Urmaz Sepp

Estonia’s Transition to a Market Economy 1995
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Introduction

The purpose of the paper was to describe the Estonian way of transition to market economy. Although the process of reforming the Estonian economy started already in the second half of 1980s, this paper focuses on changes that occurred at the beginning of 1990s.

The years 1990–1991 were important due to the fact that in this particular period conditions were laid which were to determine the subsequent path of development and the means of introducing the market mechanism. In 1992–1993 the market signals became the main incentives for agents' behavior.

The paper does not claim to present an overall characterization of the period under the consideration. The main attention has been given to the macroeconomic issues of transition. Ownership reform (with the accompanying land, agriculture and other reforms) has been left out. Ownership reform gained momentum in 1993 and especially in 1994.

As was mentioned above, the paper presents an overview. This seems to be the typical manner of dealing with the problems of the Estonian economy.

In some cases the reasoning in the paper is based on presumption and hypothesis. This is probably the only way to deal with the transition processes. As a consequence of the absence of statistical data, the academic studies of the transition processes in Estonia are also missing.

The paper starts with a short historic review, which also involves a description of the planned economy. The next section describes the Estonian reform experience by stages. Moreover, a separate section is dedicated to the stage of post-socialist economy that was the starting point for the actual transition to a market economy.

The fourth section of the paper describes the actual transition to the market economy. The final section describes the consequences of the monetary reform and the initial achievements in the transition to a market economy.

The structure of the paper reflects the opinion of the author that from mid-1980, the reform of the Estonian economy should be divided into two subperiods.

The difference between these periods is clearly seen at the microeconomic level and is connected with the importance of market signals in determining the behavior of economic agents. During the first period, i.e. from 1985 to 1992, non-market signals determined this behavior. Some elements of the market were functioning, but market signals were not for the most part taken into account. In reality the command system was reformed without any substantial change in the economic system.

The second period, which began in 1992 after the monetary reform, included substantial changes leading from the command economy to a market-determined economy. The reforms realized during the second period made market signals the main determinant of economic agents' behavior.
1 Historical Review

1.1 Short Survey of Estonia

The Republic of Estonia lies on the eastern shores of the Baltic Sea.

The surface area of Estonia is 45,215 sq. km., making it somewhat larger than Denmark, the Netherlands or Switzerland. The length from east to west is 350 km and from north to south 240 km. Estonia has more than 1,500 islands.

According to the 1989 census, Estonia's population is 1,565,662, of which 71.6 percent live in urban centers. The population density is 35 people per sq. km. The average life expectancy in 1988-89 was 71 years (66.4 for men and 75.1 for women).

The main religious denominations are Lutheran, Orthodox and Baptist.

Administratively, Estonia is divided into 15 counties and 6 towns (the other 27 towns are subordinated to the counties). The capital is Tallinn (population 484,400 in 1990). Other large towns are Tartu (115,400), Kohtla-Jarve (76,800), Pärnu (54,200), Sillamäe (20,700), Rakvere (20,100).

The most important natural resources are: oil shale (6425.5 million t.) and rock phosphate (167.7 million t. calculated as having 100 percent P₂O₅ content), deposits of which are located in the northeastern and northern parts of Estonia. Plenty of limestone (292 million t.), clay (64.7 million t.) and sand (2.1 million t.), the raw materials for cement, can be found in Estonia. There is sufficient quartz sand (3.8 million t.), construction sand (175.3 million t.) and gravel sand (28.8 million t.). And there are abundant deposits of dolomite (493 thousand cubic meters).

Forests cover 39 percent of the surface of Estonia and are considered its main wealth. Of the forests, 41 percent are pine forests, 28 percent birch groves and 23 percent fir groves.

Mineral water has been found in the south and southeast of Estonia.

Marshes cover more than 20 percent of the surface. Peat reserves amount to 1198.4 million t.

1.2 Economic History

During the period of feudalism the most important sector of the Estonian economy was agriculture, mostly the cultivation of land. Townsmen were engaged mainly in handicraft and trade. In the 17th century manufacturing enterprises began to spring up. The textile industry emerged at the end of the 1820s. In the second half of the 19th century, the machine, metal, cement and peat industries developed.

At the beginning of the 20th century, Estonia was an agrarian country (68 percent of the population were employed in agriculture). Agriculture (especially dairy and pig husbandry) was the most important sector of the economy also at the time of the Republic of Estonia, 1918–1940.

Agricultural products, raw materials and semi-manufactured products formed the bulk of the exports. In 1938 Estonian exports amounted to nearly 104 million pre-war kroons and imports for 107 million kroons. The main trading partners were the United Kingdom (35 percent of exports), Germany (34 percent), Sweden (5 percent), Finland (4.5 percent) and the Soviet Union (4 percent). The value of the Estonian
national convertible currency, the kroon, differed by only a few percentage points from the Swedish krona. The standard of living resembled that of Finland.

The national economy changed radically after the incorporation of Estonia into the Soviet Union in 1940. The aim of the restructuring carried out under the slogan of industrialization was to destroy the integrity of the Estonian economy. The Estonian economy was turned into a part of the Soviet Union's economic complex, and was bound to the rest of the Soviet regions through economic and technological ties. With this goal in mind, priority development was granted to industries that did not use local raw material and resources. Most of the output of the newly created industries was sent back to the Soviet Union.

Some of the results of the economic annexation of Estonia were:
1. dismantlement of the formerly integrated economy (distruption of agriculture, which was highly developed by pre-war standards, replacement of industries oriented toward local resources and consumers by the so-called all-Union specialization sectors, cutting off of relations with the world economy)
2. alienation of the producer from the means of production (liquidation of private ownership of production means)
3. mechanical application of the totalitarian model of the command economy
4. russification of Estonia (deportation of indigenous population, promotion of non-Estonians, creation of non-traditional industries and jobs)
5. turning of Estonia into an economic hinterland of Leningrad. This undertaking was legally fixed by the decree of the USSR State Defence Committee of 10 June 1945 on the Reconstruction and Development of the Oil-Shale Industry in the Estonian SSR and the Leningrad Oblast and on Supplying Leningrad with Gas. The decree envisaged extremely rapid development of the oil-shale industry in Estonia to supply Leningrad's population with gas and its industry and transportation with liquid fuels produced from oil-shale. (Kukk, K. 1991; 5,6).

Economic annexation was a component of colonial policy. In this sense the reason for economic annexation was ideological. At the same time economic annexation was promoted for economic reasons. In comparison with the Soviet Union, Estonia was characterized by a well-developed technical and social infrastructure as well as by strong work ethic of the Estonians. Easily accessible natural resources and relatively high living standards were also favourable for investing in Estonia.

By the end of the Soviet period in the second half of the 80s Estonia had become an industrial-agrarian country. During the final years of the Soviet era, industry accounted for approximately 60 percent of the gross material product (GMP) and 40 percent of the net material product (NMP). The share of agriculture was about 20 percent (Table 1.1).
Table 1.1 

Structure of the Estonian economy (current prices)\(^1\)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gross material product</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Industry</td>
<td>60.3</td>
<td>62.9</td>
<td>63.6</td>
<td>60.2</td>
</tr>
<tr>
<td>Agriculture and forestry</td>
<td>20.9</td>
<td>18.6</td>
<td>16.4</td>
<td>19.5</td>
</tr>
<tr>
<td>Transport and communications</td>
<td>3.2</td>
<td>3.6</td>
<td>3.7</td>
<td>4.7</td>
</tr>
<tr>
<td>Construction</td>
<td>8.8</td>
<td>9.0</td>
<td>8.0</td>
<td>8.8</td>
</tr>
<tr>
<td>Trade and other sectors</td>
<td>6.8</td>
<td>5.9</td>
<td>8.3</td>
<td>6.8</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Net material product</strong></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Industry</td>
<td>47.5</td>
<td>50.4</td>
<td>49.8</td>
<td>43.7</td>
</tr>
<tr>
<td>Agriculture and forestry</td>
<td>27.0</td>
<td>24.2</td>
<td>16.5</td>
<td>25.3</td>
</tr>
<tr>
<td>Transport and communications</td>
<td>3.9</td>
<td>4.9</td>
<td>4.9</td>
<td>6.2</td>
</tr>
<tr>
<td>Construction</td>
<td>8.5</td>
<td>8.9</td>
<td>9.4</td>
<td>10.8</td>
</tr>
<tr>
<td>Trade and other sectors</td>
<td>13.1</td>
<td>11.6</td>
<td>19.4</td>
<td>13.9</td>
</tr>
</tbody>
</table>


Light industries and food processing industries and the metal and engineering industry were dominant, accounting for 2/3 of the total output of Estonian civil industry, and 3/4 of its exports.

By world standards, the most highly developed sectors of Estonian industry were the forest, timber and paper industries, which produced furniture, pulp, paper, wood particle and fibre boards as well as skis. (Kukk, K. 1991, pp.10,11)

Estonia's economy – like that of a typical small country – has been very open. In 1987 41 percent of the gross industrial product was exported; imports accounted for 45 percent of the industrial product consumed. The ratio of exports to GDP was 49–50 percent in 1987–1989 (Kukk, K. 1991, p.12). During the Soviet period such openness was unnatural to some extent because it did not result from strong competitiveness. Rather, Estonia represented a part of the all-Union economic complex and typically had production ties with all the other parts of the complex (see Table 1.2).

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\(^1\) As is common in a centrally planned economy, relative prices are distorted; hence the table misrepresents the actual structure of the economy. Using realistic prices, the share of heavily subsidized and underpriced agriculture would be higher. The same holds for services.
Table 1.2  
**Estonian Dependence on the Soviet Union**  
Prior to Sept. 1991

<table>
<thead>
<tr>
<th>Energy</th>
<th>% Input from SU</th>
<th>% Output to SU</th>
<th>Share of Output</th>
<th>Share of Employment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power</td>
<td>80</td>
<td>60</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fuel</td>
<td>n.a.</td>
<td>20</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Industry</th>
<th>% Input from SU</th>
<th>% Output to SU</th>
<th>Share of Output</th>
<th>Share of Employment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food</td>
<td>50-70</td>
<td>25-40</td>
<td>26</td>
<td>14</td>
</tr>
<tr>
<td>Light Industry</td>
<td>90</td>
<td>70</td>
<td>24</td>
<td>21</td>
</tr>
<tr>
<td>Machine Bldg.</td>
<td>97</td>
<td>90</td>
<td>18</td>
<td>29</td>
</tr>
<tr>
<td>Forestry</td>
<td>50</td>
<td>50</td>
<td>10</td>
<td>14</td>
</tr>
<tr>
<td>Chemical</td>
<td>75</td>
<td>80</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Building materials</td>
<td>90</td>
<td>30</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>Other</td>
<td>n.a.</td>
<td>n.a.</td>
<td>9</td>
<td>7</td>
</tr>
</tbody>
</table>


Industries that prevailed in Estonian exports and imports are shown in Table 1.3.

Table 1.3  
**Structure of exports and imports (%)**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Electric power</td>
<td>4.9</td>
<td>5.6</td>
<td>4.5</td>
<td>0.3</td>
<td>0.0</td>
<td>1.1</td>
</tr>
<tr>
<td>Metals</td>
<td>0.1</td>
<td>0.2</td>
<td>0.5</td>
<td>7.6</td>
<td>7.7</td>
<td>6.6</td>
</tr>
<tr>
<td>Fuels</td>
<td>2.2</td>
<td>2.2</td>
<td>0.8</td>
<td>5.8</td>
<td>5.0</td>
<td>7.5</td>
</tr>
<tr>
<td>Chemical products</td>
<td>4.5</td>
<td>6.0</td>
<td>9.8</td>
<td>9.6</td>
<td>8.5</td>
<td>12.5</td>
</tr>
<tr>
<td>Machinery</td>
<td>19.6</td>
<td>20.4</td>
<td>19.0</td>
<td>22.3</td>
<td>24.9</td>
<td>30.4</td>
</tr>
<tr>
<td>Forest, timber, pulp</td>
<td>4.9</td>
<td>6.0</td>
<td>5.2</td>
<td>3.0</td>
<td>3.8</td>
<td>2.6</td>
</tr>
<tr>
<td>and paper products</td>
<td>1.8</td>
<td>1.8</td>
<td>1.1</td>
<td>1.0</td>
<td>1.8</td>
<td>1.4</td>
</tr>
<tr>
<td>Building materials</td>
<td>28.8</td>
<td>27.8</td>
<td>28.5</td>
<td>26.0</td>
<td>27.6</td>
<td>18.3</td>
</tr>
<tr>
<td>Light industry products</td>
<td>25.3</td>
<td>23.5</td>
<td>26.2</td>
<td>16.5</td>
<td>13.3</td>
<td>10.9</td>
</tr>
<tr>
<td>Food industry products</td>
<td>4.5</td>
<td>2.5</td>
<td>3.0</td>
<td>1.6</td>
<td>3.7</td>
<td>3.3</td>
</tr>
<tr>
<td>Other manufacturing products</td>
<td>2.6</td>
<td>3.3</td>
<td>1.1</td>
<td>5.7</td>
<td>3.5</td>
<td>4.9</td>
</tr>
<tr>
<td>Agricultural products</td>
<td>0.8</td>
<td>0.5</td>
<td>0.3</td>
<td>0.6</td>
<td>0.2</td>
<td>0.5</td>
</tr>
</tbody>
</table>

Source: Kukk, K. 1991, p.27.

By the mid-1980s, Moscow controlled more than 90 percent of Estonian industry. Internal resources for extensive development were exhausted. With colonialist and economic aims in mind (Estonia was, in comparison with other Union republics, better supplied with infrastructure and skilled labour) Moscow pumped investment and other resources into our economy. This was the reason for the relatively dynamic
development of the Estonian economy under Soviet rule.

The economic growth, however, was in many respects illusory. The gap between Estonia and the developed countries actually grew (despite the fact that the growth rates of the aggregate economic indicators point to the opposite conclusion).²

1.3 The Planned Economy

A centrally planned economy (CPE) of the Soviet type³ is not a simplified version⁴ of the capitalist economy but rather a completely different system (certainly degenerated by its nature, but this is another issue).⁵ The behavior⁶ of economic agents and the economic environment differ from the market economy.

