reform brought about de facto fiscal autonomy from the beginning of 1991 and made possible the introduction of a new tax system (Laar 2002: 89-96).

and did not reflect the relative scarcity of products. Thus, many productions units detracted value in the sense that their final products were worth less than the inputs going into the production.

However, as long as Estonia did not have independence, it had little chance of carrying through a consistent reform strategy. The political situation in the Soviet Union was extremely uncertain; Soviet troops still stationed on Estonian territory could at any time suppress the hope for independence. On August 20 1991, after the old communists' failed coup in Moscow, Estonia declared its independence.

3. Transition Reforms

With its independence, Estonia could implement economic reforms without being subjected to pressure from the outside. The reforms were the result of political processes in the newly independent country, but a large number of constraints were present (see Laar 2002, chp. 4). As was mentioned above, Estonia's economic situation was deteriorating. The administrative apparatus in Tallinn was targeted towards the administration of a Soviet republic, not of a new independent state. Few had a clear perception of the functioning of a market economy. Thus, the reforms were commenced in a challenging environment (World Bank 1993; Aslund 2002, chp. 3; Laar 2002, chp. 2).

The large number of reforms and legal and administrative changes makes it convenient to group the reforms under a few broad headings. Following Islam (1993), we consider four categories, namely liberalisation, stabilisation, privatisation, and finally structural and institutional reforms. This grouping broadly follows the sequencing and chronology of events. The liberalisation and stabilisation policies were most intensive at the beginning of the 1990s, privatisation in the middle of the decade, while implementation of the broad range of structural and institutional reforms has been an ongoing process, which is still in progress in certain areas.

3.1 Liberalisation

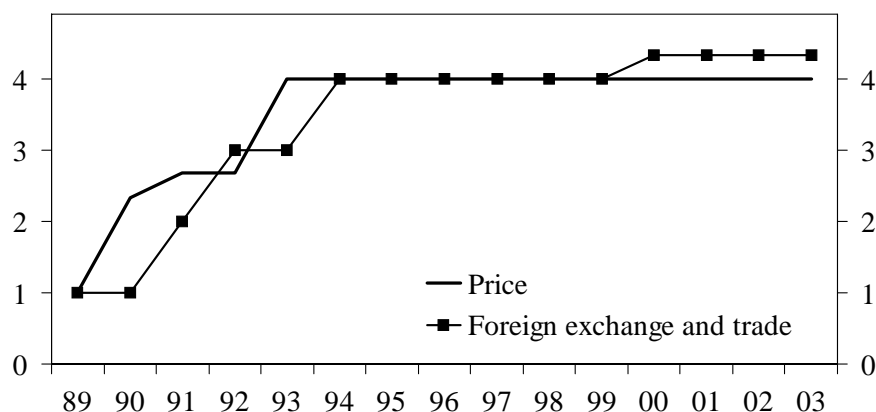
The main prerequisite for a market economy is that producers and consumers are free to react to market signals. If consumers appreciate a product, high demand will lead to a high price and hence be an incentive to increase production. A product in low demand will attain a low price that again will lead to production cutbacks. This simple notion lies behind the liberalisation of prices, trade, and production. By allowing economic actors to react to market signals, the economy's productive resources can

be directed towards consumer needs, waste and squandering are reduced while innovation is stimulated (Aslund 2002, chp. 5).

To abridge a large amount of descriptive information on reform progress and to facilitate illustration, we will occasionally use indices reflecting the reform progress in various areas. The European Bank for Reconstruction and Development (EBRD) assesses the reform progress in a number of areas and publishes the results in its annual *Transition Report*, e.g. EBRD (2003).⁶ The indices are constructed by combining data for specific variables of interest and qualitative assessments by e.g. the EBRD's representatives in the various transition countries.

The indices cover a range of areas reflecting different fields of economic transition. Each index can take a value between 1 and 4.33. An index value of 1 indicates that the area in question is unreformed and functions along Soviet-style lines. An index of 4.33 denotes that the area is thoroughly reformed and functions along the best norms in modern market economies. A value of 3 generally indicates that many reforms have taken place and that the area to a large degree functions according to market-based principles. (See EBRD (2003: 15-18) for more details on the construction and interpretation of the indices.)

Figure 1. Price liberalisation and foreign exchange and trade liberalisation, indices



The indices reflect the EBRD's qualitative assessment of reform progress in the area. The minimum value is 1 reflecting no reform, and the maximum value is 4.33 reflecting the best practices of market-based economies. See also text.

Source: EBRD (various years).

⁶ Country-specific indices for the period 1989-90 have not been published. However, the EBRD has kindly made available the data in electronic form.

Figure 1 shows indices that reflect the degree of price liberalisation and the degree of external liberalisation in Estonia throughout the period 1989-2003. For price liberalisation, an index value of 1 indicates that the government controls most prices, while 4 indicates that basically all prices are liberalised. For the foreign exchange and trade liberalisation index, 1 indicates full state control over foreign trade and foreign exchange transactions, while 4.33 indicates full external liberalisation.

The first round of price liberalisation was implemented while Estonia was still part of the Soviet Union. In December 1992 the next round of comprehensive price liberalisation was carried out. Since 1993, only the prices of a few items have been subject to regulation, mainly publicly provided housing, electricity, and heating (OECD 2000a, chp. I).⁷

Most regulation of enterprise activity had de facto ceased before independence in August 1991. Most state-owned companies were made to compete in the marketplace, and could determine their own production, employment, etc. From 1992, state-owned enterprises – as well as private ones – could be declared bankrupt (OECD 2000a, chp. I). New firms could freely enter and exit, and permits were only required in a few industries (e.g. weapons production).

Importantly, external transactions were also liberalised at an early stage, for enterprises as well as for private persons (Feldmann & Sally 2001). International trade was liberalised and almost all tariffs were abolished during the first years of transition. During the period 1997-99, Estonia did not have any restrictions on international trade and consequently did not receive any tariff revenue.⁸ Starting in 2000, Estonia reintroduced some tariffs as part of its preparations for EU membership. Estonia entered into free trade agreements with a large number of countries during the 1990s, most importantly with the EU through an Association Agreement signed in 1995.

The abolishment of quotas and duties also included agricultural products. The result has been low food prices that have benefited the Estonian consumers. On the other hand, the lack of protection from world market competition has led to a significant reduction in the Estonian agricultural sector (OECD 2000a, annex I).

Foreign exchange was largely liberalised when the new Estonian currency, the *kroon*, was introduced in June 1992. Full current account convertibility was attained in

⁷ The *Heritage Foundation* assesses that in 2003 Estonia, Denmark and Iceland are the three countries in the world with the freest determination of wages and prices (Heritage Foundation 2003).

⁸ Only Hong Kong and Singapore have equally free trading regimes (Feldmann & Sally 2001).

1994 when remaining restrictions on trade, interest and transfer payments were abolished. Full capital account convertibility was achieved in 2001, with the removal of the last restrictions on international financial transactions (EBRD 2002, p. 142). Already in September 1991, Estonia introduced a legal framework that opened up for foreign direct investment (FDI).

