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(editors)

ON THE ECONOMIC STRUCTURE OF ESTONIA AND FINLAND BEFORE THE 1990'S

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ABSTRACT: The report provides a presentation on the economic structure of Estonia and Finland based on statistical material. In addition to the aggregate national economies the main sectors of the two economies are looked into, namely agriculture, industry, construction, services and foreign trade. The time period covered varies for different sectors, ranging as far back as the first years of the 20th century. However, the main emphasis is on the data of the 1980's. When possible, concepts and classifications of the Finnish national accounts are used. They correspond to the international recommendations on national accounts given by UN. Comparability of the data gathered from different economic systems has been enhanced by making use of data in physical units when necessary.

KEY WORDS: Estonia, Finland, national economy, branches

Ahde, Pasi ja Rajasalu, Teet (toim.), Viron ja Suomen talouden rakenne ennen 1990-lukua. Helsinki : ETLA, Elinkeinoelämän Tutkimuslaitos, The Research Institute of the Finnish Economy, 1992. 101 s. (Keskusteluaiheita, Discussion Papers, ISSN 0781-6847; no. 422).

TIIVISTELMÄ: Raportissa esitellään tilastomateriaalin pohjalta Viron ja Suomen talouksien rakennetta. Koko kansantalouden lisäksi käydään läpi tärkeimmät sektorit eli maatalous, teollisuus, rakennustoiminta, palvelut ja ulkomaankauppa. Tarkasteluperiodi vaihtelee sektoreittain, pisimmillään se alkaa 1900-luvun alkuvuosista. Pääpaino on kuitenkin 1980-luvun aineistolla. Aineiston esittämisessä on mahdollisuuksien mukaan pyritty käyttämään Suomen kansantalouden tilinpidon mukaisia käsitteitä ja luokituksia. Erilaisten talousjärjestelmien piiristä kerätyn datan vertailukelpoisuutta ja luotettavuutta on pyritty parantamaan tukeutumalla tarvittaessa talouden kuvaamiseen fyysisiä mittayksiköitä käyttäen.

AVAINSANAT: Viro, Suomi, kansantalous, toimialat

Ahde, Pasi ja Rajasalu, Teet (toim.), Eesti ja Soome majanduse struktuurist enne 1990.-ndaid aastaid. Helsinki: ETLA, Elinkeinoelämän Tutkimuslaitos, The Research Institute of Finnish Economy, Soome Majanduse Uurimise Instituut, 1992. 101 lk. (Keskusteluaiheita, Discussion Papers, Preprint, ISSN 0781-6847; Nr. 422).

RESÜMEE: Esitatakse statistilisele materjalile tuginev ülevaade Eesti ja Soome majanduse struktuurist. Lisaks rahvamajandusele tervikuna vaadeldakse lähemalt põllumajandust, tööstust, ehitust, teenuseid ja väliskaubandust. Käsitletav periood on tegevusalati erinev ulatudes võimaluse korral isegi kuni 20. sajandi algusaastateni. Põhitähelepanu on aga osutatud 1980.-ndatele aastatele. Võimalus mööda on võrdluse alusena püütud kasutada Soome rahvamajanduse arvepidamise süsteemi, klassifikatsioone ja majandusnäitajaid. Erinevate süsteemide kohta käivate andmete võrreldavust on püütud täiendada naturaalnäitajate kasutamisega.

VÕTMESÕNAD: Eesti, Soome, rahvamajandus, majandusharud

PREFACE

This study is to be used as a basis in preparing chapter 'Economic structure' in the forthcoming book 'Estonia and Finland: Socio-economic development'. The first draft of the chapter was prepared at the Institute of Economics of the Estonian Academy of Sciences. It was compiled by Teet Rajasalu and written by a group of authors including T. Rajasalu (Main economic features), J. Kaubi (Agriculture), K. Kilvits (Industry), E. Veski (Construction), U. Venesaar (Services), J. Laving (Transport) and K. Kukk (Foreign trade). The text of the first draft was translated and edited by M. Kirsspuu.

The second draft was prepared at ETLA, Helsinki, by Pasi Ahde. Finnish data was added in the figures and tables if it had not been available to the Estonian writers. Also the sections concerning the development of the Finnish economy were augmented in some cases.

The amount of material gathered at this stage was much larger than required to write the chapter for the forthcoming book. It was decided to publish all that material in the form of a discussion paper without any deeper analysis of the data for the time being. However, the scope of the study was also widened to include a brief historical review of the two economies to give some background to the situation prevailing in the beginning of the 1990's.

We wish to thank John Rogers from ETLA for comments on the language of this report.

Pasi Ahde and Teet Rajasalu

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1 INTRODUCTION

1.1 Some historical background

Before the socialist era the economic development in Estonia was quite similar to that in Finland. Large enterprises which were established during the time of czarist Russia and oriented toward production for the Russian market became inefficient and faced difficulties. The most important branches of these firms were ship-building and textile manufacturing. When Estonia declared independent in 1918, the trade relations with Russia dropped considerably. Instead the export of foodstuffs to Western Europe became dominating (Figures 37 and 39). Thus there was a reorientation in economic policy towards new markets and new goods.

In Finland the development after the First World War also led to a sharp decline of eastern trade. The trade with Russia had been rather diverse, so the decline led to a more one-sided structure of exports; 85 % of exports were forest industry products.

Estonia weathered the depression of 1932 - 1933 rather well and in 1938 the economy was in quite good shape. The economic development was approximately similar in Estonia and Finland during the inter-war period (see Figures 32, 33 and 36).