It is necessary to stress the nature of the CPE as an economic system in order to understand the transition to a market economy. If the CPE were a variant of the market economy rather than a separate system, an entirely different set of rules and principles would have to be applied in improving it.

The CPE is characterized (and differentiated from the market economy) by four main features:

1. Central planning and control. Government actions determine the direction of national economic development and coordinate development efforts.

2. Directive (command) system in which the life-cycle and activity of firms, their adjustment to disturbances and coordination between them, are typically and in the main governed by administrative means – commands, directives and regulations – rather than by the market mechanism. (Grossmann (....)).

3. Lack of private ownership and civil law. Natural resources and capital are nationalized. This includes land, manufacturing industries, banking, and domestic and foreign trade.

4. Non-monetary nature. Money flows are nominal, being used to record commodity flows.

Under the planned economy, the market mechanism is largely replaced by, or at least


³ Synonymous or nearly synonymous are command economy, centrally administered economy, Soviet-type economy, bureaucratic economy (Grossmann (....)).

⁴ For example, the fixed price economy model, which has been used in attempts to treat the socialist economy.

⁵ According to Kornai socialism is a shortage economy where there is a constant shortage of supply (in comparison with demand). See Anti-equilibrium (1970), Economics of Shortage (1980), Non-Price Control (1981 in collaboration with B. Martosi), Growth, Shortage, and Efficiency (1982), The Soft Budget Constraint (1986).

⁶ Phenomena like compulsory substitution of consumption, shortage, nonprice adaptation, soft budget constraints, control by means of norms, large share of inputs in inventories, etc. are all causes or descriptions of particular behavior.
substantially supplemented by the allocation of resources by directive.

Directive allocation of resources is partly caused by the superstition of the greater efficiency of centrally planned and directed regulation as compared with the market mechanism. Generations of socialist ideologists, Marx and his followers, polarized the planning that would occur under socialism versus the anarchy of capitalism.

Due to a lack of markets, price setting in a planned economy is artificial. According to ideological explanations, prices are set according to the law of value formulated by Marx.

One could, of course, doubt whether the Marxian scheme is a basis for correct pricing, i.e. pricing that effectively perform functions like allocation, distribution and measurement. It is well known that this approach virtually denies the role of demand in determining value. The idea of marginal utility is rejected because it is in conflict with the assumption that value is objectively determined by labor content, not by subjective valuation depending on the amount used. (Wilczynsky 1970 pp. 128-129).

However, the Marxian postulates, in spite of their dominating status in centrally planned economies, do not exhaust the variety of theories and concepts for central planning. According to Bennett (1989, p.2) discussions by Wiseer and Pareto may be regarded as the beginning of modern planning theory. Unfortunately developments in this field (see Bennett 1989) spanning nearly a century do not touch on the practical pricing procedures in the USSR, including Estonia. Perhaps the only real attempt at improving the pricing model was made when Marxian standard slogans were mixed with the input-output framework. To make the pricing model operational, the Marxian assumption that every price consists of three basic components, i.e. material costs, wages and profits, was translated into the input-output table. Unfortunately the practical outcome was a failure. The price model based on the input-output table suffered from all the limitations associated with the assumptions behind that technique (see Brown 1977). Moreover, the rationality for using the input-output framework was in its usefulness in solving optimization problems. Only in this context can dual solutions be treated as proxies for prices. Unfortunately the ultimate aim of practical planning was to achieve consistency rather than optimality (Bennett 1989, p.65).

Thus practical price formation remained arbitrary. It was based on the calculation of material costs in current prices, wage costs and amortization (depreciation) costs. To get the actual price, the value added in the form of a mark-up was added. In determining the mark-up, intuition as to the priority of products (sectors of the national economy) was decisive. Besides, price setting was determined by sociopolitical aims, of which price stability was crucial.

The elimination of price signals had a distortive effect on resource allocation. In a planned economy, the allocation of resources and the major structural breakdowns, eg between consumption and accumulation or between sectors, are determined directly and quantitatively.

Quantitative planning and centrally directed distribution of resources, do not compare with the market mechanism in terms of efficiency, and so do not produce

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7 The principles of a command system as a model do not eliminate the market completely, but they relegate it to the peripheries of the state-owned production sector (Brus ...).
optimum results. As a result of price control and inefficient allocation of resources, a characteristic feature of the planned economy is the tendency to supply-sidedness accompanied by an excess of aggregate demand over supply at official prices, and the consequent privileged and the dominance of producers and distributors over consumers.

1.4 The Microeconomics of the Centrally Planned Economy

Non-optimal distribution of resources should be considered a result of ineffective central distribution as well as the behavior of economic agents.

In the behavior of a firm three kinds of constraints are recognized: resource constraints (labor, capital, intermediate inputs), demand constraints and budget constraints (finance). Under capitalist conditions it is demand constraints that normally limit production, whereas under socialism it is the resource constraints, hence the term resource-constrained economy. At the same time the budget constraint of the socialist firm tends to be very soft (Charemza, W. 1989, p.54).

According to J. Kornai four conditions contribute to the softness of the constraint:
1. price-formation, in the sense that sooner or later enterprises are able to pass on the cost increases to their customer
2. soft tax system, with enterprises able to negotiate rates or exemptions, or influence the formulation of tax rules
3. free state grants available to enterprises for a wide variety of purposes
4. soft credit system, with loans only loosely related to future sales revenue and with easy repayment conditions and/or weak penalties for non-repayment (Kornai 1980, pp.306–309).

Under these conditions the survival of a firm is hardly at all contingent on its ability to cover all of its costs out of its sales proceeds. Grants, subsidies, tax advantages, etc. can be negotiated to fill the gap. Likewise, the growth of the firm does not depend solely on internally generated funds supplemented by hard loans, but can be supported from a variety of sources with softer financing terms. In this kind of an environment state enterprises are not obliged to react to price changes as one would expect a capitalist firm to do. They may react by changing input combinations, or production (the real sphere), or they may just as well negotiate special tax treatment or an exemption from a credit repayment obligation with a higher authority (the control sphere).

Furthermore, enterprises with soft budget constraints face a special kind of uncertainty. Although survival is virtually assured (no bankruptcy), an enterprise can never be sure that it will be allowed to keep and use any additional funds that it manages to accumulate. There is an ever-present risk that surplus cash may be

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8 The supply constraint and excess demand are also caused by (i) planning for high investment at the expense of current consumption to maintain high rates of economic growth; (ii) balancing with unduly low (or no) reserves; (iii) strictly controlled imports and priorities given to exports; (iv) irregularities in the supply of inputs (unfulfilled targets); (v) official reluctance to commit more resources to distribution (Wilczynsky, J. 1970 p. 168).
siphoned off to help out other enterprises in a less fortunate situation (Charemza, W. 1989, p.56).

Consequently, whenever enterprises have financial resources, or see the possibility of getting them, they will go all out to spend and commit the funds as quickly as possible - hence their almost-insatiable demand (Charemza, W. 1989, p.57).

Insatiable demand is not the only reason for a disequilibrium. In a fixed-price economy experiencing shortages, the economically relevant signals perceived by firms, households and planners are basically quantity signals: stocks, queue length, orders received, waiting times, and so on. Production does adjust to these signals, albeit with some delay: the production of inputs in short supply is increased, resources are directed toward the output of goods for which there are long queues and away from other products. This kind of adjustment occurs both in the allocation of current inputs and in investment decisionmaking (Charemza, W. 1989, p.55).

Adjustment will not lead to a market equilibrium. The basic motivating force for enterprises is a strong push for quantity, an urge to increase output as far as possible within the constraint of available resources, and there is little regard for costs. This push induces enterprises to demand both current and investment resources, to the extreme of insatiable demand. To some extent, the demand is tempered by tactical considerations: each enterprise has some idea of the level of demand that would be considered reasonable by higher bodies and knows that large demand for inputs will only be accepted if a correspondingly higher output target can be agreed on. In addition, if the enterprise asks for too much and promises too much in the current period, the demands placed on it in the future will be greater, in accordance with the usual bureaucratic principle of planning from the achieved level (the ratchet principle) (Charemza, W. 1989, p.56).

Despite the above-mentioned restraints, the quantity push operates at the enterprise level as the key driving force behind persistent shortage. It is further encouraged by the fact that both managerial rewards and the strength of an enterprise in the usual plan-bargaining process are likely to be enhanced by the achievement of larger size (Charemza, W. 1989, p.56).
2 History of Economic Reform

2.1 Stages of the Reform

Starting from the mid-1980s, the reform of the Estonian economy can be divided into two periods. The difference between these periods is most clearly seen on the microeconomic level and is connected with the importance of market signals in determining the behavior of economic agents. During the first period, i.e., from 1985 to 1992, the market or the initial aspects thereof were functioning, but market signals were not to any great extent taken into account. The command economy was reformed without any fundamental change in the economic system.

The second period, which began in 1992 after the monetary reform, meant a fundamental change leading from the command economy to a market-determined economy.

Differentiation between the two periods is relatively easy. The market-economy period can itself be separated because of the change in the economic environment from supply constrained to demand constrained (see section 4.1). Crucial for the change was the price shock at the beginning of 1992 as well as the monetary reform of mid-1992 and the new economic policy pursued during the post-reform period (see section 4.2).

The result of the new economic policy was the exposure of state owned enterprises to the discipline of the market. This meant the elimination of soft credit, subsidies, and tax breaks and the introduction of hard budget constraints for state enterprises. State enterprises could no longer rely on the financial support of ministries and other state bodies.

In brief, one can say that the reforms of the second period transformed market signals into the main determinant of economic agents' behavior.

The introduction of market signals as behavior stimuli does not mean that the second period marks the formation of a developed market economy in Estonia. Actually this stage was only the first step toward the market economy. It was followed by further liberalization (particularly regarding external transactions), land and agricultural reforms and the development of the financial sector.

And finally certain systematic reforms, particularly privatization, were crucial for the optimizing behavior of agents. Only after privatization and the establishment and spread of entrepreneurship can it be expected that the preconditions created by the change in the economic environment will be realized. The spread of entrepreneurship should also involve the state sector, particularly that part of the sector which after the privatization remains under state control, as the demonopolization (deconcentration) and commercialization of enterprise governance are inevitable.

Unfortunately the change in the form of ownership, which in itself is a sufficiently complicated task, is not enough to ensure the "right" kind of market regulation. The market economy is based not only on private ownership but to the same extent on adequate civil law. The essence of a market economy is the right and opportunity for an individual to use his wealth for the purpose of gaining profit. The system works only if there exists a real danger of a loss of wealth if one invests unwisely. Without the risk of losing, there is no incentive to make wise economic decisions.
The use of (private) wealth is optimumal only if the law stipulates the above-mentioned risk, i.e. the loss of wealth as a result of wrong decisions. Unfortunately the socialist legacy was not adequate to spawn such legislation.


Reformation of the Estonian economy started from an orthodox CPE as it existed in the Soviet Union up to the middle of the 1980s. The primary thrust of the economic reform was similar to developments in the other parts of the USSR. In the mid-1980s economic reform seemed to refer to those developments leading through the reformed planned economy to market socialism. 9

The expected advantage of the market socialism model was its ability to combine the allocative efficiency of competition with the welfare maximizing income distribution and the internationalization of internalities.

The leader in the of gradual introduction of market socialism is Hungary. 10 In 1968 Hungary introduced the 'new economic mechanism'. Improvement of it led in mid-1980 to a modification of the planned economy, whereby the market assigned an active role not only to relations between the state and households but also within the state production sector itself.

Unfortunately the experience with market socialism in Hungary as well in Yugoslavia failed to prove the possibility of combining the advantages of the planned and market economies. Economic growth and social welfare turned out to be less than was hoped. 11 In part this was caused by external factors that arose in 1970s. 12 But the main reason for failure was in the model of market socialism itself. Without private ownership and civil law determining the use of ownership, the stimuli and restrictions needed for making innovative decisions involving risk are lacking. The absence of private ownership also means the lack of a capital market, which is decisive for market efficiency 13.

Actually the problems of market socialism lost their importance in Estonia. As a result of persistent reforms (liberalization) the orthodox CPE has not been replaced by market socialism but by the post-socialist economy.

The main difference between the post-socialist and the market socialism model lies in the extent of state intervention. 14 First of all this applies to macroeconomic regulation and long-term growth. In market socialism the conduct of monetary and

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9 Market socialism as a theoretical concept refers to an economic system in which the means of production (capital) are publicly or collectively owned, but the allocation of resources follows the rules of the market (Brus ...).

10 The second option for market socialism and a way of introducing it, is provided by the former Yugoslavia. Market socialism was instituted in Yugoslavia in early 1950 as a result of political separation from the USSR.

11 See Nove (...).

12 The real shocks (price of oil) and western economic crises.

13 (...) provides criticism.

14 The post-socialist economy can be define as non-capitalistic laissez faire due to the absence of private ownership and the non-interventionist economic policy of the state.
fiscal policies is a function of the state. The goal of economic policy is macroeconomic equilibrium and stable socioeconomic growth.\textsuperscript{15}

In post-socialism (at least in its Estonian version) the state's impact on the economy was limited to fiscal and budgetary policies. The aim was to cover the current expenditures of the public sector (including the social security net).

The post-socialist economy was no longer the reformed planned economy. The main explicit difference between the two systems was in the scale of liberalization, which was considerably larger in the post-socialist economy. The difference was the result of ideological background. The aim of the ideology leading to post-socialism was the introduction of the market economy. The ideology of the reformed planned economy aimed at improving the CPE (whether it is actually possible is another question). Therefore the creation of post-socialism occurred through the destruction of the old system and its regulation mechanism. Unfortunately it appeared that the new economic mechanism was not operable immediately after the destruction of the old system. Certain specific conditions were needed (see section 3.1).

The differentiation between the post-socialist economy and the reformed planned economy, in time, has become conventional. The periodization presented above is based on the assumption that the formation of the post-socialist economy started in 1990. This assumption is in accordance with the fact that in 1990 fiscal, price and financial sector reforms were either started or gained momentum. These reforms along with liberalization of entrepreneurship and massive reforms of governmental institutions determined the formation of the post-socialist economy.