The rapid and comprehensive opening of the Estonian economy is also reflected in the EBRD's index for external liberalisation, cf. Figure 1. Estonia has become a very open economy with a very large trade turnover relative to its production (Feldmann & Sally 2001).

3.2 Stabilisation

An immediate problem after independence was the high and increasing inflation. In 1991, the annual inflation was above 200 percent, and by 1992, it reached close to 1100 percent. This level of financial instability was unsustainable. Economic transactions were impeded and the value of rouble savings evaporated almost overnight. Two factors were at play here.

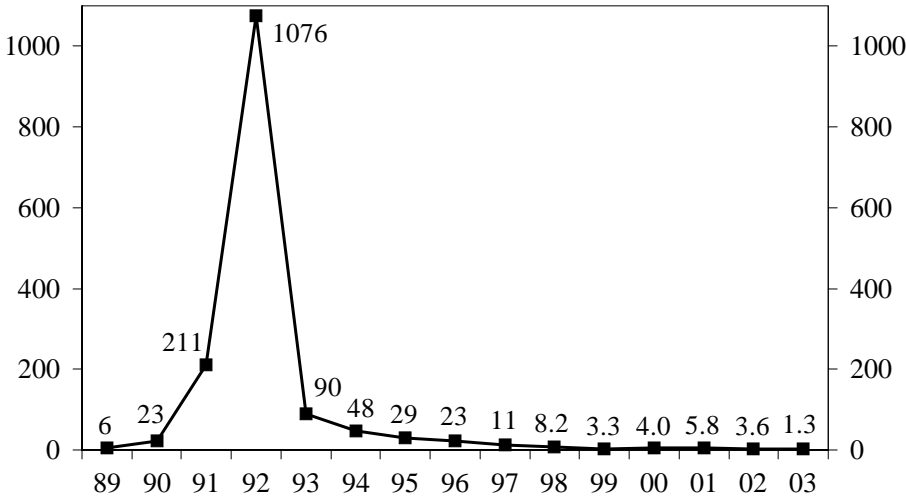
First, the excessive credit supply during the twilight of the Soviet Union had, as noted earlier, led to the public accumulating a surplus of money. As long as almost all prices were controlled, queues appeared when people tried to spend the money; but when pricing was liberalised, the immediate result was a great increase in prices. Second, Estonia still used the Soviet rouble, and all nations emerging from the Soviet Union issued roubles without restraint. The result was a rapidly expanding money stock, which resulted in extreme inflation (Aslund 2002, chp. 6). Figure 2 shows the consumer price inflation in Estonia since 1989 based on annual changes in the average consumer price index.

The Estonian government realised that the extreme inflation could not be stopped as long as the rouble was used. As the first ex-Soviet country, Estonia introduced its own currency and thus gained control over its money supply. The new currency, the kroon, was put in circulation on 20 June 1992 and made sole legal tender a few days later (Laar 2002, chp. 5).

The kroon was from the outset pegged to the German mark within a currency board arrangement that fixed the exchange rate at 8 kroons to one DM. The currency board meant that the Estonian central bank, *Eesti Pank*, was allowed to issue domestic currency only to the extent that it had foreign currency reserves of a similar

value. Eesti Pank guaranteed that 8 kroons would always buy 1 German mark, as it always stood ready to exchange currencies at this rate. Eesti Pank’s foreign exchange reserves came from the gold reserves of the first Estonian Republic. The gold, or its currency equivalent, was returned to Estonia when it regained its independence (Laar 2002, chp. 5).⁹The peg was switched to the euro on 1 January 1999 (15.6466 kroons = 1 euro), when the German mark was formally replaced by the new European currency.

Figure 2. Consumer price inflation, percent per year



Sources: EBRD (various years), Statistical Office of Estonia

The establishment of a currency board prevented the central bank from supplying credit. Eesti Pank stopped lending to both commercial banks and the government. The government acted to cut the deficit, in 1993 enacting a law requiring the budget to be balanced at all times. The government budget showed a surplus in 1994 and has since been in balance (with the exception of 1999). As a precautionary measure, the government set up the Estonian Stabilisation Reserve Fond in 1997. The fund invests abroad and can be tapped in exceptional circumstances. Revenues from the privatisation are directed into the fund. The main source has been the proceeds from the sale of the national telecommunication company *Eesti telefon* (OECD 2000a: 99)

⁹ Curiously also the logging rights to 150,000 m³ of wood (!) were transferred to the Central Bank (Laar 2002: 121). The intention was presumably that in case of a currency attack, the Central Bank could sell the logging rights in order to replenish the foreign currency reserve.

The Estonian stabilisation program is generally considered to have been a major success (Berengaut *et al.* 1998; OECD 2000a, chp. II). Since 1997, inflation rates have been in the single digit range, and the inflation has gradually converged towards the level that one finds in the euro-zone. The fixed exchange rate has functioned as a “nominal anchor” increasingly linking domestic inflation to European inflation levels.

3.3 Privatisation

The state-owned firms in the planned economies were perceived to be wasteful and unaccustomed to react to market signals. Managers of state-owned companies had incentives to demand subsidies or protection from the government instead of restructuring the businesses (Aslund 2002, chp. 7). In this context, it was hoped that the privatisation of companies would create new owners who would force through management changes, cut down on waste, introduce new products, and find new markets. However, this requires that the owners are motivated to do so, and are able to exercise corporate governance, i.e. to gain control over management decisions. A leading motive for the Estonian privatisation process was that ownership should be concentrated and clearly defined, thus facilitating corporate governance (Laar 2002, chp. 10).

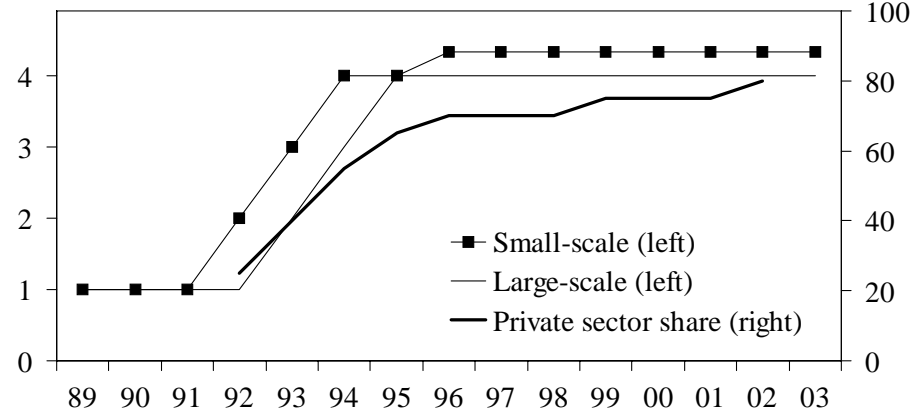
Already in Soviet times, *de facto* private enterprises had emerged in Estonia. In December 1990, a number of small-scale businesses, mostly within service, retail, and catering, were privatised through sale to insiders, i.e. employees and managers. Still, when Estonia regained its independence the vast majority of all firms were state-owned. Predictably, the process of privatising nearly all companies, land, and residential property must be complicated, politically sensitive and subject to alterations over time (Terk 2000, Purju 1996). The following brief survey will touch upon only some of the many issues involved.