In August 1939 a treaty between Germany and the USSR was signed (the so-called Molotov-Ribbentrop pact). Its secret protocol divided the territory of Eastern Europe between the German and the USSR spheres of interest. Estonia and Finland were assigned to the Soviet sphere of interest. Finland fought for its independence during the Winter War. The Estonian government decided that Estonia had insufficient strength to wage war against the Soviet Union. So Estonia was obliged to sign an agreement about the establishment of military bases of the USSR on the Estonian territory. It turned out to be the beginning of an occupation. In 1940 after annexation of its whole territory Estonia was politically incorporated into the USSR.

As a result of these events Estonian economic development was essentially changed. Already in 1940 the private ownership was abolished and private property in the cities nationalized. Many previous owners and experienced managers of enterprises were imprisoned or deported to Russia and Siberia. The collectivization of agriculture was carried out at the end of the 1940's mainly during one year. It was possible only under the fear of mass deportations taking place at the time. The full control over the Estonian economy went to the all-union organizations and central authorities in Moscow. The ideology of

economic development was thoroughly changed and from this time on the Estonian economy cannot be treated as an independent one. In principle, the whole output was all-union property and was allocated and distributed according to the interests of the all-union economy. The aggregate demand and supply of a particular union republic lost its meaning as fulfilling of the centrally fixed plans and gaining of maximum growth rates in material production became the first priority of economic activity. For about 40 years only material production was borne in mind.

In order to attend to these tasks the system of statistics was reorganized. More complex information about the economy was substituted with information about the output of certain goods. As the statistics were to fulfil also propagandistic tasks mainly goods with maximum growth rates were included in it. As soon as some difficulties arose in certain fields of economy these items were excluded from the official statistics.

For Estonia the events of 1940's were crucial. Direct war damages (many industrial enterprises in Tallinn, Narva and Tartu were ruined by the Soviet Army) were accompanied by mass deportations of population in 1940 and 1949. Much of the population emigrated before the return of the Soviet troops in 1944. There were territorial changes, too. As a result of these events the industrial output of Estonia was reported to be only 70 % of pre-war (1940) level in 1945. The agricultural output was only 60 % of the 1940 level in 1945. As a rough estimation it may be pointed out that the Net Material Product¹ of 1945 was approximately 60 % of the 1940 level. There was an average annual decline of 9.8 % in the economy during the period of 1941 - 1945.

Intensive investments into fixed capital formation in the second half of 1940's were financed from the all-union budget. It is believed that they were carried out bearing in mind the interests of the USSR mainly and besides economic objectives they had to fulfil other functions as well.

At the beginning of World War II a great deal of the Soviet productive capacities and part of the civil population were moved into the Urals, Siberia

¹ Here and later we are to use Net Material Product (abbreviation NMP) as a general indicator of economic development in Estonia. NMP includes the value added in the field of material production. In Russian and in Estonian a term 'National Income' is used for NMP but it is misleading because the value added in the field of services is not included. Thus adding to NMP the value added in services we gain the sum which is comparable to National Income in the western sense. Adding the depreciation allowances to this NI we get GDP.

and Kazakhstan. After the end of the war the population returned to the European part of the USSR. This created a shortage of labour in the eastern part of the USSR. Hence, the USSR had no reason at all to invest into its underpopulated eastern regions which had already excess capacities. The investments were quite naturally concentrated into the western part of the USSR where the war damages were more substantial. Since some capacities had survived, it was possible with less investments to restore the production there and gain faster results. Allocation of investment into western parts of the USSR was also supported by the war reparations, which arrived in the USSR through the seaports of the Baltic Sea and could be technologically more easily fitted in with the existing equipment in the newly incorporated regions (which had, for instance, close contacts with German technology).

As a matter of fact, the production did not belong to the producers any more and so there was a problem of which territories would be the sites for investments. For instance, the purpose of the intensive expansion of oil-shale production in Estonia was to provide Leningrad with electricity and gas.

These overwhelming post-war investments were soundly used as a propagandistic tool for demonstrating the help given to the Baltic republics. In the case of Latvia and Estonia the real economic target was something else. The abundant investments and increase in industrial output were accompanied by an intensive influx of labour resources from Russia and Byelorussia. Management of enterprises and managerial staff of governmental and local levels was substituted by late immigrants. The process ran in parallel to the deportations of the Estonian population to Siberia. Obviously it formed a part in a more general strategy of russification and expanding the control of the central government in Moscow over newly incorporated territories. In Lithuania this policy did not work so well, since there was abundant supply of labour resources in rural areas and the industrialization was carried out without such intensive immigration.

As a result of the abundant investments the merchandise trade balance with other republics ran in deficit. In the period of 1945 - 1948 the value of imports was 262 million roubles and the value of exports only 149 million roubles (Veimer 1949 p. 55).

In the 1950's the socialist change in the Estonian economy was completed. In agriculture the process of concentration of collective and state farms was launched - instead of 2898 collective farms in 1949 there were only 805 in 1958 (Tõnurist 1967 p. 24) and about 300 in the mid-1980's.

In industry the first new enterprises established in post-war years were put into full operation. In the mid-1950's, after the end of the Stalinist period and some

increase in the power of local authorities as regards the control over the economy (formation of the Councils of National Economy in the Soviet republics), a new round in the foundation of industrial enterprises followed. The power plants in Kohtla-Järve (1947) and in Ahtme (1951) were followed by the Baltic power plant in Narva. Its construction began in 1957 and the first blocks were put into operation at the beginning of the 1960's. The end of the 1950's was the culmination of industrialization in Estonia. Many enterprises in the field of electrical engineering and machinery were established or formed on the basis of previous workshops, for instance the Kalinin plant for producing mercury rectifiers in Tallinn, electrical engineering plants in Rõngu and Puurmani, the Pöögelmann plant for producing radio equipment, a plant for producing gas analyzers in Võru, plant for producing excavators in Tallinn etc. (Renter 1991 pp. 15 - 17). It is a little confusing to confess that the increased control over Estonian economy was used for expanding the industry on the basis of an inflow of labour resources. As a result of the specialization process in industry the enterprises became more and more orientated to the all-union consumers and dependant on the imports from other republics. A long step towards over-industrialization was taken just at the end of 1950's - in the period of relatively high degree of self-management in Estonian economy. The preconditions for too high migration from rural to urban settlements as well as from outside Estonia were created.