Descriptions of the various stages of economic reform are presented in the following sections. The post-socialist economy will be discussed separately in section 3.

2.2 1985–89: The Reformed Planned Economy

The principles of reforming the planned economy in Estonia between 1985 and 1989 were similar to those adopted elsewhere in the Soviet Union (they reflected decisions adopted in Moscow).\textsuperscript{16}

A campaign-like mood was typical of the early part of this period: at one time it was important to modernize industry and to raise the quality of production; at another time the policy of glasnost and other measures designed to unleash human initiative and to reduce alcoholism were carried out.

Typically by these campaigns did not address the roots of the problems.

\textsuperscript{15} In the actual realization of market socialism (Hungary) the state was also responsible for allocating resources. Still in the first half of 1980s a substantial part of (particularly infrastructure) investments was in the hands of state. The state also tightly controlled the allocation of resources through the supervision of financial intermediaries (Brus (...)).

\textsuperscript{16} However there were some differences between developments in Estonia and in other parts of the USSR. The distinctive feature for Estonia was higher intensity in introducing new forms of entrepreneurship. In 1985-1987 the fundamentals of state-owned small enterprises were worked out in the USSR. Estonia was first in the Soviet Union to do this. In Estonia the establishment of producers' cooperatives proceeded at a considerably faster pace than was generally the case in the USSR. In Estonia the number of employees of cooperatives increased 11.5-fold in 1987–1990, amounting to 55,525 in 1990 (7% of the labor force) (Lugus–Venesaar–Vitsur 1991).
In 1987 the Central Committee of the Communist Party initiated reforms of the system (so-called perestroika). Resembling the 1965 Reform it was, in fact, an attempt at "bettering" the existing system.

One of the most important results of perestroika was the Law on State Enterprises, which replaced the traditional mandatory output targets for enterprises with the state orders (centrally directed orders to firms to deliver specified quantities of goods). The law also granted firms some leeway to negotiate with each other, and permitted them greater autonomy in the allocation of their internally generated funds, in the payment of wages and bonuses, in particular. (The Economy 1990, p.4)

Another major reform measure undertaken in this period involved the decentralization of foreign trade, with entities other than the traditional state-trading organizations reportedly becoming substantially more significant by 1989.

Other reforms in the external sector included the introduction of a foreign exchange retention scheme (obligatory surrender of foreign currency earnings), foreign currency auctions with limited transactions, etc. (The Economy 1990, p.4)

It is unfortunate that perestroika was carried out as a sequence of isolated and detached actions, which were rather inconsistent. For example, increased enterprise autonomy was severely circumscribed by the system of state orders, which covered the bulk of industrial output in 1988 and 1989. The dismantling of some aspects the traditional planning system was started, but the inflexible and distorted official price system was left essentially intact, as was the role of the state distribution agency (Gosnab) in allocating most material inputs. From 1988, enterprises were allowed to negotiate "contract" prices for the so-called new products, but these were still subject to official supervision and, in any event, covered only a fraction of total output. The encouragement of private economic activity was limited to a small number of joint ventures with foreign participation and a grudging acceptance, beginning in 1988, of the so-called cooperatives, which were subject to various restrictions and sporadic campaigns of harassment. (The Economy 1990, p.4)

From 1 January 1988, the rules were changed regarding the formation of "stimulation funds", i.e. funds for wages and a wide variety of bonuses in enterprises. Up to that time these funds had been formed according to calculations based on basic indicators (production costs, labor productivity etc.) and economic standards. Now the standards in question were abrogated. Therefore, all the profitability factors, i.e. production growth, cost reductions, structural shifts of product composition, and price increases, gained equal importance in the formation of the stimulation fund. Increases in profits and production of goods with higher prices became the main sources of material incentives. (See Table 2.1).

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Table 2.1  
Indices of Estonian industrial enterprises in 1988 compared to previous year (%)  

<p>| | |</p>
<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Output</td>
<td>4.0</td>
</tr>
<tr>
<td>Labor productivity</td>
<td>5.6</td>
</tr>
<tr>
<td>Output-capital ratio</td>
<td>-1.1</td>
</tr>
<tr>
<td>Profit</td>
<td>9.1</td>
</tr>
<tr>
<td>Profit allowances to</td>
<td>30.4</td>
</tr>
<tr>
<td>material stimulation funds</td>
<td></td>
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</tbody>
</table>


There was an increasing lack of discipline in wage settlements. Successive attempts to reign in the growth of wages through the taxation of "excess" wage increases were unsuccessful, as these schemes were made ineffective by exemption and lax enforcement. To the extent that firms had wider scope for making production and investment decisions, they did so in an environment of distorted and rigid prices. Arguably, a serious mistake was made by loosening trade, wage and financial controls on enterprises while failing to harden their budget constrains or to liberalize prices. (The Economy 1990, p.7).

In the years 1988 to 1990 state control of the formation and use of salary and wage funds continually diminished. The Regulations of the Government of the Republic of Estonia of 5 May 1990 established new grounds for paying salaries and wages for self-financing enterprises, giving management the right to pay its employees hourly wages, extra pay and bonuses. This resulted in the jerky growth of salaries and wages (Table 2.2).

Table 2.2  
Changes in labor productivity and average salaries (%)  

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</thead>
<tbody>
<tr>
<td>labor productivity</td>
<td>4.4</td>
<td>5.2</td>
<td>3.7</td>
<td>2.8</td>
</tr>
<tr>
<td>wages and salaries</td>
<td>3.6</td>
<td>7.4</td>
<td>8.1</td>
<td>23.1</td>
</tr>
</tbody>
</table>


By the end of this period a reformed planned economy had developed in Estonia. According to Bauer (1991, pp.109-111) the following features should be noted:  
1) destruction of the all-embracing decisionmaking hierarchy.  
2) abolition of mandatory planning;  
3) decontrol of prices;  
4) decontrol of wages;  
5) liberalization of foreign trade.

It should be mentioned that the final goal was not reached regarding all of the five points mentioned above. Reforming the planned economy continued in the following months and years, and resulted in a post-socialist economy. (The liberalized socialist economy will be discussed later, in connection with the description of the post-socialist economy.)

Liberalization and decentralization of decisionmaking (under conditions of state
ownership), liberalization of prices and salaries as well as decentralization of investments and decisions connected with foreign trade resulted in a state of total disequilibrium. On a short-term basis this is characterized by excess demand, which in a given period is also manifested as suppressed inflation. The long-term reason for the disequilibrium is insufficient investment.

2.3 1987–89: IME concept

On 26 September 1987 an article "Proposal: the whole Estonian SSR as a self-financing economy" written by S. Kallas, T. Made, E. Savisaar and M. Titma, was published in the "Edasi" newspaper.

The importance of this article to the future development of Estonia can not be overestimated. For the first time in the Soviet era the aspiration for independence and market discipline (actually in the form of market socialism) was declared openly and through the mass media.

The main ideas presented in the article were the following:
1. Control and planning of the economy must be based on the law of value and market relationships.
2. The economy in the territory of Estonia should be subjected to Estonian authorities. The economy must be restructured in accordance with the raw material resources available locally and in observance of local priorities.
3. Trade with other republics must be based on market relationships and must take the form of direct relations between producer and consumer.
4. The budgeting and fiscal policies of a republic of the Soviet Union are independent of all-Union control. The relation between the budget of the republic and the all-Union budget will be determined on the basis of long-term standards. In Estonia a local tax system will be formed.
5. Self-financing relations will be introduced throughout the territory of Estonia, on every level of the economy and regional sectors.
6. In an environment of competitive production a variety of forms of ownership (besides state-ownership also cooperatives and joint stock companies) will be introduced.
7. Management is based on economic independence and individual enterprises.

It is understandable that the IME proposal (as a proposal for the separation of Estonia from the USSR) unleashed a stormy reaction. Public support for the idea was overwhelming. During the following four months nearly a hundred supportive articles were published in Estonian newspapers. Only five articles opposed IME.

On 16 November 1987 the IME question was discussed in the Council of Ministries of the Estonian SSR. IME was judged to be unworkable. Yet in the beginning of 1988 it became clear that the IME idea could not be suppressed. Thus

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18 IME - Isemajandav Eesti (Self-financing/managing Estonia).

19 The original text has been published in Diskussioonid (1991).

20 Proos-Savisaar-Terk (1988) give as reasons the exceptional public support and Moscow's penchant for economic reform.
the work on the 'proposal of four men' was continued in the efforts of several research groups, and the idea was developed into a concept of economic development and reform.

On 5 April 1989 the consolidated concept of the self-financing of the Estonian SSR and a proposed law for the Estonian SSR, "The basis of self-financing of the Estonian SSR", were published for discussion purpose. The law was adopted by the Supreme Soviet on 15 May 1989.

The reaction of Moscow turned out to be more favorable than expected. Albeit in a less clear-cut form than desired, the Supreme Soviet of the Soviet Union adopted two important legislative acts; on 27 July 1989 a "Regulation on self-financing of the Baltic States" and on 27 November 1989 on "Economic Independence of the Baltic States".

In August 1989 talks on three main issues began in Moscow:
1) independent handling of the state budget of Estonia and the amount of the tax to be paid to the all-Union budget
2) trade agreements and direct economic relations in 1990
3) transfer of enterprises and institutions that were directly governed by Moscow to the authority of Estonia. (Taaler, J. 1990, p.28).

The talks were a partial success. An agreement was reached on the independent control of the budget of the Estonian SSR, but the question of the amount of the tax to be paid to the all-Union budget was left open. The negotiations on a trade agreement to be signed between the governments of the Soviet Union and the Estonian SSR were a total failure.

Some success was achieved on the question of of transfer of enterprises and institutions directly subordinate to the Central Government of the Soviet Union to the authority of Estonia. According to agreements signed at different times, 20 to 50 enterprises were to be handed over. As a practical achievement a document was signed on 7 February 1990 according to which 21 enterprises were to be transferred to the authority of the Estonian SSR. (Taaler, J. 1990, p.15)

Although the IME idea was pur forward as an economic proposal, its real nature was clearly political. The essence of IME, dressed up in an entirely economic wrapping for political reasons, was the separation of Estonia from the Soviet Union. 21

The political primacy of IME became apparent with the realization of IME. In the talks with Moscow the IME conception spread from the economy into social life and politics. As part of the independence process, IME prepared the ground for the political separation of Estonia.

The practical achievements of this period were:
1) consolidated concept of self-financing of the Estonian SSR
2) law for the Estonian SSR: "Basis of self-financing in the Estonian SSR"
3) compromise solutions with Moscow on questions of economic policy
4) partial independence of the budget of the Republic of Estonia
5) adoption of numerous draft laws by the Supreme Soviet, the essence of which was to improve the planned economy
6) formation and development of small businesses (Taaler, J. 1991, p.33).

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21 This was immediately realized by the opponents who claimed that IME will lead to a break from the USSR. See Tahtaasta (1988, pp.23–28).
In the further development of Estonia, the IME played a two-sided role. It was a platform from which the Estonian independence movement developed and led up to the re-establishment of independent statehood. Moreover, the IME formed a theoretical basis for the economic reform which gave rise to the post-socialist economy in Estonia.

2.4 1989–91: Independence as a Precondition for the Transition to a Market Economy

Independence was a necessary requisite for Estonia’s transition to a market economy. At the end of the 1980s the Moscow central authorities were not actually interested at all in a transition to a true market economy (in spite of assurances to the contrary). There was even a shift of sentiment in the opposite direction.

It should also be kept in mind that so long as Estonia remained a constituent republic of the Soviet Union command methods of economic management were more effective.

Some of the reasons why this was the case were:

1. The Estonian economy was closely bound to that of the Soviet Union - by common currency, money and credit markets, technology, production relations, etc.
2. Estonia represented only an insignificant part of the Soviet economic complex. Estonia’s external links were mainly with the USSR. At the time, Estonian exports amounted to 3.3 billion rubles and imports to 3.7 billion. The bulk of this trade was accounted for by the Soviet Union. The share of non-USSR countries in Estonian exports was approximately 130-140 million rubles (4 percent of exports) and in imports 500-600 million rubles (13-14 percent of imports).

Therefore the economic relationship between Estonia and the Soviet Union could only be one-sided: the Soviet Union could affect the Estonian economy but not vice versa. If Estonia had been a part of the Soviet Union in the context of a market economy, the structure and growth rate of Estonia’s economy would have been determined by the Soviet market (reacting to price signals, demand and supply conditions, etc. in the Soviet Union).

It could be asked whether a production structure formed in this way was at all disadvantageous for Estonia. In fact, if the Soviet Union had been a highly developed industrial country, its influence would not have been undesirable. But the Soviet Union was and is an underdeveloped country with an economy marked by crises, with high inflation and a distorted price structure, a shortage of hard currency, low quality output, etc.

To sum up, it can be stated that under free market conditions the Estonian economy as part of the all-Union economy would have been completely and exclusively controlled by the Soviet economy and markets. The consequences for the development of the Estonian economy would have been unfavorable. To avoid this outcome it was necessary to eliminate or soften the effect of price signals coming from the Soviet Union. The only possible way to do that was to use nonmarket tools (protectionism, obligatory plans, etc.), i.e. the means of the command economy.
2.5 1989–92: Post-Socialist Economy

The period of post-socialist economy is characterized by the following achievements:
1) economic program of Prime Minister E. Savisaar’s Government (development of IME)
2) conceptual basis of ownership reform
3) concepts for the introduction of the Estonian national currency, (not realized in the actual Monetary Reform)
4) beginning of the price reform
5) liberalization of wages and salaries
6) legislation on entrepreneurship
7) fiscal reform (Taal, J. 1991, p.34).

Liberalization and decentralization continued at the same pace as during the formation of the reformed planned economy. The idea was simple: the less centralization and intervention by the state, the greater the degree of market economy and the greater the economic efficiency.

Complete liberalization and decentralization did not replace the planned economy with a market economy. In place of a planned economy came anarchy caused by an unfortunate combination of factors, including the monopolistic structure of the economy, a lack of factor markets, inadequate laws for regulating the use of private property etc. – and, naturally, the continuing dominance of state ownership.