A basic principle of the Estonian privatisation was the restitution of property to the former owners or their descendants. This choice was partly meant to demonstrate the continuity between the interwar Republic and the restored independent Estonia. The Soviet occupation was regarded as illegal and the Soviet nationalisation should thus be reversed (Laar 2002, chp. 10). More than 200,000 restitution claims were filed and each was examined individually. In case a restitution claim was deemed justified, but the property could not be returned, or if the claimant

did not want it returned, he or she was offered compensation in the form of restitution vouchers. These vouchers could be used as payment for residential property that was being privatised or at privatisation auctions. Restitution was the major means of land privatisation, albeit the process stretched throughout the entire decade of the 1990s (Terk 2000, chp. 5).

All permanent residents of Estonia were offered “capital vouchers,” which could be used as a means of paying for one’s residential property or for property being auctioned off. The vouchers were eventually made transferable and were in large part bought up by foreign firms that used them as payment when buying privatised Estonian companies (see below).

Figure 3. *Small-scale and large-scale privatisation, indices. Private sector share, percent of GDP*



The indices reflect the EBRD’s qualitative assessment of reform progress in the area. The minimum value is 1 reflecting no reform, and the maximum value is 4.33 reflecting the best practices of market-based economies. See also text.

Source: EBRD (various years).

The privatisation of small-scale businesses was relatively uncomplicated. Most of the smaller firms were sold off at auctions. Initially, insiders were favoured, as they were given a right to buy their company at a pre-set minimum price. These advantages were curtailed in 1992, and removed entirely in 1993 (Purju 1996; OECD 2000a, chp. V). By 1992, approximately 50% of all small-scale firms were privatised; by 1995 privatised companies made up close to 90% and by 1997, close to 100% (EBRD 2000: 160).

The privatisation of large-scale businesses followed the “Treuhand-model,” i.e. direct sale to the buyers that were expected to offer the most favourable prospects for

the enterprises. The Estonian Privatisation Agency was set up in 1992 to undertake the sales, receiving expert help from Germany. The agency sold controlling share holdings to both domestic and foreign buyers. The aim was not necessarily to obtain the highest possible price, but rather to find core investors with industrial experience and a strong business plan. Employment and investment guarantees were also given weight (Laar 2002, chp. 10).¹⁰ Remaining minority shares were later auctioned off for cash or vouchers.

Figure 3 shows the EBRD's assessment of the extent of small-scale and large-scale privatisation in Estonia. An index value of 1 indicates no reforms and little or no private ownership, while an index value of 4.33 corresponds to the typical degree of private ownership in market economies. The bulk of enterprise privatisation was completed by the mid-1990s with only a small number of large firms (mainly the perceived natural monopolies) remaining in state ownership. By 2003, the electricity company and the Tallinn harbour were the only remaining major, state-owned enterprises. Figure 3 also shows estimates of the private sector's production as a share of the total production in Estonia. Since 1999, the private sector has been responsible for just around three quarters of the total production.

3.4 Institutional and structural reforms

A market economy requires an institutional and structural underpinning. Indeed, the economic performance of a market economy is likely to depend in large part on the quality and specific set-up of its institutions and legal system (North 1990, 1997; Roland 2000; Stiglitz 2001). The underpinning stretches from contract and private property laws to social safety nets to help those loosing out in the market economy. As a large number of reforms have been undertaken in these areas, only a summary treatment can be offered here.¹¹

¹⁰ The revenue raised from privatisation has consequently been small. Data from EBRD (2002: 144) specify that the accumulated privatisation revenues until 1998 amounted to only 0.3% of GDP, while the revenues until 2001 amounted to 7.2% of GDP. The increase from 1998 to 2001 relates to the privatisation of the major telephone company. Considering that almost all state-owned enterprises were sold at the end of 2001, the privatisation revenues are comparatively small.

¹¹ EBRD (various years) provides chronologies (under "Country assessments"), which are used in this subsection if no other source is indicated.

Property, contract and competition rights

At the most basic level, a market economy requires legal institutions to safeguard and regulate property rights, contracts and trade (Islam 1993; World Bank 1996, chp. 5). Private ownership was established in 1990. In 1991, further legislation was put through to regulate the rights to ownership of, and trade with, land. The property rights laws were amended several times during the 1990s. A bankruptcy law was enacted in 1992 and was later changed several times. A revised contract law was passed in 2001. The first law regulating competition was introduced in 1993 and was revised in 2001 in order to comply with EU requirements (EBRD 2002: 142-143).

Taxation system

Already at the beginning of 1991, when Estonia was still a part of the Soviet Union, the Soviet turnover taxes were replaced by taxation of income (OECD 2000a, chp. III). A 33% “social tax” (pay-roll tax) was levied on the wage-bill with 20 percentage points going towards the pension fund and 13 percentage points towards the health fund. An income tax was also introduced. The income tax was simplified in 1994, when it was decided that all Estonians were to pay 26% of all personal income exceeding a small tax-exempt allowance. The rate has remained unchanged until 2004 in spite of successive governments arguing for income tax changes.

A value-added tax (VAT) was introduced in 1994 and the rate set at 18%. Lower rates apply for, among other items, books, and utilities. In addition, there are excise duties on, for example, alcohol, tobacco, fuel, motor vehicles, and packaging. The corporate profit tax is 26%, but reinvested profit (i.e. profit not paid out to owners) has been tax-exempt since 2000.

Financial sector

The development of banks, stock markets, insurance companies etc. is an integral part of the transition process. The government plays an important role in regulating and supervising these industries and in setting up the necessary institutional support framework. The central bank, Eesti Pank, was re-established in 1989 and was given substantial autonomy in 1993. Banking regulation was enacted in 1993, after serious bank crises, but banking regulation has been changed repeatedly throughout the 1990s. An integrated financial sector supervision agency was set up in 2002.

There is some uncertainty with respect to the effectiveness of the financial regulation in Estonia (OECD 2000a, chp. IV). However, most major financial institutions – including almost the entire banking sector – have (especially since the Russian crisis in 1998) been taken over by foreign owners, which presumably reduces the risk of systemic crises.

Social welfare reform

Estonia inherited a relatively extensive social safety net from the Soviet Union.¹² Laws governing the universal health care system, sickness benefits, family benefits and social insurance have been modified frequently. Unemployment benefits were introduced in 1991 together with elements of active labour market policies; the latest reform in the area was enacted in 2002.

Estonian independence led to relatively few changes in the pension system and the basic principle of current taxpayers financing current state-pensions remained in situ until major reforms were implemented in the late 1990s (Raudla & Staehr 2003). An entire complex of laws reforming the pension system was completed in 2002. The new pension system comprises three “pillars”: The first is a modified version of the existing universal pension; the second consists of (mostly) compulsory pension savings in individual funds; the third comprises supplemental voluntary retirement savings.