The trade balance reached its equilibrium in the mid-1950's. The value of imports was 324 million roubles in 1956 and 486 million roubles in 1960. The value of exports reached 322 and 494 million roubles respectively in these years (Eesti NSV majanduslikud sidemed ... 1965 p. 37). This trade included mainly the production exported to other Soviet republics and raw materials, machinery and consumer goods received from the other republics. The share of foreign countries was as low as 15.3 million roubles in imports and 7.7 million roubles in exports (5 % of total imports and 2 % of exports) in 1956.

The 1960's were for Estonia marked by years of reorganization. From 1962 steps were taken towards the reinstallation of the management of economy by branches. The growth rate of NMP decreased sharply at the beginning of the 1960's (from 14-15 % in 1958 -1959 to 7 % in 1961 and only 1.6 % in 1962). In 1965 a new economic policy was launched. The Councils of National Economy were abolished. Enterprises were transmitted into all-union subordination and the management of the economy was organized by branches. At the same time economic interests of enterprises were promoted by the introduction of self-accounting, but the price reform was a very limited one and prices were not liberalized. Thus in many cases the increased interests of producers proved to be in contradiction with the interests of society. Later reforms led to the return of administrative control over economy and to the

reduction of importance of self-accounting.

Nevertheless, the first few years of new economic system seemed to be quite successful. The growth rate of GNP reached 12.7 % in 1967. Some interest in the results of production was aroused. The annual growth rate of NMP in the decade was 7.6 %.

The external trade was well in balance. In 1961 the value of imports was 557 and that of exports 553 million roubles, with the share of foreign countries in imports being 65.4 million roubles (12 %) and in exports 40.4 million roubles (7 %) (Eesti NSV majanduslikud sidemed ... 1965 p. 37). In 1966 the external trade balance was still positive. The value of imports was 878 and the value of exports 977 million roubles. The share of foreign countries reached 14 % in imports and 13 % in exports (Ekonomitshes svjazi Estonskoj SSR ... 1969 p. 57, 75). Thus, in the mid-1960's the Estonian economy was in quite good shape. Its external trade balance was in surplus, with the share of foreign countries in trade fairly high. There was considerable new production capacity and the problems of technological backwardness, high depreciation of technological equipment, environmental pollution, etc. were not evident yet.

The 1970's witnessed years of continuous minor reforms in the Estonian economy. Since the economic interests of enterprises brought them into contradiction with the interests of the whole society, attempts were made to switch the main economic indicators. For example, there was a campaign for implementing the value added as a most important indicator of economic activity. Later the campaign of self-accounting was launched. There was much talk about the quality of production and efficiency, but these ideas were not introduced into the real economic interests of enterprises. Sound programs for scientific and technological changes in the economy were launched. Nevertheless, the growth rate of NMP declined to 5.2 % in the 1970's. The five year growth of industrial output which was 60 % at the end of 1960's fell to 51 % at the beginning of 1970's and to 41 % in the second half of 1970's (Lugus 1981 p. 17). As a matter of fact, ecological problems began to arise, the environment became polluted and many natural resources became scanty in the USSR.

The external trade became unbalanced. Continuous large investments and an increase in the number of jobs supported permanent influx of labour resources. At the same time the social needs of the population remained unsatisfied, as there were shortages in housing, hospitals, schools etc. Some improvement could be noticed only in Tallinn where in the course of preparations for the Yachting Regatta of the 1980 Olympic Games a few hotels were constructed and the old town was renewed and reconstructed.

In the 1980's the Estonian population finally became tired of waiting for a growth in the standard of living. More attention was paid to social needs and social stability. Many experiments for improving the economic situation were undertaken. Moscow's plans for constructing an additional third great power plant were resisted successfully. But at the same time a new port in Tallinn was erected which created an additional influx of migrants including construction workers, sailors for the merchandise fleet and harbour personnel.

In the mid-1980's the consciousness of the population about the contradictions between all-Union and local interests increased during the long-lasting and politically difficult discussions over taking into use the phosphate deposits near Rakvere. All-Union ministries wanted to excavate the resources using economically inefficient and ecologically unacceptable technology, which would have been disastrous for the water resources and environment of Estonia.

The second half of the 1980's began with the fuzzy reforms of Gorbachev. One should remember the struggle for restructuring the economy while simultaneously accelerating its development. The battle against alcoholism was launched which trimmed state budget revenues, all kinds of 'non-labour' incomes were prohibited first, and later all kinds of manipulations were liberalized. In agriculture the campaign for establishing huge agro-industrial complexes was started which ended with disaggregation of agricultural production and rehabilitation of private farming.

The most advantageous of Gorbachev's reforms was 'Glasnost' - liberalization of press and media. It enabled the campaign against the inefficient use of phosphates in Estonia. In 1987 a more radical idea of economic autonomy was put forth. This idea was at first resisted both by local and USSR communist party leaders, but ultimately accepted by the USSR parliament. At the same time many even quite moderate steps towards real economic autonomy were rejected by the USSR government or blocked by the USSR ministries and banks. This led to the substitution of the idea about economic autonomy with the more radical idea of restoring independent Republic of Estonia in February 1990 on the basis of the Tartu peace treaty between Russia and Estonia in 1920. In March 1990 the newly elected Supreme Council of Estonia declared the Soviet power in Estonia illegal and also proclaimed the restoration of the Republic of Estonia together with a transition period which would end with the formation of constitutional organs of state power in the Republic of Estonia.