Looking at this period from the aspect of the transition to a market economy, one gets the impression that there had been a long and slow start. Plans were made but little practical reform was achieved. The actual result was not so much the introduction of a new economic system as the destruction of the old.

The most significant achievements were the liberalization of prices and the budget system and reforms in the financial sector.

2.6 Price Liberalization

Normalization of the price system began in Estonia in 1988 with the Government decree on selling agricultural products and foodstuffs at so-called negotiated prices. The first significant step toward price liberalization was taken with the adoption of the pricing law in December 1989. Under this law, state-established, coordinated and free prices were introduced. State-established prices were applied to goods and services of state enterprises and joint stock companies.

State coordinated prices were applied to primary goods and services produced by monopolies. According to the law a monopoly was defined as a producer/supplier delivering half or more of the sales volume for a good or service in a county, town or local market.

Local administrations had the right to establish and co-ordinate the prices of goods and services of municipal enterprises. Otherwise, prices were free of control.

In 1990 the Price Committee, an institution of the planned economy, was replaced by the Price Office. In the first half of the year price controls were lifted on a number of consumer goods (fruit and vegetables, books, furniture) and production
inputs (certain building materials). The deregulation was accompanied administrated increase in wholesale and retail prices (postal services, footwear, furs, etc.) of 10–100 percent.

In October 1990 prices of basic foodstuffs (bread, meat, milk etc.) were raised 80–200 percent by administrative means. Since at the same time, minimum salaries, public sector salaries and pensions were raised, the subsidization of foodstuffs in the 1991 budget decreased by as much as 10 percent.

In addition to retail prices the Government also began to deregulate wholesale prices.

By April 1991 the share of goods with fixed prices had decreased to 20 percent of the consumer basket and the share of free price goods amounted to 40 percent; the other 40 percent had controlled prices.

By the end of 1991 approximately 10 percent of consumer prices were still set by the state and 30 percent of the consumer basket were under some form of government regulation.

By the end of 1992 price liberalization had practically ended. Prices subject to the control of government and ministries are limited to land, oil shale, electricity, forest resources, natural gas, thermal energy, strong alcoholic beverages, medicines, precious metals and some minor items. There also remains a group of services with state controlled prices (water supply, transport services subsidized from the budget, postal and telecommunication services, medical services, etc.). In addition, some of the services are still controlled by municipalities (eg rent tariffs are subject to ceilings).

2.7 Reforms of the Fiscal System

Until 1990, Estonia's budget was fully integrated with the all-union budget of the USSR. Estonia shared its tax revenues with the all-union budget and designed its expenditures according to Soviet guidelines. (Estonia 1993a, p.20)

The reform began with the budget law of November 1989, which applied to the 1989 budget, and which, although preserving the essential structure of finances, provided the foundation for later reforms. This law established a two-tier system of state and local budgets, clarified the nature of transfers between the state and local budgets, provided rules for the preparation of supplementary budgets, and also stipulated that both state and local budgets should be balanced.

The reforms gained momentum in 1990, with the thrust of fiscal reform at that stage focused on achieving an increasing degree of independence from the Soviet budgetary system, both in terms of control and in terms of the role of transfers to and from the center, and on modernizing the tax system to make it compatible with a market economy. (Estonia 1992, p.55)

2.7.1 Taxes

The Estonian and USSR budget was integrated until 1990, when Estonia was granted some economic autonomy. The volume of revenues transferred to the USSR declined

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22 Written with A.Saarniit.
substantially in 1990 and was reduced to zero in 1991. During these two years a tax reform took place by which the Soviet tax structure was replaced by a Western-type structure that includes a personal income tax, a corporate income tax, and a value added tax (see Table 2.3). Social security benefits, previously financed largely by USSR transfers, were now financed through an extrabudgetary Social Security Fund funded by a 20 percent payroll tax. An additional payroll tax was introduced in 1992 to fund the medical insurance part of the social security system. The import taxes inherited from the Soviet regime have been reduced to zero. A few import goods are now subject to sumptuary excise taxes, and a customs service charge of 0.5 percent is levied on all imports. (Estonia 1993a, p.21).

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<tr>
<td>Corporate income tax</td>
<td>17.89</td>
<td>20.42</td>
<td>16.94</td>
<td>13.47</td>
<td>9.16</td>
</tr>
<tr>
<td>Personal income tax</td>
<td>11.93</td>
<td>17.73</td>
<td>20.16</td>
<td>20.26</td>
<td>21.08</td>
</tr>
<tr>
<td>VAT</td>
<td>0.00</td>
<td>18.33</td>
<td>21.20</td>
<td>22.88</td>
<td>27.10</td>
</tr>
<tr>
<td>Excises</td>
<td>36.14</td>
<td>11.62</td>
<td>4.28</td>
<td>4.88</td>
<td>5.16</td>
</tr>
<tr>
<td>Customs duties</td>
<td>3.16</td>
<td>0.27</td>
<td>0.35</td>
<td>0.48</td>
<td>0.34</td>
</tr>
<tr>
<td>Social security tax**</td>
<td>0.00</td>
<td>18.78</td>
<td>27.52</td>
<td>28.43</td>
<td>30.54</td>
</tr>
<tr>
<td>Other taxes &amp; revenues</td>
<td>30.88</td>
<td>12.84</td>
<td>9.55</td>
<td>9.59</td>
<td>6.62</td>
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<tr>
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<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
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*) The tax structure is a mix of "old" & "new" taxes
**) Social security tax provides revenues for the Social Security Fund & the Health Insurance Fund

2.7.2 Expenditures

The expenditures were distributed among the central budget, local budgets and extrabudgetary funds. The main extrabudgetary funds are the Social Security Fund (founded in 1990) and the Health Insurance Fund (founded in 1992). The list of less important funds has changed frequently. The two main funds were established to provide pension benefits for old and disabled people and their beneficiaries, sickness benefits, maternity allowances and family benefits. The SSF (founded in 1991) is financed from the social security tax, amounting to 20 percent of the wage bill, and from grants from the central government budget. In 1992 a special contribution (part of the social security tax), amounting to 13 percent of the wage bill, was set up to finance the HIF. The latter also requires help from the central government. The social security tax (contribution) is collected from employers.

There have always been some social assistance programs. During the price liberalization period (1990–91) the government set up a scheme to compensate low-income groups for the removal of price subsidies. The scheme accounted for 40 percent of total transfers to households. In 1993 programs for supporting households' housing and heating expenditures were started. They cover 40 percent of the population and amount to 6–7 percent of income transfers. Expenditures for the social safety net have been stable through 1992–94: they have not exceeded 24–25 percent of general government expenditures. In 1991 they amounted 35 percent of government outlays for the "price liberalization compensations".

Changes in the expenditure structure are typical for economies in transition. In
1989 subsidies amounted 11 percent of GDP. By 1993–94 their share had declined to 1–1.5 percent of GDP. The other trend has been the decline in investments from 4 percent in 1989 to 1.3–1.8 percent in 1993–94. The government intends to raise the volume of public investments in 1995–1999 to 4–4.5 percent of GDP.

Restoration of independence resulted in new expenditures related to tasks previously performed by the central government of the USSR. Therefore, the shares of administration, defence and law and order expenditures have gone up slightly.

2.7.3 Budget balance

The primary focus of the budgeting process in Estonia since 1991 has been aimed at recurrent revenues and current expenditures. In 1990–91 several factors contributed to better state finances: subsidies and transfers were reduced, price liberalization in Estonia resulted in an improvement in the terms of trade and growing profits for enterprises, high inflation combined with the FIFO method led to taxation of inflationary profits under the corporate income tax, a lag of indexation schemes for wages, pensions etc. This situation should be tackled as an exception, as these factors lost their influence by spring 1992. Due to this fact tax rates were lifted (VAT from 10 percent to 18 percent, marginal of personal income tax rate from 33 percent to 50 percent, progressive tax rates of the corporate income tax were changed to flat 35 percent) after the monetary reform of June 20, 1992. New tax rates helped to keep the budget in balance despite the huge tax arrears, which increased in autumn 1992, to 25 percent of central government revenues.

By 1993 tax administration had improved and it was possible to reduce the marginal tax rates from 50 to 35 percent for personal income tax. The new income tax law adopted in summer 1993 turned both of the income taxes into proportional taxes at the rate of 26 percent (from January 1, 1994) and investment credits were replaced with accelerated credits.

In 1993–94 the overall tax burden has stabilized at the level of 34–36 percent of GDP.

Since the restoration of independent fiscal policy, the general government budget has been in slight surplus (0.5–1.5 percent of GDP). Foreign borrowing has been used only for on-lending for public investment purposes.

2.7.4 Budgetary Process and Legal Developments

The fiscal year is the calendar year, except for local governments, whose fiscal year was shifted to April 1 to March 31 in 1994 (by 1996 they will change back to the calendar year). The central government budget cycle commences with a forecast of economic developments prepared by the Ministry of Finances in January. In the summer budget guidelines are dispatched to all the ministries, whose requests are adjusted by the Ministry of Finances so as to obtain a balanced draft budget. The process is completed in the Parliament, which usually manages to approve the budget before the new fiscal year. The new budget law adopted in 1993 replaced the one-year budget perspective with three-year forecasts of expenditure requirements. In 1994 public investment programs were started as a medium-term planning tool.

The process of budget formulation at the local government level is similar to that of the central government with the difference that the local authorities have to
seek financial aid from the central government. In 1994 the law on local taxes was adopted. According to this law local authorities were given the right to levy nine different taxes on their residents (including a local income tax). In light of the costs of tax administration, the local authorities have not taken any serious steps to raise their tax revenues.

In 1993 Estonian legislators worked actively to improve fiscal laws. In June 1993 a new budget law was adopted. According to this law, expenditure requirements should be based on three-year forecasts.

In August the general taxation law was adopted. It defines and sets the rules for presenting financial documents and penalties for non-compliance, giving broad supervisory powers to the tax officials. This law was followed by a new version of the law on VAT. It reserved the main features of the previous law: the tax rate remains at 18 percent and the list of tax-exempt goods and services was cut slightly: banking and insurance services, postal services and pharmaceuticals are the most important tax-exempt items.

2.8 Reforms of the Financial Sector

2.8.1 The Financial Sector in the Planned Economy

The banking sector of a planned economy seems to be underdeveloped compared to the other sectors. A centrally planned economy in any form is a nonmonetary economy in which currency flows are nominal transfers reflecting commodity flows. The aim of financial activities is to provide state-owned enterprises with the financial means for achieving their plan targets.

In pre-reform Estonia the banking sector was a segmented two-tier system, consisting of the local branches of the all-union state bank (Gosbank) and certain specialized banks. At the end of the 1980s banking in Estonia was concentrated in the local offices of six Soviet banks (all with headquarters in Moscow): the Gosbank (central bank of the Soviet Union), the Vneshekonombank (the Soviet foreign trade bank), the Agricultural Bank, the Bank for Industry and Construction, the Savings Bank, and the Social Bank (Estonia 1993, p.48).

The main functions of the banking sector were (a) issuing currency according to the so-called cash plan; (b) accumulating deposits; (c) granting credit to enterprises according to plan guidelines. (The Economy 1990, p.3)

These characteristics of the Estonian financial system were typical of all centrally planned economies (see Financial 1993). The financial circuits were separated for households and enterprise sectors. Moreover in some cases deposits were separated from depositors. For example, the deposits of enterprises were not freely at the disposal of the depositors. Typical for the imperial constitution of the USSR, resources mobilized in Estonia (including savings deposits) were put at the disposal of Moscow, which decided on their allocation according to the all-union credit plan. (The Economy 1990, p.3)

The credits were directed according to the production plan. Credit distribution was exercised through branch ministries and the planning committee.

Interest rates were controlled and kept artificially low. They played no role in allocating financial resources.
Under these conditions, monetary policy (exercised in Moscow or in Estonia) had no active role. Further different governmental bodies controlled the central bank, which weakened the image not only of the central bank but also the banking sector as a whole.

The directive nature of the system resulted in a lack of commercial banking and liquidity management skills (Hilbers 1993, p.13). Inexperience in commercial banking became decisive for the extent of financial intermediation during the initial stages of transition.

And, last but not least, the outstanding feature of the financial sector of a centrally planned economy is the absence of a market for intangible assets. The main reason for this is the lack of tradables. Due to state ownership, corporative stock, securities and other financial instruments simply did not exist. This in turn explains the absence of investment bankers and companies, trustee organizations and other institutional and individual investors.

2.8.2 Reform of the Financial Sector

Reform of the financial sector involves the formation of a conventional two-tier banking sector along with the introduction of a market based financial system. The latter presumes the liberalization of banking activities and an improvement in the legal framework as well as the development of financial markets.

2.8.2.1 Formation of a Two-Tier Banking System

The formation of a two-tier system started in December 1988 with the establishment of the first commercial bank in the USSR, Tartu Commercial Bank. Tartu Commercial Bank was founded on the basis of state capital. Subsequent growth of commercial banks has resulted from the recapitalization of state owned banks and the establishment of new banks with private capital. As of December 31, 1994 there were 23 authorized banks in Estonia (and two Finnish banks, Kansallis-Osake-Pankki and Union Bank of Finland, had obtained licenses for opening local branches).

The process of establishing a central bank in Estonia began in December 1989 when the Supreme Council adopted the decree for establishing Eesti Pank (Bank of Estonia). The decree came into force on January 1, 1990. From then until October 1991, two central banks operated separately in Estonia. In addition to Eesti Pank, the local office of the all-union state bank (Gosbank) continued its activities as issuer, creditor, clearing center, etc. Dual monetary power came to an end with the decision by the Supreme Council (October 1991) to merge the branch of Gospank with Eesti Pank.

The current nature and extent of Eesti Pank's activities is determined by the monetary reform of June 1992. With the monetary reform, the currency board system was introduced and since then Eesti Pank has been operating as a currency board (see

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24 For details, see Lanela-Sutela 1994 and Hirvensalo 1994.
2.8.2.2 Introduction of a Market-Based Financial System

One objective of financial reform is to replace administrative regulation with a more effective system. In place of bank-specific credit ceilings and selective credit allocation, market forces are relied on to allocate credit.