3.5 The Estonian reforms

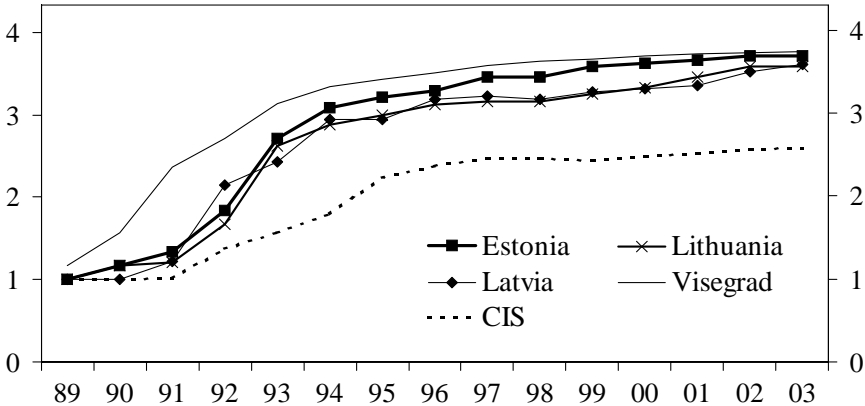
At the end of 2003, Estonia had completed most of the reforms and established a market economy. Liberalisation and stabilisation had enabled economic agents to react to market signals, privatisation had reduced the direct role of the government in the economy, and a myriad of institutional and structural reforms had created the framework for a functioning market economy and modernised the social safety net.

At an early stage, Estonia gained a reputation for being a radical, big-bang reformer (Aslund 2002, chp. 3, Feldmand & Sally 2001). Clearly, such a claim must be “comparative,” i.e. relative to the preceding economic structure and relative to other transition countries. Since the early 1990s, changing Estonian governments have

¹² See Pass (1995) for a thorough discussion of the social system in the first part of the 1990s.

pursued an ambitious reform strategy. In most areas, reforms have been pushed forward with considerable enthusiasm. Inflation stabilisation and prudent fiscal policies have been at the centre. Still, in some areas reforms have been less advanced than frequently assumed. Utility prices and some housing prices have remained regulated throughout the reform period. Competition and financial sector regulations have been relatively ineffective.

Figure 4. Overall reform index as average of eight EBRD indices



The overall reform index is the average of 8 indices within different reform areas. The minimum value is 1 reflecting no reform, and the hypothetical maximum value is 4.33 reflecting the best practices of market-based economies. See also text.

Source: Own calculations based on EBRD (various years). See also text

The vast number of reform areas makes it difficult to evaluate the assertion of Estonia as a radical reformer. We have therefore constructed an *overall reform index* which is calculated as the average of eight EBRD indices that reflect liberalisation, privatisation, enterprise restructuring and financial sector reform. Variants of this *overall reform index* are frequently used in empirical analyses (see discussion in Staehr 2003) and are meant to capture – in a rough way – the general reform intensity. A higher index indicates higher overall reform progress. Figure 4 presents the *overall reform index* for each of the three Baltic States, the average of the 12 CIS countries and the average of the four Visegrad countries (Poland, the Czech Republic, the Slovak Republic, Hungary).

It follows from Figure 4 that the overall reform index for Estonia largely follows the indices of Latvia and Lithuania. Since 1993 the overall reform intensity in

Estonia has outpaced that of the two other Baltic countries, but the difference has narrowed substantially since 2000.¹³ When compared to the CIS countries, the Estonian reforms have indeed been impressive, but when compared with the Visegrad countries, the Estonian reforms do not stand out, except that the rate of change in the Estonian overall reform index has been substantial at times, especially from 1992 to 1993.¹⁴

Thus, while Estonia has been a fast reformer, it is not unique among the transition economies. At an early stage, Estonia's stabilisation policies and radical privatisation methods signalled that it was committed to reforms and orientation towards the West. Still, other areas have seen slower progress.

4. Economic developments

The economic reforms discussed in section 3 have transformed Estonia into a country with a structure and institutional set-up resembling that of most other market economies. Still, the end goal must be to improve the living standard of the people living in Estonia. In the short term, greater consumer choice and the elimination of shortages likely improved welfare. However, in the medium term, the goal was that Estonia should become a "standard European country" with a thriving and stable economy (Laar 2002, chp. 2). This essentially translates into a desire for high economic growth, low unemployment, and little social and economic exclusion. This section will discuss how far Estonia has moved towards fulfilling these goals.

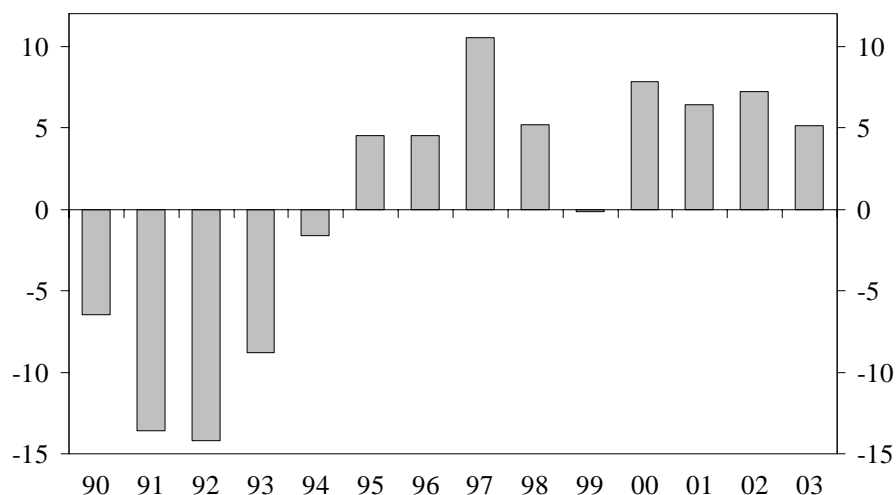
4.1 *Economic growth*

Figure 5 shows official data for the annual growth in the Estonian Gross Domestic Product (GDP) since 1990. The one immediately noticeable feature is the large negative GDP growth rates recorded during the early 1990s. In this respect, Estonia resembles other transition economies. The recorded fall in GDP from 1989 to 1995 (the first year of positive growth) is 38%, i.e. a fall in production that exceeds the one experienced in the USA during the great depression in the 1930s.

¹³ The Estonian stabilisation policy and dedication to fiscal austerity have generally been more ambitious than that of the two other Baltic States, but no variable for inflation stabilisation enters the calculation of the *overall reform index*.

¹⁴ Notice that the reform process started one or two years earlier in the central European transition countries than in Estonia, hence giving these countries a head start.

Figure 5. *Growth in Gross Domestic Product (GDP), percent per year*



Sources: EBRD (various years), Statistical Office of Estonia

Naturally, the measured collapse of production in Estonia and other transition countries has received considerable public and academic interest (Aslund 2002, chp. 4). It is beyond doubt, however, that the fall in production is greatly exaggerated and says little about the development in the standard of living. Aslund (2002: 113) concludes that: “The great post-communist output collapse is a myth.” He bases his conclusion on the following arguments:

Production had already dropped before the collapse of communism and the planning system had ceased to function, cf. also the negative growth rates in Estonia in 1990-91. The transition reforms cannot be blamed for an output drop taking place before the reforms were started.