Thus the 1980's put an end to the socialist period in the Estonian economy that had lasted some 50 years. The steps taken in the field of the economy since 1990 have been carried out with the aim of restoring a normal market controlled economy. Since there is no experience of independent statehood or the transition

to market economy these measures may seem quite fuzzy. In any case, the situation in the Estonian economy after 1990 belongs to the beginning of the next historical period.

As was mentioned above, the most important decision setting the different paths of development of the Estonian and Finnish economies during the past half a century was made in the autumn of 1939. The government of Finland chose not to agree to the demands of the Soviet Union.

Although both the human and material losses of Finland were great during the years of war, they were not greater than the losses of Estonia. The peace agreement was hard but Finland could remain independent and keep its own political, legal and economic institutions. Direct consequences of the lost war were limited to foreign policy, domestic affairs were affected only indirectly. The domestic situation was rather tense for many years after the war, but there were no serious attempts to change the prevailing market economy into a socialist one. The term 'market economy' should be used with caution here, because regulations concerning economic activities and even rationing of the most important goods were very widespread for many years after the war.

The direct war damage and the land area extracted from Finland had a large effect on the Finnish economy. In addition to that came the war reparations.

People from the lost land area moved to the remaining part of the country, where they were granted land to start farming. Land had also been promised to those men who fought in the war and had families to support.

Behind this policy of promoting farming there were in addition to the economic and social goals also political ones. Later on the policy had some important effects, all of which were not seen when the policy was introduced. At first the effects were mainly positive. Food production rose and economic activity was encouraged also in less densely populated parts of the country. Also unemployment could be kept down, which lowered the pressures in domestic politics against the prevailing political system.

Later on the negative effects surfaced. A large part of the farms founded in northern and eastern Finland gave only a rather modest income to the farmers and when their children grew up they had no opportunity to find their living in their home district. This led to a massive migration to towns and also abroad, mainly to Sweden.

The policy had also some long run effects on Finnish agriculture. When the law

on farm income went into effect, it promised a fair income to every farmer. The producer prices of agricultural products were set so that this goal was achieved. The productivity on small farms in northern and eastern Finland was rather low, thus leading to high prices of agricultural products and later on to large overproduction, which had to be marketed abroad with government support. Now agricultural questions are one of the main obstacles in Finland's way into the European Community.

The war reparations had also an important impact on the Finnish economy. In the beginning they were a heavy burden to the national economy, whereas in the worst years even more than 5 % of GDP went toward war reparations. More difficulties were caused by the fact that the products which were to be delivered were mainly outside the field of Finland's traditional export industry. For instance in the metal industries a great deal of new capacity had to be built and new products had to be designed. Later on this helped to diversify Finnish exports, which before the war had been very heavily dominated by the products of the forest industries.

The bilateral trade between Finland and the Soviet Union can at least partly be credited to the war reparations, although the development of the trade was also supported by political factors. Later on the Soviet trade helped Finland to make its economic development more steady. Soviet trade was based on five-year agreements. The main import article was crude oil, and when oil prices rose in the 1970's and 1980's and the demand for Finnish export goods in western markets suffered from the recession in Western Europe, exports to the Soviet Union could be increased and the impact of the western recession on the employment situation in Finland was not as bad as in many other countries.

The internationalization of the Finnish economy began very cautiously for obvious reasons of a foreign policy origin. Finland could not right away become a member of EFTA but had to begin as an associate member. Also the free trade agreement with the EEC had to be introduced carefully, although this time there were more also domestic opponents to be persuaded behind the agreement. Together with the free trade agreements with western countries Finland has granted the same treatment for goods from the Soviet Union and also from other socialist countries. Except for the trade with the Soviet Union this has not had a larger economic impact.

One important feature in the Finnish economy during the past half century has been the so-called devaluation cycle. Economists do not agree on the cause behind this phenomenon, but the political situation after the war and strong organizations on labour markets might give some kind of explanation. The wage level and prices of domestic raw materials have been repeatedly driven so high

that export industries have lost their competitiveness. This has been corrected by devaluating the markka. It is argued that this policy has prevented the structural change of Finnish industry.

The development of the Finnish economy can be described as rather steady until the end of the 1980's. There has been the same upswings and downswings as in the western market economies, though the swings have been softened by the impact of eastern trade. The gap between the standards of living in Finland and in Western Europe has steadily become smaller.

The collapse of the Soviet Union also had a strong effect on the Finnish economy, though the over-heating of financial and real estate markets have likewise played a part in the recent recession, which is the worst in the whole independent history of Finland if measured by GDP growth. Now there can already be seen signs of a turn for the better.

Finland has applied for a full membership of the EC. The membership would set some big challenges on the structural development of the Finnish economy, but it is assumed also to give further growth possibilities. Another important thing concerning the future of Finland will be the development in Russia and other parts of the former Soviet Union. Their peaceful development and fast economic recovery would give a good boost to both of the Finnish and Estonian economies.

1.2 Main economic features

Estonian economy has considerably changed during the socialist period (1940-1991). It is not easy to interpret these changes in the classical market economy terms, since together with the economy the statistical accounting system was also changed, so that it does not enable direct comparison with other countries.