In Estonia the liberalization of the domestic money market ended with the introduction of the currency board arrangement. Neither Eesti Pank nor any other financial authority has the power to interfere in the market by controlling interest rates, etc. Further, under the currency board arrangement neither Eesti Pank (not anyone else) has effective instruments for indirectly controlling money market operations. It is the market mechanism by which the currency board system equilibrates the demand and supply of foreign exchange and the demand for cash.

Foreign exchange and capital movement restrictions have been almost completely removed. After the monetary reform Estonia turned to the issue of current account convertibility, forced repatriation of export revenues and investment income, conversion at the unified exchange rate and certain modest restrictions on capital movements (IMF 1993). The major changes required for the introduction of full capital account convertibility were made by Eesti Pank in 1993. The liberalization was extended in March 1994, when Parliament nullified the Foreign Currency Law. In June 1994 Eesti Pank abolished restrictions on opening foreign currency accounts. These changes essentially introduced full convertibility for capital account purposes.

The success of financial sector reform presumes essential improvements in legislation. Legislation inherited from the planned economy is seen to be inadequate for regulating markets. The most critical issues here relate to changes in the ownership structure and setting rules for transactions related to real estate and other forms of ownership. The lack of precisely enunciated property rights limits the use of collateral. This in turn restricts the ability to enforce loan contracts, which

25 Eesti Pank has no monetary targets, credit restrictions for banks nor discount rate. The role of Eesti Pank is to support the formation and development of the financial markets (through the initiation of transactions, eg issuing CDs in the interbank market). Eesti Pank also prepares legislation needed for the effective regulation of markets and for rationalizing the behavior of commercial banks. The supplementing of legislation includes also improvement of prudential ratios for commercial banks (see Quarterly Review of Eesti Pank 1993, #1 and #4) and Eesti Pank Bulletin (1994, #3 and #7). The latter publication deals largely with banking supervision, which is the responsibility of Eesti Pank.


27 Current account convertibility means that domestic currency can be freely converted for current account transaction purposes (for trade). Capital account convertibility allows for conversion for capital flow purposes. (Sutela 1992, p.89).

hampers credit extension and reduces the efficiency of financial intermediation.

In this field a breakthrough was made in the second half of 1993 when Parliament passed laws defining property and real estate transactions (June 9, 1993 and October 27, 1993).

The efficiency of a market-based financial system depends on the development of the money and credit markets. Unfortunately the money market in Estonia is still in the formative stage. The interbank overnight market is more highly developed. The interbank market started to develop in June 1993 when the first (collateralized) overnight lendings took place. In 1994 the banks started to use the interbank market more actively to minimize their excess reserves held at Eesti Pank. This year all commercial banks have been participating in the market. The volume of overnight lending increased substantially - from EEK 840 million in 1993 to EEK 16 353 million in 1994. *(Teabeleht # 7 1995).* Meanwhile the share of lending without collateral increased. A new development in the interbank market was the extension of maturities (up to 57 days). By the end of 1994 the average yearly interest rate had stabilized at 5.67 percent (in 1993 6.3 percent) *(Teabeleht # 4 1995).*

Financial markets are efficient only if the securities and capital markets function. The Securities Market Act was passed in 1993. In 1994 new issues of bonds and stocks increased considerably, to EEK 684.5 million. Yet the total volume of bonds and stocks outstanding was only EEK 950 million in 1994. The market for stocks and bonds is only in the embryonic state *(Economic Transition 1994, p.23)* also due to the lack of a secondary market. The only regularly traded securities are Eesti Pank certificates of deposit with 28-day maturity.

Certainly one factor accelerating the growth of the capital market is the selling of shares of state-owned firms for privatization vouchers. This process started at the end of 1994.

The financial system is effective when there is enough competition, and this includes competition with other financial institutions. Unfortunately, as a heritage of the planned economy, there is an absence of other institutional investors (except insurance companies). Trade unions are weak and the retirement payments system is still basically different from the western system based on retirement funds. In Estonia pensions are paid out of extrabudgetary funds financed by taxes. The first retirement fund to operate as an institutional investor was established only in the fall of 1994. There are 9 investment funds operating in Estonia, but their role in financial intermediation is still unimportant (see Raamat 1994).

In summarizing, one can conclude that regarding the introduction of a market-based financial system, Estonia's primary achievement has been the liberalization and establishment of a money market. The development of other financial markets as well as the entry of institutional investors are tasks that have been left to the future.
3 Post-Socialist Economy

3.1 Ownership

By 1992 the post-socialist economy had developed in Estonia, one of the characteristic features of which was very high degree of liberalization. It was possible to do almost anything, even things what in developed market economies would evidently have been illegal. This degree of liberty was the result of underdeveloped legislation and the lack of an effective regulative mechanism.

There were two reasons for the lack of economic regulation - destruction of the previous regulatory mechanism (both the institutional and regulatory aspects) and the slow emergence of a new one. Actually, the situation was even more complicated. Even if the previous mechanism had been preserved it could not have functioned effectively during the transition period. The change in the ownership structure added considerably to the general confusion. Instead of the previously dominating state ownership numerous nonstate enterprises had been founded. (As of January 18, 1991 there were 7454 state-owned enterprises, 6184 cooperatives, 1213 joint stock companies and 250 joint ventures registered in Estonia.)

An effective market does not exist everywhere and always. First of all - there must be a sufficient number of consumers and producers and certain other prerequisites of competition must obtain. It is clear that in Estonia these conditions were not met, and the market was marked by monopoly and monopsony.

Lack of competition resulted in the spread of corruption, which is also a serious obstacle to effective market discipline.

As mentioned above there was not (and could not be) competition and an efficient market mechanism in the post-socialist economy. Instead, there was a tendency toward monopoly. True, its form had changed: the previous state monopoly had been replaced by the monopoly of enterprises or producers (due to the increasing rights of self-management). This change of form had several consequences for the future. While the state monopoly had, at least to some extent, taken into consideration the interests of the consumer (individuals, as workers, existed for the good of the state, but then were also consumers), this aspect carries no weight for an enterprise as a monopolist. For him demanders are only consumers. Therefore he does not feel the social restrictions that would make him, at least partly aware of the interests of consumers.

The aim of a monopoly is to maximize profit. With this objective in mind it manipulates two variables - the quantity of output, or supply, and the price level. In the case of a relatively balanced economy, the results would be a somewhat higher price and smaller output, as compared with the equilibrium position. In Estonia the existence of monopoly power had rather peculiar consequences (see 3.6, 3.7).

Another peculiarity of the post-socialist economy was the preservation of the leading role of the state sector. The delay of the structural reform (first of all privatization) was caused, among other things, by the complexity of the procedure. Numerous obstacles have stood in the way of developing a coherent privatization program in Estonia. These include gaps in regulations pertaining to restitution: the lack of political consensus on key issues like the free distribution of some state property; hesitation to sell property for local currency while Estonia was still in the ruble zone; indecision about what benefits would be granted to employees during
privatization; local governments impeding potential privatization; limits on the sale of land for five years; ambivalence about private and foreign ownership, etc. (Estonia 1993b, p.42).

The limited extent of private ownership and decentralization had resulted in self-management of social and state capital within firms. This economic system lacked an effective budget constraint on firms because of the "absence" of effective owners. The lack of a legal framework that would specify punishment for violation of civil rights could be also considered an essential factor in determining the behavior of state enterprises.

What are the consequences for short-term behavior? Irrational behavior in connection with the formation of prices and output quantities will be characterized below. But it should be noted here that this lack of constraints has had an adverse effect on incentives which, in turn, has resulted in chronic shortages brought on by a combination of expansionist management unconstrained by considerations of profitability and workers seeking higher pay without fear of layoffs and unemployment. (Fischer, S. and Gelb, A. 1991, p.69).

In the long run the problem of the post-socialist economy relates to investment.

a) The employees of state enterprises are, first and foremost, interested in their wages not in investment. The result is that the levels of investment would be well below both the optimal level and government expectations. In order to secure economic growth, the government has to use some type of regulation. For example, in the Central European post-socialist countries the government intervened to foster investment by forcing firms to set aside for investment part of their net income, either directly (taxation of profits with subsidization of investment or direct investment) or through incentives and regulations (forcing enterprises to allocate a portion of their income to investment funds). (Hinds, M. 1991, p.126). The promotion of investment was also used in Estonia.

b) Inefficient allocation of investments and resources.

Mobility of capital arises from owners' decisions on whether to reinvest the profits of their enterprises in the same enterprise or invest them in other activities, on whether to liquidate or restructure loss making firms, or on whether or not to sell firms. These decisions can only be made by owners. Thus, the centralization of investment decisions for socialized enterprises cannot be avoided if some mobility of capital is desired. (Hinds, M. 1991, p.131).

The situation is also aggravated by the fact that the post-socialist banking system, although superficially transformed from the mono-bank of the centralized system, has no basis for allocating credit according to market criteria and for identifying and pricing risk. The allocation is indeterminate, being the outcome of neither plan nor market forces. Avoiding severe macroeconomic imbalances in such a system is extremely difficult, mainly because economic agents have autonomy without responsibility. (Fischer, S. and Gelb, A. 1991, p.70).

Effective allocation of resources in the socialized sector would require that government assume the role of owner and make the decisions necessary for shifting resources across enterprises. In order to make the economic regulation effective central governance and direct control would have to be restored (instead of a non-performing market there must be some kind of order enforcing power).

"Renationalization" of self-managed enterprises has to produce a situation where besides the autonomy of short-run decision making there is a centralized system to manage the allocation of resources among different enterprises.
It should be noted that renationalization is not an alternative to privatization. Structural reform and privatization are inevitable preconditions for the introduction of individual property rights. Individual property rights are unavoidable in respect of both the functioning of the market economy and the rationalization of economic agents' behavior. The market system depends on the idea that personal assets can be invested at the discretion of the individual in anticipation of financial gain. But the system works only if investors are faced with the prospect of losing their property should they invest unwisely. Without individual property rights - and thus the possibility of losing one's property - the individual has little incentive to invest wisely. (Estonia 1993d, p.6).

Unfortunately privatization is a complex and long-term process. And it should be noted that without an appropriate legal framework the introduction of individual property offers little gain in efficiency. Private property rights should be guaranteed, transferable, and suitable for use as securities for loans through mortgages. Therefore in a post-socialist economy, in the short-run the "renationalization" of the state-owned sector is as important as privatization.

3.2 Decline in supply

A decline in production has turned out to be a typical feature of the transition period in Estonia as well as in other formerly planned economies.

In 1990 the value of industrial output decreased by 1 percent. Taking into consideration the high rate of inflation, the nominal value is not a very reliable measure of output. A more accurate picture is given by physical quantities of output. Of the 79 most important products, only 16 have recorded increases in output.

The situation is the same in other sectors of the Estonian economy. One may well say that the year 1990 was characterized by a decrease of supply.

The decline of production and supply accelerated in 1991. In 1990 the annual percentage change GDP was -6.5; in 1991 it was already -13.6.29

The decline of production/supply is caused by distinctive external and internal factors (see the list in Bofinger, P. 1993, Rosati 1994).

According to one explanation the planned economy constantly produces at a level above the potential output. The liberalization process is simply reducing output to its optimal level (see Charemza, W. 1992b).

Among the internal factors the most influential was the lack of an effectively functioning mechanism economic regulation, as mentioned above.

The production structure inherited from the communist era was highly monopolistic. This was the combined result of a consistent policy aimed at taking advantage of economies of scale and a desire to simplify the resource allocation problem the planners.

In the post-socialism period a large proportion of enterprises were virtually free of state control. They had gained control of their own production and pricing decisions and of the distribution of profits. Price setting had been liberalized. In this way the monopolies previously controlled by the state gained the freedom that now gave them actual monopoly power. The result of this development was rising prices and declining output volumes (for details, see 3.6).

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29 The actual decline was probably less than is shown by the official data. See the section V.2.
The decline in production volumes has also been caused by the informational inefficiency of the transition period. Price liberalization could not immediately fill the gap left by central planning. Charemza, W. (1992b) stresses that

a) price liberalization creates an inflationary situation
b) the dispersion of the perceived price and quantity distribution is further widened by the fact that a market learning process has only just started.

Leaning toward the frivolous, one may say that if there is great uncertainty concerning future prices and demand, the best strategy could be to forgo production. Part of the decline in production could be attributed to external factors, such as the decrease in available production inputs mainly due to a decrease in imports from the Soviet Union and abroad.

The shortage of inputs was one of the most significant reasons for the reduction in Estonian output. The shortage is mainly connected with the decrease in imports from the Soviet Union.

The reasons for supply shortages were as follows:

1. A weakening in supply discipline in the Soviet Union. This was caused by the disintegration of the management structure of the command economy. Increased liberty for enterprises is often reflected in a loss of all kinds of discipline.
2. A decrease in output in the Soviet Union.
   (The causes are about the same as in Estonia but shutdowns due to strikes, wars and other factors should be added to the list here.)
3. A shortage of foreign currency among Soviet enterprises.

This reduces the output of enterprises due to the shortage of inputs that are imported for hard currency.

The main reason for the decline in output that took place in Estonia was the openness of its economy to the east. The dependence on eastern relations was exacerbated by the energy-intensive, resource-wasteful economy. The decline in imports of raw materials and energy carriers that had come mainly from the CIS, caused bottlenecks and led to a substantial decline in production.

The nominal value of goods coming from the East in 1990 amounted to 3.2 billion rubles and in 1991 3.9 billion rubles. The decrease was considerable if inflation is taken into account. The situation continued in 1992. In 1991 imports from Russia were estimated to be USD 1090.45 million at 'world prices'. In 1992, according to the Estonian-Russian economic agreement, the import total was only USD 669.73 million.

Estonian-Russian trade had both formal and practical obstacles. Among the obstacles were contradictions between the Estonian-Russian trade agreement, the procedure of issuing trade licenses and the requirements set by Russian customs.

In the second quarter of 1992 it became clear that the existing intergovernmental agreements had only theoretical significance. In eastern trade neither interstate agreements nor protocols concluded for "food-fuel" deals were effective.

In light of these considerations, the decentralization of trade became inevitable. Export quotas for meat and dairy products were abolished, as was licensing for their export.