There has been a sharp increase in unregistered production after transition started. The production in many small-scale firms remains unregistered because firms seek to avoid paying taxes or because the statistical authorities do not collect the data. The apparent output drop is further exaggerated by the fact that production frequently was over-reported in the planned economies, as wages and bonuses were linked to the fulfilment of the plan.

Much production in the planned economies did not add value in-so-far as the value of the inputs, measured against market prices, was higher than the value of output. Still, the statistical authorities included the production in the statistics as a value-adding activity. When the economies were reformed, most value-detracting production was abandoned and this showed up in the statistics as a production fall.

Aslund (2002: 136-137) constructs a set of revised production data by removing these “artificial” causes of the production fall, and finds that the production in Estonia remained largely unchanged from 1989 to 1995. Evidently, these calculations are subject to great uncertainty.

At the same time, the welfare of the average Estonian was positively influenced by a number of factors. In the Soviet Union, the military absorbed a great part of the total production, and the substantial drop in military spending is likely to have had a positive effect on welfare in Estonia. Furthermore, the Estonians got more choice and did not have to queue to buy goods. On balance, although the first half of the 1990s did cause economic hardship, the period also brought major improvements.

Since the mid-1990s, Estonia has enjoyed a rapid economic growth. During the period 1995-2002 (both endpoints included) the average annual growth rate was 5.8%, which is better than in most other transition economies. On average, the annual growth rate has been 3.4 percentage points higher than in the “old” EU15 countries (IMF 2003b: 174). The weak performance in 1999 was the result of the Russian crisis spreading to Estonia via reduced trade and withdrawal of capital.

To conclude, the early 1990s saw the recorded GDP drop substantially, but the fall may well have been more apparent than real. Since the mid-1990s, economic growth has been strong and substantially above the level in West European countries. In 1995, the Estonian per capita GDP, adjusted for differences in purchasing power, amounted to approximately 31% of the average in the EU15 countries and 29% of the Swedish. In 2003 the Estonian GDP per capita was 42% of the EU15 average and 40% of the Swedish (Eurostat 2004: 9). The numbers bear witness of a substantial catch up in economic terms.

An interesting question is to which extent the choice of reform policies has affected economic performance. It has occasionally been argued that rapid, big-bang reforms and unduly emphasis on inflation stabilisation are to blame for the large (measured) output losses (Stiglitz 2001). This view is generally not supported by cross-

country statistical research into the factors determining output performance in the transition economies (see surveys in Havrylyshyn 2001, Campos & Coricelli 2002). This research suggests that the more reforms a transition economy undertakes, the smaller the output drop becomes, and the sooner growth resumes. In addition, inflation stabilisation appears to be a prerequisite for the resumption of growth. Staehr (2003) shows that big-bang reforms generally have a positive impact on output, although certain sequencings of reforms are likely to be harmful. Thus, we might expect the relatively successful growth performance in Estonia to be partly explained by the early implementation of comprehensive reforms.

4.2 *Unemployment*

It is important for individual well-being and for societal concord that everybody who wishes to work can find employment. In this respect the transition experience in Estonia has proved less encouraging.

Figure 6 shows the survey-based unemployment rate among working-age Estonians.¹⁵ The unemployment rate increased rapidly in the beginning of the transition and again after the Russian crisis, but has been falling since 2000.

The employment rate in Figure 6 is the number of employed persons among working-age Estonians as a share of all persons in the age group. The employment rate fell approximately 15 percentage points from the early to the mid-1990s. This reflects an increasing unemployment rate, withdrawal from the labour force, and possibly increased participation in other activities (e.g. education). The falling employment should also be seen on the background of unusually high employment rates in the communist economies as formal employment gave access to goods and social services otherwise not available (Standing 1996).

¹⁵ The methodology for constructing the survey-based unemployment and employment rates is devised by the International Labour Organisation (ILO). A sample of the working age population is asked whether they are currently employed, unemployed or outside the labour force. Unemployed are those who are without work, could take up work within two weeks and are actively seeking work. (Survey-based unemployment rates are often higher than registered unemployment rates, which include only persons who are recorded by the authorities as unemployed.) The working-age population is here taken as persons being 15-69 years, while in some cases it is defined as persons being 15-74 years. The employment and unemployment rates are practically identical regardless of which of these age groups one considers.

Figure 6. *Unemployment, percent of labour force. Employment, percent of population aged 15-69. Survey-based*



Source: Statistical Office of Estonia

To appreciate the pattern of higher unemployment and lower employment, it is useful to consider the transition process. Economic transition has two layers (Blanchard 1997, chp. 2-3). One layer is the implementation of reforms changing the way the economy functions, e.g. liberalisation, privatisation, and structural reforms (cf. section 3). The other layer is a major restructuring and reallocation of resources (Schumpeterian “creative destruction”). When the consumer can choose freely, firms that produce goods that are not in demand must close down. On the other hand, new firms emerge that produce goods that are in demand, typically services and higher-quality products.

Labour is the most important production resource to be relocated. However, the process of relocating labour from old to new industries is unlikely to be “smooth”: Old state-owned firms close down before new firms open, while workers who are laid off might not have the skills required to take up jobs in the new private sector. Unemployment, and to some extent withdrawal from the labour force, suggest that rigidities have impeded the flow of workers from old to new industries.

The relatively high unemployment rates in Estonia indicate that, more than a decade into the transition, the transfer of workers between jobs is still not functioning smoothly. Older workers – often with a background in manufacturing – have problems adapting to the new requirements (IMF 2001) and might withdraw from the labour force altogether, or experience periods of long-term unemployment. In the

early stages of transition, a large proportion of the unemployed were job-losers and *not* new entrants to the labour market (OECD 2000a, chp. VI). Subsequent to the Russian crisis, unemployment has remained very high (above 15%) in the industrialised north-eastern regions of Estonia.

4.3 Distribution and welfare

Official data often showed a very even income distribution in communist countries. There is reason to believe that official statistics painted a too rosy picture, but even then data for the Soviet Union showed greater earnings equality of a magnitude similar to the one found in many West European countries (Gros & Steinherr 1995: 69-73). The social safety nets were also less fine-meshed than often assumed (Standing 1996). Still, it is important to assess to which extent transition has increased inequality and – perhaps more importantly – to which extent poverty has increased.

One might start noting that in spite of the free-market approach of most Estonian governments, the basic structures of an interventionist welfare state have remained in place.¹⁶ Among the social programs can be mentioned: Free primary and secondary education, maternity leave support, child support, universal and basically free health care, disability pension and universal old-age pension. When assessing this level of coverage, it must be borne in mind that the Estonian per capita production is less than one half of the level in Western Europe.