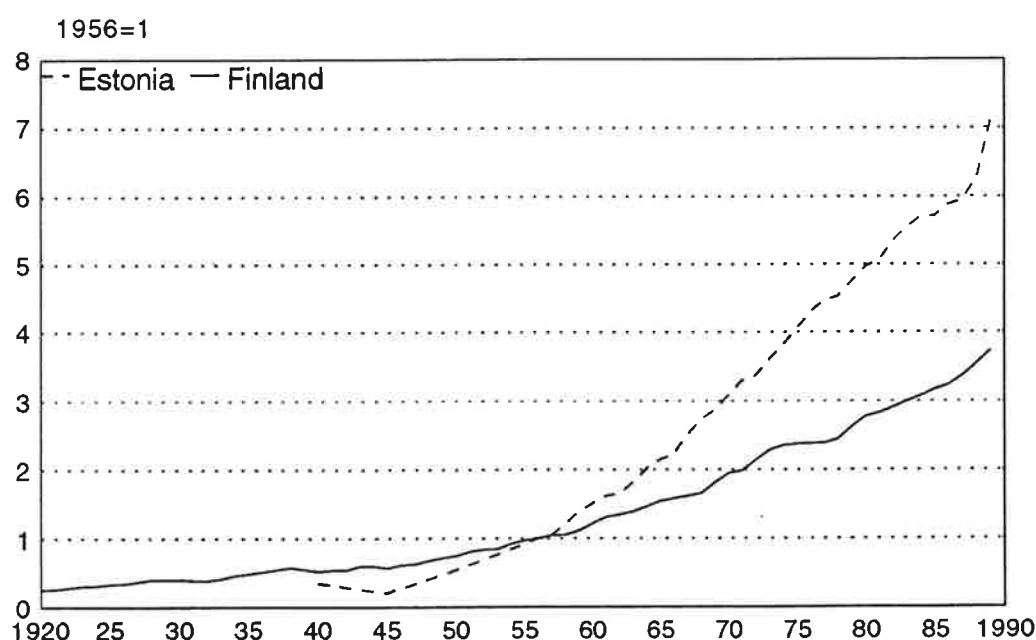
For a long time after World War II information on the Estonian economy was limited only to the volumes of production in individual industries. These volumes contained multiple accounting in the form of intermediate products. Since 1956 there are also data on net material product, but they are not very reliable either. Namely, the reported volumes in constant prices of both total output by industries and net material product (NMP) contain also the disguised rise in prices. The indices of economic growth calculated on their basis contain therefore, in addition to real growth, also the effect of hidden price increases.

In Finland the most important source of economic data are the National

Accounts. These are available since 1948. The conventions used in the Finnish National Accounts are largely based on international recommendations, so their international comparability should be rather good. This applies also to other Finnish statistics. Also the reliability of Finnish data is usually considered satisfactory.

The dynamics of economic growth in Finland and Estonia have been depicted, though not very credibly, in Figure 1. In the case of Estonia the NMP has been used. The values of NMP for 1940-1956 have been calculated as approximate estimates on the basis of regression from volumes of production in major industries. There is no reason, however, to believe the resulting high growth rate of the Estonian economy, due to the statistical problems mentioned earlier.

Figure 1. Index of NMP in Estonia and GDP in Finland



Sources: Eesti Vabariigi rahvamajanduse bilanss 1989, Hjerppe 1988, Statistical Yearbook of Finland and Valovoj obshestvennyj produkt.

The Finnish data is based on the volume of Gross Domestic Product in basic values. The detailed calculation procedure of the series depicted is explained in the source mentioned.

First post-war data of gross domestic product for Estonia were published in 1990, according to which GDP was 5787.5 million roubles in 1987, 5879.8

million roubles in 1988 and 6358.1 million roubles in 1989 (Eesti rahvamajanduse bilanss 1989 p. 8). As there are various exchange rates for converting rouble into foreign currencies and the real purchasing power of the rouble is not known we cannot draw any essential conclusions. In 1989 GDP per capita was 4042 roubles which, according to the official exchange rate of that time, could be USD 6400, but at the same time it could be USD 200 when calculated according to the unofficial exchange rate. Therefore the GDP per capita in Estonia in 1989 is estimated to be between FIM 800-25000. In Finland it was nearly FIM 100,000 (to be more precise - FIM 99,807 in 1989 according to the Statistical Yearbook of Finland), or from four to ten times higher. However, this type of information should be interpreted with caution: this kind of calculation leave aside many relevant aspects, for example differences in price structures.

There are no official data on the structure of GDP in Estonia. Relying on the input-output tables of 1989 and making necessary recalculations there, we can reveal approximately the structure of GDP in Estonia which can be compared with that of Finland. The Finnish data is based on the Finnish National Accounts, and the figures correspond to value added in basic prices by branch. The results are presented in Table 1.

At the same time it must be observed that the Estonian input-output tables for 1989 are in prices of final consumption which cannot be directly compared with value added in basic prices. According to the input-output tables the value of GDP is 3% lower than in the above-referred official source; and we also know that the input-output tables do not include rental incomes from living in one's own house. Besides, the input-output tables for 1989 have been compiled on the basis of the so-called cut-down programme and do not claim to be absolutely precise. But still, it produces some kind of picture about the output structures of Estonia.

The comparison of the structures of GDP of Estonia and Finland in basic prices, i.e. without sales tax and subsidies from the budget is depicted in Figure 2.

The Estonian economy is characterized by a large share of agriculture (22 %). In Finland it is only 3 %, while the share of forestry is almost equal to that of agriculture. In Estonia, however, the share of forestry is only 1 %. There is no data on fishing and hunting in Estonia, but obviously their share is not considerable. The share of the primary sector in the Finnish economy is below 6 %, while in Estonian economy it is above 22 %.