As a result of the decentralization of eastern trade, direct relations between enterprises gained new significance. However, the slowness of settlements became fatal to their efficiency. (This had been a problem for some time previously.)
Payment delinquencies and delays in settlement of exports to Russia played a major role among factors leading to insolvencies. It was not rare that an enterprise had to wait for months for an export payment, in the meantime having no money to buy raw materials or energy carriers in order to continue production. In addition, Russian enterprises introduced a system of advance payment for sales (according to a recommendation of the Ministry of Commerce and Material Resources of the Russian Federation for the relations with the Baltic states) as a way of safeguarding their financial situation.

The situation became quite critical after the June 1992 currency reform. It was a real blockade. After June 23 all bank transfers to Estonia were stopped by an order of the Central Bank of Russia. According to the agreement the Bank of Estonia and the Central Bank of Russia would each open a correspondent account credited with 500 million rubles and 50 million kroons respectively.

The overall foreign economic policy of Russia was of major importance in Estonian-Russian economic relations.

Estonian-Russian economic relations were determined by Russia's economic policy toward Estonia. There was some reluctance to the situation, probably in part caused by the role of Estonia in Russian exports. Estonia had become a door to the world, through which illegal exports from Russia found their way to the west. Allegations were made in Russia that this was the way "Russian national wealth was haggled to the West". The export of metals was the main cause for the complaints. A. Rutskoi, Russia's Vice President, had declared that in spite of its lack of deposits Estonia had risen to sixth place in world exports of metals.

Political relations with Russia were normalized to a certain extent in August-September of 1992 in connection with fairly successful negotiations between Estonia and Russia. On September 7, 1992 Estonia became the first of the former constituent republics of the Soviet Union to conclude a free trade agreement with Russia. This agreement stipulated that Estonia and Russia would not levy customs duties on imports or exports of goods from each other's territories. Some temporary restrictions were, however, possible. In connection with the prevention of re-exporting, the agreement allowed for unilateral measures. Part of the decline in supply could also be attributed to demand-side factors, particularly after the beginning of 1992. At that time the demand-sided economic environment was developing as a result of the elimination of excess demand through a price shock.

The decline in demand could be seen even earlier. The reasons were the same as in all post-socialist countries in Eastern Europe:

a) a fall in foreign demand because of the collapse of eastern trade
b) a shift in domestic demand (eg as a result of a fall in government's share of national income)
c) the elimination of forced substitution, with the disappearance of excess demand as a result of price liberalization
d) a fall in domestic demand for domestic products as a result of foreign trade liberalization (resulting in foreign competition) (Rostowsky, J. 1992, p.4).
3.3 Disequilibrium

In a classic centrally planned economy, as described above, where the aggregate wage level is moderate, a steady-state equilibrium exists in which the government budget is balanced, money supply and prices are stable, and there is no monetary overhang. In other words, despite the tension between aggregate demand and aggregate supply under administered prices and with a budget deficit and surplus of goods, macroeconomic stability can be achieved in a rigidly planned economy and the system can be sustained. (Lin, S. 1992, p.2).

In the classical planned economy the equilibrium was based on and secured by directive planning and management.

In the post-socialist period, constructive phenomena were accompanied by destructive phenomena, the latter referring to the destruction of the management system of the state sector. The idea was simple: the less centralization and intervention by the state, the greater the degree of market economy and the greater the economic efficiency. This was the slogan of the economic reform of 1990–1992.

Total liberalization and decentralization did not bring about the replacement of the planned economy by a market economy. Monopolistic structures, lack of factor markets, legislation inadequate for regulating the use of private property as well as the continued dominance of the state-owned sector led to anarchy (instead of a market economy).

The Estonian economy was marked by deepening disequilibrium in 1989–1992. Unfortunately there is no information on the extent of external disequilibrium; adequate statistics on Estonia's foreign trade and balance of payments have been available only from 1992. Therefore, only internal disequilibrium will be tackled below and even that only in connection with inflation.

The primary cause of the internal disequilibrium was the shortages inherited from the planned economy, where demand exceeds supply. But the initial disequilibrium has been aggravated during the transition period. The disequilibrium is manifested in inflation. In the most general sense the inflation was caused by the liberalization of the economy (incl. price liberalization of prices).

The destabilizing factors in the Estonian economy in the beginning of 1990s can be divided into demand-pull and cost-push inflation factors as follows:

1 Demand-pull inflation factors
   1.1 Supply side factors
      1.1.1 Decline in production in Estonia
      1.1.2 Decrease in imports
      1.1.3 Growth of barter trade
   1.2 Demand side factors
      1.2.1 Excessive money supply
      1.2.2 Growth in incomes
      1.2.3 Change in the behavior of demanders
2 Cost-push inflation factors
   2.1 Increase in wages
   2.2 Rise in prices of inputs

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30 Partly due to wages increases. The latter itself is a cost/push inflation factor. Wage increases were facilitated by the easening of restrictions in wage setting. Liberalization allowed wages to start pushing up the value of labor.
Of course, the factor breakdown presented above is not complete. The most important of the missing determinants is connected with fiscal policy. The post-socialist experience was too short for drawing definite conclusions. The influence of the introduction of the value added tax on 10 January 1991 is understandable. The price level rose in line with the tax rate. But the role of tax and budget policies in galloping inflation is obscure. One might ask, for example, how much do these policies affect inflation and what happens to the budget deficit.

High inflation is typical of the post-socialist economy in Estonia. The consumer price index rose sharply, reflecting a state of hyperinflation in 1992 (12-month rates: January 629 percent, February 1015 percent, March 1169 percent).

Besides the change in the rate of inflation in Estonia, the nature of the inflation also changed in the course of time. Demand-pull inflation dominated up to 1991. Since then monetary overhang has begun to diminish. At first this reduction in overhang was caused by the liquidity crisis (shortage of payment means, especially cash) which at the beginning of 1992 was followed by a price shock. The decrease in excess demand made cost-push the dominant mode of inflation.

Next we look at the inflation factors of inflation.

3.4 Uncontrolled Money Supply and Growth of Personal Incomes

Up to mid-1992 the legal tender in Estonia was the Soviet ruble, issued by the Soviet State Bank (now the Russian Central Bank). Actually, the monetary situation was catastrophic, because there was no real control over the money supply.

Uncontrolled money issues were the consequence of the monetary system inherited from the socialist planned economy.

There were two types of money circulation in the planned economy. One involved clearing accounts between enterprises and the other cash flows between individuals. Accounting money for interenterprise settlements had to correspond to the quantity of inputs excluding labor. Cash had to correspond with wages and consumer goods and services.

According to some analysts the money supply in a CPE can be treated as endogenous to the system. It means that the next period's money supply is determined by this period's aggregate wage bill. If all works according to the plan, then the money supply will be consistent with the price level (Sahay-Vegh 1995). If the wage bill exceeds its planned value or the goods available for consumption are less than planned quantities, the money supply turns to be excessive.

The post-socialist economy, in which the planned economy regulators had lost their power, offered no effective restrictions on the conversion of accounting money into cash. As the input market was in short supply of cash, market forces were also unable to slow the conversion. The outcome was the conversion of large amounts of accounting money into cash and the issue of additional quantities of cash, which further increased the excessive money supply.

The increase in the supply of cash was channelled mainly through wage increases. The system of bans and norms of the planned economy was abolished, but the market economy, which would have its own means of restraining wages, was not yet in place. As a result of soft budget constraints, wage increases considerably exceeded labor productivity increases. For example, in 1990 wages increased 13.3
percent while the increase in productivity was 1 percent in manufacturing (Eesti Vabariigi 1991, p.4).

In state-owned enterprises the wage increases were achieved by increasing revenues. Larger revenues were obtained through higher prices. Monopolistic supply gave the producers a relatively free hand to set prices. Methods that were well known from planned economy were used successfully to rise prices (so- called "product innovations" to get higher prices, reduction of quality at fixed prices, etc.).

In the non-state sector (cooperatives, joint stock companies, joint ventures, etc.) the possibilities for raising wages were even better. For example, after settlements were made for raw materials, etc., all revenue or most of it (without accounting for depreciation, etc.) could be paid out. Non-state enterprises' advantages in raising wages were vividly demonstrated by the wage increase in 1990 as compared with 1989 (excluding agriculture) - in the state-owned sector it was 24 percent, in the non-state sector 153 percent (Eesti Vabariigi 1991, p. 3).

3.5 The Behavior of Demanders

Inflation is a result of disequilibrium, but it can also cause further disequilibrium due to its effect on demanders' expectations.

Inflation causes market disequilibrium (increasing demand) due to changes in the behavior of demanders and consumers. The normal buying logic, according to which a higher price reduces demand, no longer holds. First, people bought "in advance" or to store up, so as not to suffer from higher future prices. Second, people bought in order to get rid of rubles that were steadily depreciating. Such a process can be called the materialization of money. In a normally functioning market economy, other financial assets besides domestic currency could be chosen. In an underdeveloped market, other alternatives for holding financial assets did not exist, and that increased the demand pressure in the goods market.

Due to the increased demand, the traditional objects for the materialization of money had disappeared from the market. Consumer goods had also become a means of depositing or materializing money. Expensive durables were especially favored. The demand for leisure goods and household necessities had also increased very much.

On the other hand, the sudden, shock-type rise in prices may be a means of balancing aggregate demand with supply. But again, a stable equilibrium presumes an adequate response by suppliers, which was lacking in the period under consideration (see 3.6), and a consistent monetary policy, which was also lacking. If the money supply is not controlled, the decrease in demand will be either temporary (as was the case after what had been the first massive and overwhelming rise in the prices of foodstuffs since World War Two, on October 15, 1990) or partial (only for certain goods).

Inflation expectations destabilized the economy because individuals, incomes were spent on current consumption, thus reducing the propensity to save.

Actually, the situation was even worse, because people had started to dissave. The inadequately low nominal interest rate on deposits, which lagged more than tenfold behind the rate of inflation, was the reason for the highly negative real interest rate. In 1990 the savings withdrawals exceeded new bank deposits by 148.7 million rubles (Eesti Vabariigi 1991, p. 37).
3.6 The behavior of producers

In the post-socialist economy, the behavior of (state) producers is inefficient. State firms have little incentive to maximize profits or to save for investment purposes. State firms' main objective during the transition period is to maximize wage income and/or minimize the social cost of unemployment (Savay-Vegh 1995).

Actually, an even more radical claim could be made. In a post-socialist economy the behavior of suppliers in general tends to become irrational. It finds expression, first of all, in price formation. This statement holds in particular for the second half of the post-socialist economy period (from the fall of 1991), with the change in the economic environment (see 4.3 and 4.4).\(^{31}\)

The monopolistic nature of the Estonian economy is readily seen in practice. Take, for example, the price shock at the beginning of 1992. This was mainly caused by external factors, i.e. changes in Russian price policy. And yet, external factors were not alone in bringing on inflation. The supply-sided and monopolistic price formation of domestic suppliers was at least as important.\(^{32}\) If the Estonian economy is monopolistic and closed to international competition, as it was before the monetary reform of 1992, then price formation must also be monopolistic. Whether this type of price formation is rational, i.e. that it maximizes the revenue of an economic agent, is another question.\(^{33}\)

As for monopolistic mark-up pricing, rational behavior has wide variations depending on the economic environment. According to Sneessens (1987) the mark-up rate is progressively revised upwards when the probability of facing labor or capital shortages increases. If there is no uncertainty and sales are known to be demand-determined, the usual optimal pricing rule under monopoly holds. In transition from a supply-sided to a demand-driven economy the mark-up and relative price must decline (in the case of rational behavior).

In Estonia price setters exceeded the optimal levels of mark-up and prices in the simple-minded hope that a higher price would not affect the quantity demanded and so would result in higher profits (as under the inelastic demand which dominated in the supply-driven economy).\(^{34}\) It turned out, however, that this was not the case. Therefore, new pricing tactics were developed – to compensate the decrease in output ensuing from the anticipated decline in quantity demanded with a price rise.

Thus, turnover became the main factor in price setting and in the rise in prices

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\(^{31}\) Here, we shall not deal with the effect of privatization expectations.

\(^{32}\) According to the results of a correlation analysis of the relation between the share of imports and price rises by output sector.

\(^{33}\) The Estonian domestic market is so small that a major part of goods production is a natural monopoly (considering the economies of the scale). In this sense the introduction of competition with the help of imports is decisive in getting rid of monopolistic behavior.

The price effect of imports is still ambiguous. A switch to a higher price level and new relative prices is typical for transitional economies. The intensity of the process depends among other things on the growth rate of imports and exports. In this sense import growth favors rising prices.

\(^{34}\) In that sense the behavior of suppliers was typical of post-socialist economies. See Vorobyov (1993, p. 30) about the situation in Russia or Fischer-Gelb (1991, p. 146-154) about the situation in Poland.
in Estonia. Unfortunately this was not in accord with the normal logic, according to which an increase in turnover is a signal to raise prices (and vice versa). In this case the decrease in turnover did not signal pressure to lower prices, but quite the contrary. A decline in turnover became an important reason to raise prices.

From the last statement one could conclude that the behavior of state enterprises was not optimal from the viewpoint of profit maximization. Post-state-owned-enterprises\footnote{A term by Yavlinsky-Braguinsky (1994) underlying the lack of government control in the activities of state-owned firms.} in a demand-driven economic environment are rarely interested in optimizing their short-term behavior, not to mention long-term goals (for details, see Yavlinsky-Braguinsky 1994).

The reasons for the irrational behavior of state enterprises are the constraints on manager-initiated restructuring during the transition to a market economy (see Aghion-Blanchard-Carlin 1994). In Estonia (as probably in other regions of the FSU) these constraints were crucial as the state desisted from governing the state-owned enterprises.

3.7 Change in Behavior

It is questionable whether economic agents could behave irrationally for long. In the course of a longer period, one would assume learning (adaption to new conditions) and rationalization of behavior.

Let us observe the behavior of suppliers in different ownership sectors. During the period in question the state sector was predominant. Price formation in the state sector was characterized by a headstrong pursuit to increase the profit margin. For example, if only one commodity unit instead of two can be sold as a result of a price rise, the price of the latter and the profit margin must be sufficiently high to guarantee the revenue previously obtained from selling two units. The behavior of economic agents in the state sector who have used such tactics was quite irrational from the viewpoint of economics.