It is difficult to obtain reliable data for inequality, and comparisons between countries are especially problematic. The Gini coefficient is a measure of inequality, which takes into account the entire income distribution. The Gini coefficient falls within an interval 0 to 1, in which a higher Gini coefficient indicates larger inequality.¹⁷ The Estonian Gini coefficient for 1997 based on net income, i.e. after taxation and transfers, is 0.34 (Kaasa 2003: 10). This places Estonia in the middle of the field of transition economies. For the same year, the Gini coefficient is estimated at 0.23 for the Slovak Republic, while it is 0.52 for Georgia. Generally, the richer transition economies have the lowest Gini coefficients. Estonia is in this respect

¹⁶ Most countries emerging from communism had some form of a welfare state. The ability of relatively poor countries to provide a high degree of social services is often stressed as one of the main achievements of the communist experiment (Gros & Steinherr 1995, chp. 3).

¹⁷ A Gini coefficient equal to 1 would indicate that one person receives the entire income!

“typical”; its Gini coefficient is at about the same level as other transition economies with comparable income levels.

It is noticeable that the Gini coefficient was 0.41 already in 1992. This relative high level must either have been carried over from Soviet times or be the result of the disorganisation and extreme inflation characterizing the final years of the Soviet Union and the very early reform years. There might have been a tendency towards slightly lower inequality during the 1990s (Kaasa 2003: 17).

Data on poverty are likewise uncertain and difficult to interpret. Kask *et al.* (2002) show that *relative poverty* has increased during the period 1997-2001. An *absolute poverty* line has been estimated since 1998. The share of all households living in poverty (including severe poverty) was 21% in 1999 and 25% in 2000. The share living below a subsistence minimum (1 dollar per day) appears to be roughly constant at approximately 2-3% of all households.¹⁸

It is noticeable that poor households in Estonia spend substantially less on food than poor households in the other two Baltic countries (OECD 2000a: 154). In this sense, the poverty problems might be less pronounced in Estonia than in Latvia and Lithuania. This probably results from the absence of restrictions on agricultural imports (until Estonia joined the EU), which kept food prices down.

5. Discussion Points

Estonia’s economic reforms have generally been successful. They have opened for high growth, low inflation, and well-functioning social services. Still, problems remain – as they always will! We have already looked at the stubbornly high unemployment, which suggests problems around the transfer of labour from the old to the new industries. The inequality and poverty problems are also conspicuous, although hardly worse than in other transition economies with a comparable income level. In this section, we bring up some policy issues, which might deserve more attention. Obviously, such a discussion will be subjective and normative in nature.

¹⁸ Official income statistics generally ignores non-monetary household production (e.g. of foodstuff) and non-registered monetary income from the informal economy. Research for other transition economies indicates that household production and income from the shadow economy constitute very important sources of income for low-income earners (Wallace & Haerpfer 2002). The official statistics of poverty and income inequality might thus overstate the social problems.

5.1 Privatisation

No privatisation model is without problems, and the Estonian belongs to the more successful programs. Still, the widespread use of restitution in Estonia has, in some cases, led to a transfer of ownership to owners with little interest in their “new” possessions. The end result has sometimes been that land lies uncultivated and buildings crumble because of uninterested or incompetent owners (Stiglitz 2001). This problem is likely to diminish as markets for land and property become more liquid and efficient.

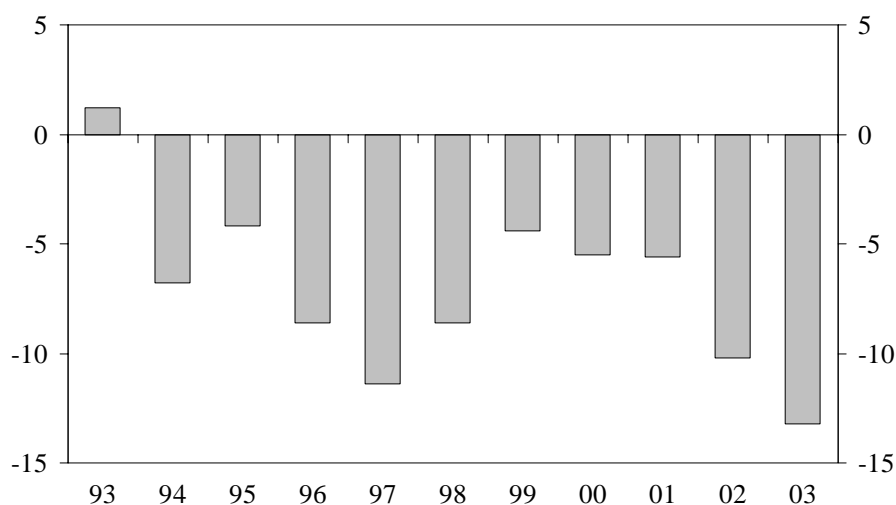
Another issue is related to the problems of selling the very last and biggest state-owned enterprises. The privatisation process has often been characterised by drawn-out business transactions associated with aborted bids, corruption allegations, and substantial uncertainty. The sale of the freight train company (ultimately successful) and the electricity company (aborted) are among the examples. There might be sound economic reasons for privatising these companies, but there might still be situations where the process is so disorderly and costly that the case for rapid privatisation is weakened. Scandals and uncertainty lead to a loss of “political capital” and weaken the authorities’ ability to carry out other pressing tasks. Empirical research has shown that state-owned companies can operate efficiently if they are subjected to sufficient competition (Vickers & Yarrow 1988). The uncertainty might also interfere with management decisions and reduce the incentives of managements to undertake needed restructuring (Commander *et al.* 1992).

5.2 Current account deficits

Estonia has had a substantial deficit on its current account balance for almost a decade, mostly stemming from a deficit on its foreign trade balance (See Figure 7). The deficit reached 11.4% of the GDP in 1997, then fell substantially after the Russian crisis, but bounced back to 10.2% in 2002 and 13.2% in 2003.

The large deficits have drawn widespread attention (e.g. IMF 2003a, 2003c). The concern is that the size of the current account deficit cannot be sustained over time. In the 1990s, the deficit was mainly covered by foreign direct investment, but it has since then increasingly been financed through loans.

Figure 7. *Current account balance, percent of GDP*



Source: Eesti Pank

At the outset, it is reasonable to expect Estonia to be a substantial capital importer, as there are likely to be many profitable investment projects in the country. Nevertheless, there is a risk of a “sudden stop” of the capital inflow, leading to a financial crisis, which again would lead to a difficult adjustment process. The risk of an Asia-crisis type crisis is difficult to access, but increasing deficits are worrying.¹⁹

5.3 Taxation and exclusion

The Estonian tax system generates total government revenues equal to approximately 40% of the GDP, a number that is comparable to that of most West European countries (EBRD 2002: 145). Still, this does not necessarily mean that the system answers to its purpose. One striking aspect of the Estonian tax system is the high (marginal) tax rates on low-income earners. Consider a worker with initial income only slightly above the tax-free deductible, e.g. earning 1,000 kroons per month. If the person would like to work more in order to expand his consumption by 1 kroon (before VAT), his employer’s extra costs would amount to 2.14 kroons. This large

¹⁹ See also Staehr (2001) for a broader discussion of the sustainability of current account deficits in transition economies. The sustainability question is intricately linked to the growth prospects of the economy, i.e. whether the capital import leads to higher investment, which again brings about higher growth. A full assessment of the Estonian current account deficit would have to consider the productivity of the investment in Estonia.

wedge between the employer's labour cost and the real consumption wage is the consequence of a 33% social tax, a 26% income tax, and an 18% VAT (as of 2003).