In the secondary sector it must be noticed that manufacturing has a very high share in Estonia (35 %), while in Finland it is only 20 % (in producer prices

Table 1. The structure of GDP in 1989

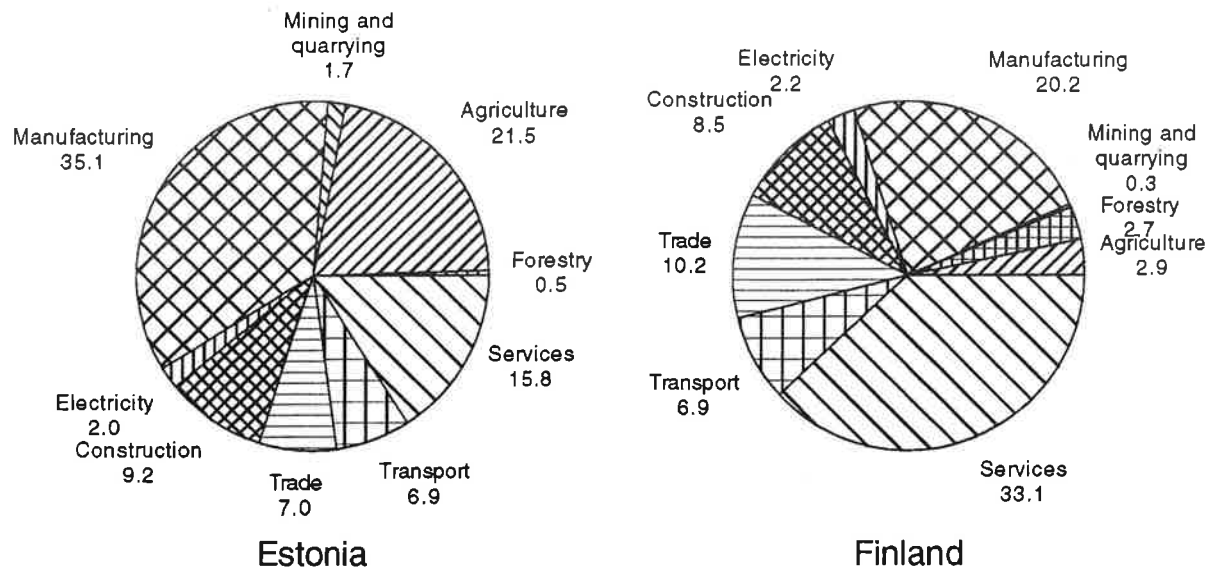
	Estonia		Finland		
	mill. roubles	%	bill. FIM		%
Agriculture	1319	21.5	13.4	13.4	2.7
Forestry	30	0.5	13.2	13.2	2.7
Fishing and hunting			0.9	0.9	0.2
Mining and quarrying	102	1.7	1.7	1.7	0.3
Manufacturing	2150	35.1	100.2	100.2	20.2
Electricity, gas and water	124	2.0	10.7	10.7	2.2
Construction	566	9.2	42.1	42.1	8.5
Trade, restaurants, hotels	428	7.0	50.5	50.5	10.2
Transport, storage and communication	423	6.9	34.4	34.4	6.9
Financial institutions and insurance			20.1		
Owneroccupied dwellings			25.5		
Real estate and business services			34.1		
Community, social and personal services	968	15.8	19.4	163.9	33.1
Imputed bank service charge			-16.4		
Producers of government services			72.7		
Producers of non-profit services			7.7		
Domestic services of households			0.8		
GDP in basic values	6110	99.8	431.0	431.0	87.0
Commodity taxes	780	12.7	72.1	72.1	14.6
Commodity subsidies	-765	12.5	-7.7	-7.7	-1.6
GDP in producer prices	6125	100.0	495.4	495.4	100.0

Sources: Eesti Vabariigi rahvamajanduse 1989. aasta toodangu valmistamise ja jaotamise aruandeline maatriksbilanss väärtuselises väljenduses, ESA, Tallinn, 1990, pp. 4 - 17; Statistical Yearbook of Finland, Central Statistical Office of Finland, Helsinki, 1990, p. 315.

23 %). In Finland primary and secondary sectors add up to a bit more than a third, in Estonia more than two-thirds of GDP.

The tertiary sector of Estonia is characterized above all by a small share of banking and financial services. Transport and communication services have not lagged behind considerably, but there is a more noticeable difference in trade and public catering. In Finnish data the tertiary sector includes the value-added from owner-occupied dwelling, which partly explains the greater size of the Finnish service sector.

Figure 2. The structure of GDP in current basic prices in 1989, %



Sources: See Table 1.

There are no data in Estonia concerning the GDP by kind of service industries. It must also be mentioned that GDP created in the sphere of services depends to a large extent on wages. Taking into consideration the proportions of wages prevailing up to lately, it may be said that the low share of the services sector is in a way the result of low wages in this field of activity. After 1989 some changes in the proportions of wages have taken place which should be reflected in the structure of GDP as well.

In the Finnish economy GDP in current market prices exceeds essentially GDP in basic prices (13 %). Indirect taxes increased the value of GDP by more than 72 billion FIM in 1989. In Estonia large sums of money were collected in the form of the turnover tax (nearly 780 million roubles) too, but they were used almost fully for subsidies. In 1990 the system of subsidies was thoroughly changed and direct subsidies to agricultural production were replaced by subsidies to people with low incomes. The mechanism of imposing turnover tax was also changed in 1991. Therefore there is reason to believe that the structure of GDP has somewhat changed in 1991.

The economic structures of Finland and Estonia can also be compared by

number of employed persons. In 1989 49.7 % of the inhabitants of Finland were employed, for Estonia the corresponding figure was 51.6 %. Unemployment is characteristic of Finland: according to official statistics there were 89000 unemployed in 1989, and nearly 350000 at the end of 1991. There is no direct information about unemployment in Estonia. On the whole, the shortage of labour was still dominating at the time, though unemployment occurred in some specialities or regions and in connection with changing of jobs. Unfortunately there are no official statistics on unemployment in Estonia. The structure of labour used is presented in Table 2 and Figure 3.