For example, in the state-owned joint stock companies the situation was extreme: during the recession profitability increased from 31 percent to 51 percent. It should be noted that it was not easy to react to market signals. The producer was separated from the buyer by a long chain of intermediaries - wholesalers and retailers, transporters and warehousers. Intermediaries were strongly inclined to act, according to their interests of the moment and for immediate profit. For example, in transport, warehousing and communication, profitability increased to 54 percent in the second quarter (33 percent in the first quarter), retailers stopped handling cheaper goods, etc.

Still, in the same environment there were also private joint stock companies and enterprises whose reactions to the changes were quite different from the above. It did not take long for the private institutions to realize that it is not expedient for the maximization of profit to use price formation based on a fixed or increasing mark-up, which produces the best results in the case of inelastic demand (which was dominant in the supply-driven economy). In the new situation flexible tactics proved to be more useful - increase/maintenance of turnover by reducing relative prices and profitability.
As far as rationalizing the behavior of state suppliers is concerned, hope is held out by Poland's example. There is evidence that as the economic environment becomes more stable, enterprises eventually behave in ways that lead to higher profits. The survey shows that enterprises that initially raised their prices sharply tended to lower their prices later on, whereas those that raised them relatively little or not at all later made upward adjustments. (Fischer-Gelb 1991, p. 146).

Unfortunately the rationalization of the behavior of the producers in Estonia was hindered (and is still being hindered) by expectations regarding privatization. In the expectation of privatization, production itself is forgotten and attention focuses on the seamy aspects of privatization (e.g. asset stripping).

In order to rationalize the behavior of producers, it is of primary importance to eliminate the expectation of privatization. There are two ways this can be done: either to privatize or to formally declare that a certain enterprise will remain state owned.

3.8 Recession cycle

The behavior of (state) economic agents (particularly in price setting as was described in section 3.6) is one cause of the decline in the post-socialist economy.

If demand is price and income elastic (as was the case during the final period of the post-socialist economy at the beginning of 1992), then a price increase will reduce the quantity demanded.

If supply is determined by demand (as is the case in a demand-driven economy, see 3.6), a price increase leads to a decrease in output.

The process is of a self-generating nature. A decrease in quantity demanded stimulates another price increase (see section 3.6). This again causes a decrease in demand, and so on. This creates a vicious circle pushing the economy to into a continuous decline (see Fanizza, D. 1992).

The generation of such a spiral is presented in Figure 3.1. Proceeding from Figure 3.1, a price increase leads to the decline depicted in Figure 3.2. As a result of the price increase the demand decreases. So the supply curve has to shift from S to \( S'' \) along the demand curve. If the real income is changing, the demand curve will also shift (Figure 3.2B).
Figure 3.1  Connection between demand, supply and price in the Estonian economy
Figure 3.2

A) Constant income

B) Changing income
4 Transition to a market economy

4.1 Changeover of the Economic Environment

The change in the nature of the economic system in Estonia started with the changeover of the economic environment.

By economic environment is meant the system of economic regulation which, with its stimuli, constraints etc., determines the behavior of economic agents. Kornai (1979) distinguishes between resource-constrained and demand-constrained systems in talking about centrally planned and market economies. Close equivalents to resource-constrained and demand-constrained macroeconomic environments might be supply-driven and demand-driven economic environments. G.W. Kolodko (1989) has stressed that "a socialist economy, unlike the market economy of developed capitalism, is constrained by inadequate supply, not demand. This is the source of all bottlenecks."

An economy is demand-driven if the (potential) quantity supplied, S, exceeds the (potential) quantity demanded D: S>D. And an economy is supply-driven if D>S. In other words in a supply-driven economy supply determines aggregate output, Q, while in a demand-driven economy demand determines output.

An economy can change from being supply-driven to being demand-driven in two ways: by means of a positive supply shock or/and a negative demand shock. As a rule, the decisive factor in the changeover of the economic environment of a post-socialist country is a price shock accompanying the liberalization of the economy and the ensuing collapse of demand. The result of this in turn is a decrease in supply.

The changeover of the economic environment in Estonia has been examined in Sepp (1993), which shows that the changeover occurred in the first half of 1992. Until 1992 the Estonian economy was generally supply-driven. Due to excess demand, supply (production, sales, etc.) determined the main characteristics of economic activity (volume, quality etc). The drop in demand was caused by the price shock at the beginning of 1992.

One may, of course, assume a priori that the liberalization of pricing and the ensuing price rise (shock) automatically brings an immediate transformation to a demand-driven economic environment. However, the experience of eastern Europe does not yet confirm that belief. For example, recall the shortageflation in Poland in the 1980s (see Kolodko 1989 and Kolodko and MacMahon 1987).

In Estonia as well, there were indications that the effect of the shock would be a short-term effect and that monetary expansion would produce new monetary overhang and send the economy back into a state of disequilibrium.36 A continuation of this development would again have led to a massive excess demand for goods and to a supply-driven economic environment.

The monetary reform of 1992, which included a new economic policy regime, was introduced after the reform had led to the final stage of the changeover of the economic environment. The new economic policy put the demand-constrained

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36 As it actually turned out in Russia, the price jump at the beginning of 1992 was followed by a decline in inflation in the first half of the year. Later, as a result of poor macroeconomic policy, the decrease in prices has been turned into chronic double-digit monthly inflation up to the end of 1994.
economic environment firmly in place, which is a necessary precondition for the market mechanism.

4.2 Currency Reform and New Economic Policy


The value of the kroon at the moment of its issue was 1 ruble = 0.1 EEK and 1 DEM = 8 EEK.

The essence of the currency reform consists of the following: 1) the money supply is limited by increases in the foreign exchange reserves of the central bank; 2) the exchange rate of the kroon is fixed; 3) the kroon is pegged to the deutschmark, with a maxim fluctuation of 3 percent in the exchange rate; 4) the kroon cannot be devaluated without a legislative change; 5) the kroon is the sole legal tender in Estonia.

As part of the reform, the currency board system was introduced.

4.2.1 Basic Features of the Estonian Currency Board

The main characteristic of the currency board (CB) system is that the board stands ready to exchange domestic currency for the foreign reserve currency at a specified and fixed rate (Walters-Hanke (1992, p. 558). The money supply is endogenous, changing when domestic currency is exchanged for the reserve currency at a fixed exchange rate.

There are several versions of the CB. Depending on the exchange rate regime, there are orthodox, crawling peg and contingent peg CBS (Osband-Villaneuva 1992).

In Estonia the least complicated CB regime was chosen - the fixed exchange rate. The expected advantage of this choice was the ease of understanding the fixed rate.

In terms of the real exchange rate, the kroon was at first undervalued. The aim of the undervaluation was to support outward-oriented economic development as

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38 Under the orthodox CB arrangement, the exchange rate is fixed. A crawling peg CB devalues or revalues domestic currency according to preannounced rate. In the case of a contingent peg the operative exchange rate schedule is tied to an observable state of the world economy.

39 The exchange rates of kroon against the ruble and the deutschmark were equivalent to the respective market rates of the pre-reform period. According to Charemza (1992, p. 3), in transitional economies the free market exchange rate, because of its marginal importance is normally above the rate based on purchasing power parity.
well as to provide a buffer for probable transitional inflation.\textsuperscript{40}

The original intention was to peg the kroon to a currency basket (ECU). Besides all its advantages, the currency basket had some very concrete disadvantages. Bennett (1994, p. 189) stresses that such a link would not have been as transparent as a link with a single well-known currency and would have greatly complicated the task of reserve management and the conditions of exchange. For this reason the kroon was pegged to the deutschmark.\textsuperscript{41}

CBs must hold realizable financial assets in the reserve currency having a value that is at least equal to the value of the domestic currency outstanding (Walters-Hanke 1992, p. 558). Actually the claims against the CB and backed by reserves can be broader or more narrow. For instance, Argentina has adopted a quasi-CB arrangement in which only newly issued domestic currency, but not the whole outstanding stock, is 100 percent backed by foreign reserves, with all currency convertible at a fixed exchange rate. (Osband-Villaneuva 1992, p. 2)

According to the rules of the Estonian CB, the deposits of commercial banks (required and excess reserves) with Eesti Pank are backed in the same way as cash. This solution was conditioned by practical considerations. In Estonia there was no effective system of interbank clearing outside the central bank. Therefore the banks had to keep their accounts in Eesti Pank. When the kroon was first issued, it was crucial to achieve full confidence in the newly issued currency as well as in the monetary system as whole. For this purpose, it was decided to back the obligations of the central bank to the commercial banks.

Broader backing of the currency was made possible by the existence of sufficient reserves. Gold reserves for the Estonian CB became available following the agreement to repatriate gold deposited by Estonia with the Bank of England before the occupation of the country in 1940 (Saavalainen 1995, p. 6). Thus at the moment of the currency reform in June 1992, 90 percent of the obligations of the CB were backed by reserves. The rest of the initial reserves came from subsequent restitution by the Swedish government and the Bank for International Settlements. By mid-July the CB already had reserves in excess of its obligations.

### 4.2.2 Main Advantages

The fundamental advantage of the CB is its simple and generally understandable principle of operation. In this sense, its simplicity is presumed to give it credibility.

The CB's credibility means greater price stability (compared to a floating exchange rate)\textsuperscript{42} as well as a lower risk of currency devaluation (compared to other

\textsuperscript{40} Transitional inflation is caused by (a) price liberalization; (b) introduction of international relative prices due to the opening of economy under the fixed exchange rate. For details see Sepp (1995).

\textsuperscript{41} The Finnish markka and Swedish krona would have been more reasonable alternatives from the point of trade structure. The deutschmark was chosen because of its stability and credibility.

\textsuperscript{42} The CB is effective even in extreme situations. For example, in Estonia the monetary reform was preceded by hyperinflation. Inflation expectations could be broken only using drastic and harsh measures. For that purpose the introduction of CB served well (See Sepp 1995).

Meanwhile it must be admitted that the fixed exchange rate - one identifying feature of the CB - could produce questionable results under more complicated conditions. The fixed exchange rate, which was a factor in stabilizing the Estonian economy, was vulnerable and damaging during the
fixed exchange regimes).

Another advantage of the CB is seignorage\(^{43}\) (compared with domestic use of a foreign currency).

The worst institutional shortcoming\(^{44}\) of the CB is considered to be the inability to pursue discretionary monetary policy. The lack of a discretionary monetary policy is accompanied by a lack of flexibility, including the inability to deal with monetary and price disturbances. Inflexibility in turn causes relatively high social costs for the CB arrangement.\(^{45}\)

The question of the effectiveness of discretionary monetary policy\(^{46}\) still remains mainly a theoretical problem in Estonia. The preference for the CB and automatic system used to be obvious due to the difficulties in understanding and measuring the transitional processes in the Estonian economy. The rationale for monetary policy is largely predicated on the existence of a well-defined and stable demand for money (Guitan 1994). In a transition economy the estimation of money demand as well as other monetary indicators is impossible.\(^{47}\) This means that the conduct of policy based on behavioral models is similarly impossible (see Bofinger, P. 1990).

Secondly, the absence of experience limits the possibilities for conducting monetary policy. Rostowski stresses that central banks in post-socialist countries have little experience in conducting monetary policy in an open economy with a convertible currency, because monetary policy was previously subordinated to physical planning, the economy was closed and/or currency was not convertible (Rostowski, J. 1993 p. 18). Taking into consideration the inexperience of the monetary authorities prior to the monetary reform – so far there has been neither the opportunity nor the need for discretionary monetary policy – the risk of unexpected consequences would have been too great.

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\(^{43}\) Under the CB arrangement the domestic currency takes on most of the foreign currency's characteristics when the independent currency authority gains the seignorage. The seignorage is produced by investing foreign currency receipts in low risk foreign bonds, etc. The seignorage consists of the interest earnings minus the administrative expenses of the monetary authority.

\(^{44}\) The arguments resulted from a misunderstanding of CB operating principles are left aside. Typical of these is claim that economic growth under the CB arrangement has deflationary consequences. For competing arguments, see Hanke-Jonung-Schuler (1992) and Schwartz (1993, p. 170-172).

\(^{45}\) Osband-Villaneuva (1992, p.10) give the following example. Suppose that a government that is determined to pursue responsible fiscal policies is temporally stuck with a bad or uncertain reputation, and as a result cannot borrow all it wishes. In that case, a discretionary central bank offers some immediate advantages over an currency board.

\(^{46}\) See Fischer (1994).

\(^{47}\) Due to the reconstruction of the whole national economy as well as to the demand of state enterprises (operated at the time of currency reform under soft budget constraints) for working capital.
Due to endogeneity of the money supply, the budget deficit cannot be monetized under the CB arrangement. In Estonia this is prescribed by law. Laws adopted before the monetary reform prohibited the monetizing of budget deficits and the granting of central bank credit to commercial banks. Since the government cannot get financing from the central bank, domestic financing must be obtained from the commercial banks.48

Due to the change in financing patterns the CB also transforms the expenditure side of the budget. As a rule the CB restricts the budgetary process and lessens the deficit. Under the CB the financial authorities pay very close attention to the balance. Moreover, in Estonia, under the CB arrangement the authorities have tended to draft relatively small budgets (particularly with reference to expenditures). As a result, supplementary budgets, covering the distribution of revenues not contained in the original budget, were adopted in 1993 and 1994.49

As was pointed out above, the CB eliminates discretionary monetary policy. This is clearly reflected in the activities of Eesti Pank, which lacks the monetary targets and instruments that typify full-fledged central banks.

The creditgrating has been a very modest factor in the activities of Eesti Pank. The full backing of currency and deposits by Eesti Pank limits its capacity to extend the credit. Therefore Eesti Pank does not lend to the household or corporate sectors. In exceptional circumstances some lending to the banking sector is allowed. Loans to commercial banks are limited to the amount of the CB's excess external reserves. This eliminates the possibility of a shortfall in the backing of currency and deposits.

The strict rules of the CB explain why there Eesti Pank has no discount window and why it does not operate as a lender of last resort.