The large wedge between employers' costs and the real consumption wage is a cause of concern. Employees with low productivity might have trouble finding employment that pays enough to make it worth their while to work. The result might be that low-productivity workers remain unemployed or withdraw from the labour force altogether (Room 2003). Indeed, some empirical analyses suggest that lower after-tax wages lead to lower employment in Estonia, especially because of retrenchment from the labour market (Vork 2002). The comparatively high Estonian unemployment rates and the declining employment rates may thus partly be linked to the high tax pressure on low-income earners (see also Cazes 2002).²⁰ The high taxes for low-income earners can also be seen as a distributional problem.

5.4 EU membership – new challenges

Estonia entered the European Union in May 2004 together with seven other transition countries and Malta and Cyprus. While membership opens opportunities, it also gives rise to new challenges and uncertainties (Gacs 1999; IMF 2000, chp. IV; Mueller *et al.* 2002). How will the agricultural sector be affected when included in the EU's Common Agricultural Policy? Will EU membership cause large-scale emigration and, for example, lead to a disruptive "brain drain"? Will Estonia be able to utilise the structural and social funds effectively? Will the new fiscal obligations with their resultant extra domestic expenditures and transfers to the EU strain the government budget?

Among these concerns, the impact that increasing food prices might have on the distribution has largely been ignored. There is little doubt that farmers will gain from EU membership, but higher food prices might have negative consequences, particularly for low-income earners who spend a large share of their income on food.

²⁰ Other transition countries also have high tax wedges and the Organisation of Economic Co-operation and Development has argued that this might be behind high unemployment rates and lower participation rates in e.g. Poland and Hungary (OECD 2000b: 115-147; OECD 2000c: 118, 139-140). The impact of a high tax wedge on employment, unemployment and social exclusion is also a concern in many high-income countries (OECD 1994).

Some of those affected, especially pensioners and families with many children, can relatively easily be compensated; others cannot.

6. Final Comments

Our overall assessment of the Estonian economic reforms is positive. Estonia has pursued and sustained a remarkable transformation of its economic system. In 1991 – when Estonia emerged from the crumbling Soviet Union – it was by no means certain that the country, one decade later, would be a democratic country with high economic growth, low inflation, and a functioning welfare state.

That these achievements are indeed remarkable becomes vividly apparent when Estonia is compared to most of the other countries emerging from the Soviet Union. During the last decade, the Baltic States have outperformed all other ex-Soviet states. Countries like Belarus and Moldova also emerged from the western fringes of the Soviet Union, with starting points that, in some respects, were comparable to those of the Baltic States⁹. However, in these countries autocratic governments have postponed and distorted reforms, something that has contributed to these countries' unsatisfactory economic and social progress.

Estonia's transition reforms have emphasised pro-market policies, prudent macroeconomic management, and integration into the global economy. These policies have earned Estonia a reputation as a big-bang reformer with a very liberal economic system. In their ranking of Economic Freedom, the *Heritage Foundation* and the *Wall Street Journal* have, several years in a row, placed the Estonian economy among the world's freest (Heritage Foundation 2003).

Still, as this chapter has emphasised, Estonia is not a mere playground for capitalists and fortune hunters. The Estonian government plays an important role in the economy. It regulates businesses and the labour market and sets environmental standards. High tax revenues enable the government to improve infrastructure and education and to maintain a well-developed welfare system. In this sense, the radical reforms and the prudent macroeconomic policies have allowed the welfare system to be kept largely intact and in some cases to expand. This is perhaps the greatest achievement of Estonia, namely to combine economic freedom and pro-market policies with social responsibility.

Part of the explanation for these positive results is the broad consistency of reform policies throughout the decade. After regaining independence all governments have had a clear vision of Estonia belonging to the Western European sphere. Thus, in spite of frequent changes on the political scene, there has been a broad consensus on the economic goals. Essentially, policies have only been reversed when circumstances necessitated it or when the initial policy design turned out to be obviously flawed.

It is outside the scope of this paper to speculate on the underlying reasons for the very different reform policies and economic results in the Baltic States and other ex-Soviet states.²¹ Still, one must appreciate the determinedness of some of the reform politicians in Estonia (see e.g. Laar 2002). In retrospect, some of their policies can be questioned, but the wish to turn Estonia towards the West and introduce a free, market-based economy was clear from an early stage.

Estonia has experienced a decade of fundamental reforms and rapid economic change. As the transformation is essentially completed and Estonia is a member of the EU, future economic developments might become calmer and less “exciting.” In this sense, Estonia’s goal of becoming a “standard European country” has been fulfilled. However, Estonia can contribute to the new Europe by its example, not least by reminding the major European players that fundamental reforms are possible and should not be sacrificed in lieu of short-term political gains.

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²¹ Purju (1996) discusses aspects of the political economy underlying the privatisation policy. Feldmann & Sally (2001) consider the political economy of the Estonian trade policy.

References

- Ahde, Pasi & Teet Rajasalu (eds.) "Economic Structures." *Estonia and Finland. A Retrospective Socioeconomic Comparison*. Eds. Lugas Oleve & Pentti Vartia Helsinki: The Research Institute of the Finnish Economy, 1993.
- Aslund, Anders. *Building Capitalism. The Transformation of the Former Soviet Bloc*. Cambridge University Press, 2002.
- Berengaut, Julian *et al.* "The Baltic Countries. From Economic Stabilization to EU Accession." IMF Occasional Paper 173 (1998).
- Blanchard, Olivier. *The Economics of Post-Communist Transition*. Clarendon Lectures in Economics, Oxford University Press, 1997.
- Campos, Nauro & Fabrizio Coricelli. "Growth in Transition: What We Know, What We Don't, and What We Should." *Journal of Economic Literature* 90, no.3 (2002): 793-836.
- Cazes, Sandrine. "Do Labour Market Institutions Matter in Transition Economies? An Analysis of Labour Market Flexibility in the Late Nineties." International Institute for Labour Studies, Discussion paper, DP/140/2002.
- Central Statistical Bureau of Latvia. "The Baltic States before the Second World War. Brief Collection of Statistical Data" (Statistics, Comparisons of Countries, 2002) <<http://www.stat.ee>>
- Commander, Simon, Fabrizio Coricelli & Karsten Staehr. "Wages and Employment in the Transition to a Market Economy." *Central and Eastern Europe: Roads to Growth*. Ed. Georg Winckler. International Monetary Fund, 1992.
- de Melo, Martha, Cevdet Denizer, Alan Gelb and Stoyan Tenev. "Circumstance and Choice: The Role of Initial Conditions and Policies in the Transition Economies." *World Bank Economic Review* 13, no.1 (2001): 1-32.
- EBRD. *Transition Report*. The European Bank for Reconstruction and Development, 1995-2003.
- Eesti Pank. Statistical Indicators (Annual indicators of Estonian economy) <<http://www.eestipank.info>>
- Eurostat. "Purchasing Power Parities and Related Economic Indicators for EU, Candidate Countries and EFTA." (2004) <<http://europa.eu.int/comm/eurostat/>>
- Feldmann, Magnus and Razeen Sally. "From the Soviet Union to the European Union: The Political Economy of Estonian Trade Policy Reforms, 1991-2000." BOFIT Online 1 2001.
- Gacs, Janos. "Accession to the EU: A Continuation or a Departure from Transition Reforms?" IIASA Interim Report IR-99-002 (1999).
- Gros, Daniel and Alfred Steinherr. *Winds of Change. Economic Transition in Central and Eastern Europe*. London: Longman, 1995.
- Hagfors, Robert and Toivo Kuus. "Income – Structure and Distribution." *Estonia and Finland. A Retrospective Socioeconomic Comparison*. Eds. Lugas Oleve & Pentti Vartia Helsinki: The Research Institute of the Finnish Economy, 1993.
- Havrylyshyn, Oleh. "Recovery and Growth in Transition: A Decade of Evidence." *IMF Staff Papers* 48, special issue (2001): 53-87.