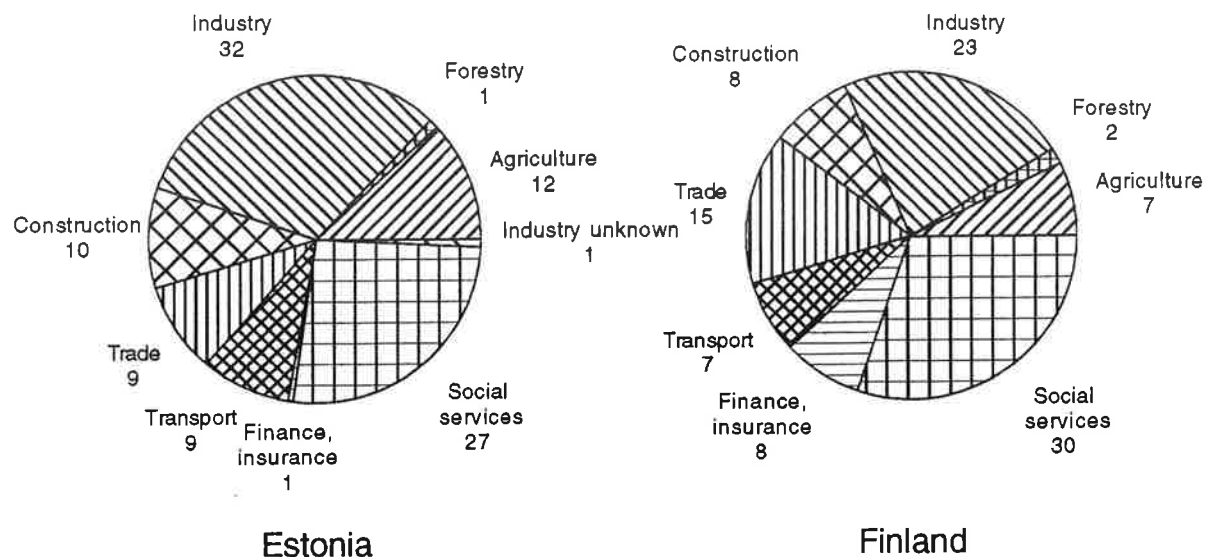
Table 2. Employed persons by industry in 1989

	Estonia		Finland	
	1000 persons	%	1000 persons	%
Agriculture	97.2	12.0	179	7.2
Forestry	7.7	0.9	39	1.6
Industry	259.5	32.0	561	22.7
Construction	80.3	9.9	199	8.1
Trade, restaurants, hotels	72.6	9.0	368	14.9
Transport, storage and communication	67.8	8.4	179	7.2
Financial institutions and insurance	4.1	0.5	194	7.9
Community, social and personal services	215.1	26.5	749	30.3
Industry unknown	6.8	0.8	2	0.1
All industries	811.1	100.0	2470	100.0

Sources: Eesti Statistika Aastaraamat 1990, "Olion", Tallinn 1991, p. 236; Statistical Yearbook of Finland, Central Statistical Office of Finland, Helsinki, 1990, p. 360.

In the distribution of labour Estonia is also characterized by the relatively high share of those employed in agriculture and industry. The share of persons employed in banking and insurance institutions is insignificant - it is over 10 times lower than in Finland. A relatively small number of persons employed in trade, restaurants and hotels is partly caused by the fact that the employees of hotels are included in the sector of community, social and personal services in the Estonian statistics. But as the share of those employed in this sector is smaller than in Finland too, it is evident that there is considerable backwardness in the whole services sector. At the same time backwardness of the service sector in Estonia by the number of employed persons is smaller than that by GDP, which confirms the above-given statement on the effect of the low level

Figure 3. Employed persons by industry in 1989, %



Sources: See Table 2.

of wages on the structure of GDP.

The present employment structure of Finland is the result of rather fast changes. Towards the end of the 1980's the service sector, together with the construction sector, was expanding rather rapidly. The result was that the industrial sector lagged behind and a huge current account deficit emerged. Now Finland has to either boost its exports and thus the industrial sector, or cut down on imports and the service sector. The construction sector has declined already. In a more balanced situation the share of Finnish industrial sector will be larger and the share of the service sector and construction sector will be smaller than in 1989.

The dynamics of the employment structure is reflected in Table 3 and Figure 4. Unfortunately the incomparability of data for Estonia does not enable us to look back into the more remote past. But even in Figure 4 it is clear that the employment structure of Estonia has lagged behind that of Finland by approximately 10 - 15 years. The employment structure of Estonia in 1989 is similar to that of Finland in 1980, while the number of those employed in finance and insurance is relatively small and on account of that the number of employees in manufacturing is large. Here we should not hurry in drawing