There is some flexibility in the case of reserve loans. Modest amounts of reserves deposited with Eesti Pank can be borrowed for short periods at penalty rates if reserves fall below required levels.

Characteristic of Estonia is the embryonic state of its securities and bond market. The underdevelopment of the market is the reason there are no open market operations.50 The only tradable instrument on the bond and securities markets is Eesti Pank's 28-day certificate of deposit issued to commercial banks. The purpose of this

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48 In some cases this may restrain the financing of economic growth. Bennett suggests that if commercial banks are to have any resources left to lend to the private sector, such domestic government financing must be fairly limited in scale (Bennett (1994, p. 198).

49 Probably the reason lies partly in the limited experience of budget planners and the resulting poor quality forecasts of economic growth, inflation and budget revenues.

50 Although open market operations are one of the few tools the CB has to pursue monetary policy, the effectiveness of these operations vis-à-vis the money supply and interest rates is highly questionable.

Bennett (1994, p. 199) stresses that under the CB both the interest rate level and the yield curve are genuinely market determined. This means the complete loss of control over interest rates.

Attempts to control interest rates through open market operations typically leak quickly into changes in reserves. This process can continue indefinitely if the reserve changes are sterilized.
instrument was to support the development of the interbank money market, where CDs serve as collateral for interbank transactions.

Another of Eesti Pank's potential monetary instruments is the commercial banks'reserve requirement. But the effectiveness of this tool is also questionable. Although it would seem that changes in reserve requirements can give policymakers some flexibility, in fact this is not the case. For example, the liquidity position of the Estonian banking sector was improved twice in 1994 by changes in reserve requirements. In April the reserve ratio for the Estonian Savings Bank was reduced to 60 percent. Since July the banks may include the cash in their reserves. Essentially, this has meant a reduction in required reserves. Contrary to suppositions, the money supply and interest rate did not respond to this reduction. The only result was an intensification of the capital outflow in the form of an increase in foreign assets of commercial banks (see details in Sepp 1995a).
5 Initial Consequences of Monetary Reform

5.1 The New Economic Policy and Inflation

In a demand-driven economy there is a simple recipe for rising prices and inflation: restrictive economic policy which allows for neither excess money supply nor its transformation into demand pressure and rising in prices. Monetary reform paved the way for the introduction of such a policy.

Currency reform broke the inflationary cycle and brought about a balance between demand and supply. The restrictive monetary policy in combination with restrictions in incomes policy (limits on the growth of wages in the state sector) prevented the spillover of price increases into wages and the build-up of excess demand.

The effect of the currency reform can be divided into two parts;
1. the effect of the monetary reform as such
2. the effect of monetary policy (and in a broader sense economic policy) which started with the reform.

The effect of the reform is manifested as follows:

a) the currency reform and introduction of the kroon allowed Estonia to leave the ruble zone, i.e. to escape economic chaos (e.g. the hyperinflation in Russia);
b) the introduction of the national currency made it possible to conduct Estonia-oriented economic policy;
c) the reform changed the inflationary expectations of economic agents.

The currency reform also marked the beginning of the new economic policy under the currency board (CB) arrangement.

Stabilization in a demand-driven economic environment must eliminate two factors:
a) expectations of inflation
b) monetary overhang.

Accomplishing of the latter task is (in the short run) relatively easy. Excess liquidity has to be liquidated. In the transition from one currency to another this is relatively easy.

In order to reach a permanent equilibrium, economic agents' inflation expectations have to be eliminated. Otherwise the effect of stabilization measures remains temporary. Expectations can be changed through a drastic change or shock. Thus, an effective way to achieve stabilization is by means of a shock.

The change of expectations must be grounded in a belief in the future of and the stability of the national currency. This task was accomplished through laws adopted before the monetary reform which prohibited the monetizing of budget deficits and the granting of central bank credit to commercial banks. The package of fiscal policy measures introduced and accompanied by the monetary reform ensured a balanced budget.

A decisive factor in influencing expectations, of course, was the introduction of the CB arrangement under which the money supply is independent of subjective decisions.
Finally, in eliminating inflation, it is not any the less important which key anchor in chosen for the price system. According to M. Bruno (1993, pp. 28-29) in a small open economy the relationship between the general price level and the exchange rate is considerably closer than between money and prices, primarily because import prices play a large role in the input-output system. In this sense the regime introduced by the monetary reform in Estonia, i.e. the pegging of the kroon to the German mark, was rational.

In light of the above argument it seems that in carrying out a restrictive economic policy it is possible to force inflation to a normal level. This assumption seemed to be supported by the slowdown in the inflation rate. Conservative fiscal policy and a money supply based on the CB arrangement reduced the rate of inflation to 35 percent per year. The monthly rate was lowest in August – only 0.7 percent.\footnote{Sutela (1994, p. 167) stressed that Estonia and the other Baltic states possibly had the best post-communist stabilization outcome - with exception of the war-torn countries - though probably in the worst of circumstances.}

\section{5.2 Outward-oriented Economic Development}

Outward-oriented development is important in Estonia, first of all, because of two factors determining long-term growth.

First, the Estonian economy used has historically been open. During the Soviet years Estonia was turned into a part of the Soviet economic complex with a high degree of openness. For this purpose, industries without a local resource base were given priority and the output went to the Soviet Union. So, both inputs and factors of production were imported, and outputs were exported. Thus, outward-oriented development makes it possible to utilize capacity meant for exports production.

Second and even more important, the only reasonable way for Estonia to achieve growth is through outward-oriented development. Our economy and domestic market are so small that it is impossible to produce efficiently for the domestic market only.

The fact that the Estonian economy has been opened to the east and tightly related through trade relations with Russia did not matter during and after the breaking up of the USSR. In the early 1990s trade relations between Estonia and Russia have experienced several shocks.

Price liberalization started in Estonia earlier than in other parts of the former Soviet Union. The liberalization resulted in domestic inflation as well as in rising of export prices. The latter produced a positive change in the terms of trade with Russia.

The partial Russian price reform started in 1991. As a consequence of comprehensive price liberalization, on January 2, 1992 Russian domestic and export prices jumped up. In addition, Russia administratively raised the prices of raw materials and fuel to be exported. This time the terms of trade changed to the detriment of Estonia. The drastic change can be seen from Table 5.1. In the first quarter of 1992 the rise in prices was 24-fold compared to the 8.7-fold rise in the same period of the previous year.\footnote{The efficiency of the currency board in the case of a persistent capital net inflow is not yet that clear, as follows from the above (see Sepp 1995b).}
Unfortunately trade relations with Russia suffered not only due to the worsening of the terms of trade. Russia obstructed trade with Estonia for political reasons and this made exporting to the east even more difficult.

Economic ties were cut on the initiative of Russia, almost in the form of economic blockade. It is significant that the reasons for cutting economic ties were mostly political. In October 1992 the Economic Reform Center of the Russian government published a program which puts the main political emphasis for the so-called 'near foreign countries' on protecting the interests of the Russian-speaking population there. According to the Russian interpretation, Estonia and several other former Soviet republics discriminate against Russians and the Russian-speaking population. Because of that, negotiations were halted over the implementation of the Estonian-Russian free trade agreement, which was finally signed on September 7, 1992.

Instead of free trade, Russia began to pursue a policy of sanctions and protectionism directed against Estonia. Thus, for example, on February 1, 1993, the import tax was doubled for goods from Estonia, Latvia, Lithuania, Moldova, Georgia and Tajikistan. By now, it has become known that the free trade agreement with Estonia was considered a mistake and talks on its implementation were broken off.

The change in eastern economic relations had a major impact on the Estonian economy, as the country was cut off from most of its traditional (Soviet) markets. Fortunately the reorientation to the west was considerably quicker than predicted and hoped for. The share of Estonia's trade accounted for by its eastern neighbor dropped to one-third in 1992: the CIS accounted for a mere 30.2 percent of Estonia’s imports and 37.8 percent of exports (Russia’s shares being 17.7 and 32.5 percent, respectively). It remained almost as low for the next years.

The main contributors to the for quick reorientation were the issue of an undervalued kroon and the liberalization of external sector transactions.

Decisive in the liberalization was the Regulation of the Government of the Republic of Estonia on the Liberalization of Foreign Economic Activities (October 31, 1993), which abolished most of the legislative acts regulating foreign economic activities. Up to the end of April 1992 the export of 38 products (mostly foodstuffs and raw materials) was licensed (both to the east and to the west). Later most of the licensing requirements were eased. Export barriers are minimal. The export tax is valid for antiques and art works.

Regarding imports, there are no quantitative restrictions. Only furs and sea and road vehicles are are subject to duties.

Table 5.1

<table>
<thead>
<tr>
<th>Price indexes</th>
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<tr>
<td>1991/90</td>
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<tr>
<td>Metal products</td>
</tr>
<tr>
<td>Non-ferrous metals</td>
</tr>
<tr>
<td>Chemistry products</td>
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<tr>
<td>Timber and paper products</td>
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<tr>
<td>Building materials</td>
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<td>Machines</td>
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<td>Fuel</td>
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The second stimulus for outward oriented development was promoted by issuing the undervalued krone in terms of purchasing power parity. Kroon exchange rates against the ruble and the German mark were equivalent to the respective market rates of the pre-reform period. According to Charamza, the free market demand for foreign currencies in transitional economies is composed of:

1) transactional demand, as foreign currencies provide access to goods not available domestically or for domestic currency
2) speculative demand, in periods of substantial inflationary expectations
3) substitutive demand, due to the persistent goods shortages, excess supply of domestic currency and to the fact that saving in domestic currencies was generally not attractive

Because of its marginal nature, the free market exchange rate normally settled well above the rate based on purchasing power parity. (Charamza 1992, p. 3)

The cheap kroon provided favorable conditions for cheap exports and so for strong demand for exports. In the same way, expensive imports were the result of the low exchange rate. As balancer of trade flows, this is more effective than tariffs and other restrictions.53

The real exchange rate of the kroon is appreciating. This is a result of the domestic price rise under the fixed exchange rate. According to Marshall-Lerner-Hirschmann conditions, the trade balance improves following a real depreciation if the components of the trade balance possess sufficiently large exchange rate elasticities (Arora-Kumar 1994). So, appreciation of the real exchange rate favors imports as the relative price of imported goods falls as compared with domestic goods. Meanwhile the appreciation reduces the exports due to the decrease in profits and operating surplus.

The last conclusion holds when the prices of exports and imports remain stable. Otherwise, if in the case of stable import prices part of domestic price rise is transformed into export prices, the terms of trade would improve and net export income would increase. This development presumes that the demand for the exports is price inelastic. This used to be the case for the Estonian exports. In 1994 the value of exports increased by 84 percent when the export price index was 25 percent.54

55 The price inelasticity is explained by the recent access of Estonian exports to western markets. The price rise could be attributed to the increase in the awareness and competitiveness of Estonian products. The latter has been achieved by improvements in quality, design and efficiency.56

5.3 End of the Economic Decline

According to official statistics, Estonia's industrial production fell by 62 percent in


54 Estimation by the Macroeconomic Research Department of Eesti Pank.

55 In Estonia statistics on export price indexes start from 1994.

56 For details regarding export price rises accompanying the opening of the Estonian economy, see in Sepp (1995).
1992 (see Figure 5.1). Since 1990 it has fallen 70 percent. This pessimistic evaluation of the industry is clearly an exaggeration. And it is even less true of the country's economy as a whole.

The figures showing a sharp decline are an indication of shortcomings in the collection of statistical data and the resultant inadequacy of overall information rather than an indication of economic reality. The official data cover only a part of the Estonian economy, i.e. the state sector, which is reducing its output. A considerable portion of the non-state sector, which is marked by increasing output, has not been documented at all. Thus, the statistical data reflect the decline of the state sector, overlooking the growth in the non-state sector.

But the state sector, too, is covered only incompletely by the official statistics. The number of enterprises submitting reports is diminishing. There is a strong desire to conceal profits (in many cases industrial production has been replaced by some other business with profits which the owners prefer to keep hidden).

Making generalizations based on the available statistical data can lead to several profoundly misleading results:
- extrapolating the decline of the state sector to the entire economy
- extrapolating the dynamics of declining branches of the economy (industry and agriculture) to the economy as a whole.

In other words, the statistical data reflect only partially the structural changes in the Estonian national economy. The latter conclusion points to an important process in the Estonian economy: the "documented" decline is taking place at the same rate as restructuring of the ownership and sectors of the economy. 57

To be able to estimate the actual extent of economic decline, an indirect method, using proxies, must be applied. 58 One of these proxies is consumption of electricity in the national economy.

The consumption of electric energy in the Estonian economy in 1992 (with waste) was 85 percent of that of 1991. If we use this figure as a proxy for economic activity, this means a decrease of GDP on the order of 15 percent compared to 1991. The 15 percent decline in 1992 is also indicated by the preliminary estimates of gross domestic product. A decline of 15 percent per year in industrialized countries would be a catastrophe. In Estonia the situation is different. Taking into account the decline in 1991, which was about 15 percent, it can be concluded that the rate of decline did not accelerate in 1992 as it happened in 1991.

The situation continued to improve during the following years as well.

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57 The situation is typical for former socialist economies, where official statistics with their underestimation of current level overestimate the base level. According to a witty saying, output in the planned economy involves goods as well as bads; under the new conditions it is composed only of goods. For estimation inadequacies as a cause for decline, see Aghion-Blanchard-Carlin (1994), Gavrilenko-Koen (1994), Winiecky (1994), Bartkowski (1993).

58 For alternative methods of estimating output decline, see Gavrilenko-Koen (1994).
According to the economic growth index\textsuperscript{59} of the Macroeconomic Research Department of Eesti Pank, GDP growth was 3 percent in 1993; for 1994 the growth has been forecasted to be 4–5 percent.\textsuperscript{60}

\textsuperscript{59} The growth index gives an approximation of the GDP growth rate. For a description of indicator, see Sepp 1994.

\textsuperscript{60} Use of the new proxy for economic growth was conditioned by the availability of additional information as well as by the changes in average consumption of electricity. The change of consumption follows from the shift in the composition of the national economy (the share of energy-consuming manufacturing has declined, the share of energy-saving services has increased). The decline of the average is also caused by the improvement and rationalization of energy consumption patterns.
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