- Heritage Foundation. "The Index of Economic Freedom." (2003)
 <<http://www.heritage.org/research/features/index/>>
- IMF. *World Economic Outlook*. International Monetary Fund, October 2000.
- _____. "Labor Markets in Hard-Peg Accession Countries: The Baltics and Bulgaria." IMF Country Report 01/100 (2001).
- _____. "Estonia – 2003 Article IV Consultation. Concluding Statement of the Mission." International Monetary Fund (2003a)
 <<http://www.imf.org/external/np/ms/2003/080103.htm>.>
- _____. *World Economic Outlook*. International Monetary Fund, September 2003b.
- _____. "Republic of Estonia: 2003 Article IV Consultation – Staff Report," International Monetary Fund, IMF Country Report 03/330 (2003c).
- Islam, Shafiqul. "Conclusion: Problems of Planning a Market Economy." *Making Markets: Economic Transformation in Eastern Europe and the Post-Soviet States*. Eds. Shafiqul Islam and Michael Mandelbaum. New York: Council on Foreign Relations Press, 1993.
- Kaasa, Anneli. "Factors Influencing Income Inequality in Transition Economies." University of Tartu, Faculty of Economics and Business Administration (ISBN 9985-4-0326-6) (2003).
- Kask, Urve, Hilja Kogel & Margus Tuvikene. "Poverty and Welfare Trends in Estonia over the 1990s." UNICEF Innocenti Research Centre, Country Paper (2002).
- Laar, Mart. *Little Country that Could*. London: CRCE New Series 19, 2002.
- Misiunas, Romuald and Rein Taagepera. *The Baltic States: Years of Dependence 1940-1990*. Berkeley: University of California Press, 1993.
- Mueller, Johannes *et al.* "The Baltic Countries. Medium-Term Fiscal Issues Related to EU and NATO Accession." IMF Occasional Paper 213 (2002).
- North, Douglass. *Institutions, Institutional Change and Economic Performance*. Cambridge: Cambridge University Press, 1990.
- _____. "Understanding Economic Change." *Transforming Post-Communist Political Economies*. Eds. Joan Nelson, Charles Tilley and Lee Walker. Washington DC: National Academy Press, 1998.
- OECD. *Jobs Study*. Paris: Organisation for Economic Co-operation and Development, 1994.
- _____. *The Baltic States: A Regional Economic Assessment*. OECD Economic Surveys 5 2000a.
- _____. *OECD Economic Surveys: Poland 2* (2000b).
- _____. *OECD Economic Surveys: Hungary 18* (2000c).
- Pass, Tiiu. "Social Welfare Policy in Estonia during Transition to Market Economy." *Reforming Social Services in Central and Eastern Europe – an Eleven Nation Overview*. Ed. Victor Pestoff. Cracow Academy of Economics / Friedrich Ebert Stiftung, 1995.
- Purju, Alari. "Political Economy of Privatisation in Estonia." Centre for Economic Reform and Transformation, Heriot-Watt University, mimeo 1996.
- Raudla, Ringa & Karsten Staehr. "Pension reforms and taxation in Estonia." *Baltic Journal of Economics* 4, no.1 (2003): 64-92.

- Roland, Gerard. *Transition and Economics: Politics, Markets and Firms*. Cambridge, Mass.: MIT Press 2000.
- Room, Tairi. "Taxation of Production Factors and Unemployment in Estonia." *Kroon & Economy* (Bank of Estonia) 1 (2003): 36-45.
- Staehr, Karsten. "Economic Growth in the Transition Economies – Sustainability and Vulnerability." *Proceedings of the 1st International Conference on Recent Economic Developments and Problems in the Transition Economies*. ASECU (Thessaloniki, Greece) 2001.
- _____. "Reforms and Economic Growth in Transition Economies: Complementarity, Sequencing and Speed." BOFIT Discussion Paper 1 (2003).
- Standing, Guy. "Social Protection in Central and Eastern Europe: A Tale of Slipping Anchors and Torn Safety Nets." *Welfare States in Transition. National Adaptations in Global Economies*. Ed. Gosta Esping-Andersen. London: SAGE Publications, 1996.
- Statistical Office of Estonia. Statistical Database. <<http://www.stat.ee>>
- Stiglitz, Joseph. "Whither Reform? Ten Years of Transition." *World Bank Annual Bank Conference on Development Economics 1999*. Eds. Boris Pleskovic and Joseph Stiglitz. Washington DC: World Bank, 2001.
- Terk, Erik. *Privatisation in Estonia. Ideas, Process, Results*. Tallinn: Estonian Institute for Futures Studies, 2000.
- Vensel, Vello and Clas Wihlborg (eds) *Estonia on the Threshold of the European Union: Financial Sector and Enterprise Restructuring in the Changing Economic Environment*. Tallinn: Department of Economics at Tallinn TU, 2001.
- Vickers, John and George Yarrow. *Privatisation: An Economic Analysis*. London: MIT Press, 1988.
- Vork, Andres. "The Effect of Social Benefits on Labor Supply in Estonia. An Econometric Analysis." mimeo, University of Tartu, 2002.
- Wallace, Claire and Christian Haerpfer. "Patterns of Participation in the Informal Economy in East-Central Europe, 1991-1998." *The Social Impact of Informal Economies in Eastern Europe*. Eds. Riner Neef and Manuela Stanculescu. Aldershot, Burlington, VT: Ashgate Publishing, 2002.
- World Bank. *Estonia. The Transition to a Market Economy*. Washington DC: The World Bank, 1993.
- _____. *World Development Report 1996: From Plan to Market*. New York: Oxford University Press 1996.