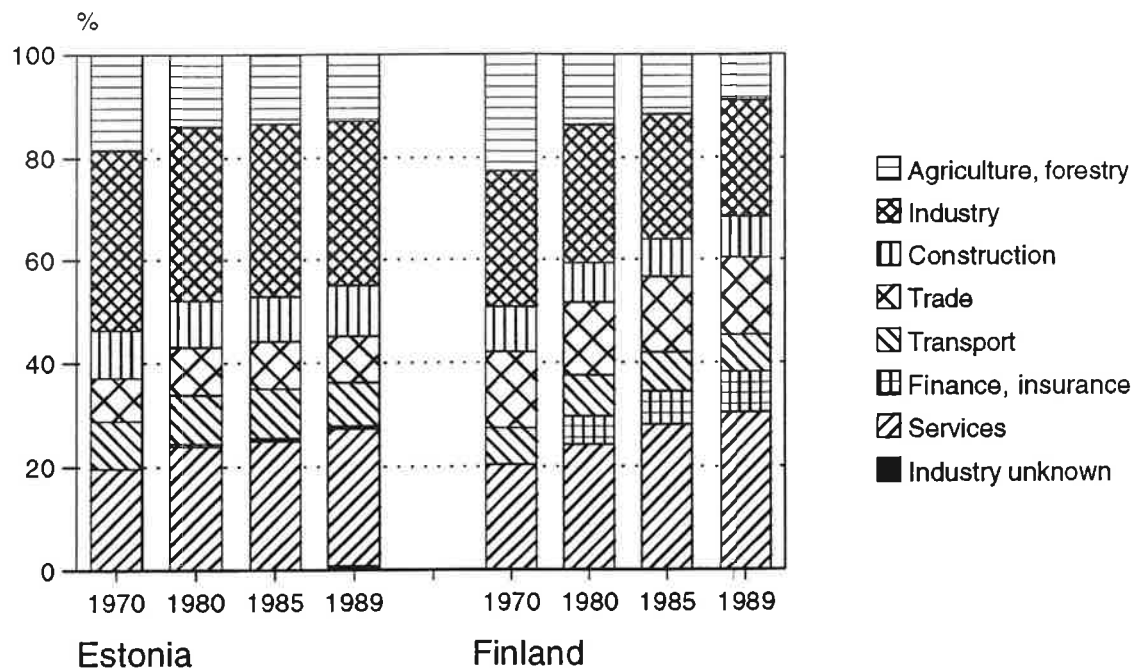
conclusions that the employment structure in Estonia was absolutely inappropriate.

Table 3. People employed by industries in 1960-1989

E S T O N I A	1970	1980	1985	1989
Agriculture and forestry	18.4	13.9	13.3	12.9
Industry	35.2	33.9	33.7	32.2
Construction	9.3	9.1	8.7	9.9
Trade, restaurants, hotels	8.3	9.1	9.2	9.0
Transport, storage and communication	9.2	9.5	9.5	8.4
Financial institutions and insurance		0.5	0.5	0.5
Community, social and personal services	19.7	23.9	25.0	26.5
Industry unknown				.8
F I N L A N D	1970	1980	1985	1989
Agriculture and forestry	22.6	13.6	11.5	8.8
Industry	26.5	27.0	24.5	22.7
Construction	8.8	7.6	7.3	8.1
Trade, restaurants, hotels	14.7	14.2	14.6	14.9
Transport, storage and communication	7.0	7.9	7.6	7.2
Financial institutions and insurance		5.5	6.4	7.9
Community, social and personal services	20.4	24.2	28.0	30.3
Industry unknown			0.1	0.1

Sources: Shema razvitija i razmeshsenija proizvoditel'nyh sil Estonii na 1985-2000 gody, II tom, Institut ekonomiki AN Estonii, 1983, pp. 9 - 12; Shema razvitija i razmeshsenija proizvoditel'nyh sil Estonii na 1985-2000 gody, II tom, Institut ekonomiki AN Estonii, 1988, p. 34; Eesti Statistika Aastaraamat 1990, 'Olion', Tallinn 1991, p. 236; Suomen Kansantalous, Instituutiot, rakenne ja kehitys, Werner Söderström osakeyhtiö, Porvoo, Helsinki, Juva, 1990, p. 198; Statistical Yearbook of Finland, Central Statistical Office of Finland, Helsinki, 1990, p. 360.

The Estonian economy like the whole socialist economy is characterized by deficits. There is a shortage of commodities and goods to be distributed. In Finland, however, there is continuously a kind of excess supply. The main problem seems to be the marketing of goods, i.e. the sphere of activities for trade and other services. In Estonia, on the other hand, the key problem is the meeting of essential needs and, in the first place, production of consumer goods.

Figure 4. Employment structure in Estonia and Finland

Sources: See Table 3.

The sphere of distribution is, of course, underdeveloped, but it has not been of primary importance in a socialist economy. In the transition to a market economy the share of the sphere of distribution is to be increased, of course, and that should bring about a change in the employment structure as well.

The structure of the economy could be also characterized by the distribution of existing fixed assets. Unfortunately we have no data on the distribution of fixed assets by industries in Finland. For Estonia, too, these data are rather conventional, since the fixed assets have not been revalued for a long time and both discount and depreciation policies have been imperfect. Therefore the total value of fixed assets acquired at different times is a comparatively poor indicator, the distribution of which hardly gives a truthful picture about the actual distribution of the fixed capital stock.

To sum up, we must state that the structure of the Estonian economy was formed according to the needs of a planned economy and especially the needs of the Soviet Union economy. Its irrationality cannot be unilaterally estimated, since this structure to some extent probably satisfied the needs of the economic regulation system under the socialist regime. Of course, such a structure of the

economy cannot meet the needs of a state striving toward a market economy and independence. To interpret problems ahead of the Estonian economy one must examine more thoroughly the equilibrium of the economy.

In order to characterize the balance of the economy let us compare the structure of aggregate demand and supply in Finland and Estonia. For Estonia we can again use only approximate calculations based on input-output tables of 1989. The results are presented in Table 4.

Table 4. Aggregate supply and demand in 1989

	Estonia		Finland	
	Million roubles	%	Billion FIM	%
GDP at market prices	6144	61.7	496.9	79.8
Imports of goods and services	3818	38.3	126.0	20.2
Aggregate Supply	9961	100.0	622.9	100.0
Private consumption	3312	33.2	257.6	41.4
Public consumption expenditure	1154	11.6	97.8	15.7
Gross fixed capital formation	1546	15.5	137.4	22.1
Exports of goods and services	3123	31.4	116.7	18.7
Increase in stocks	827	8.3	13.4	2.2
Aggregate Demand	9961	100.0	622.9	100.0

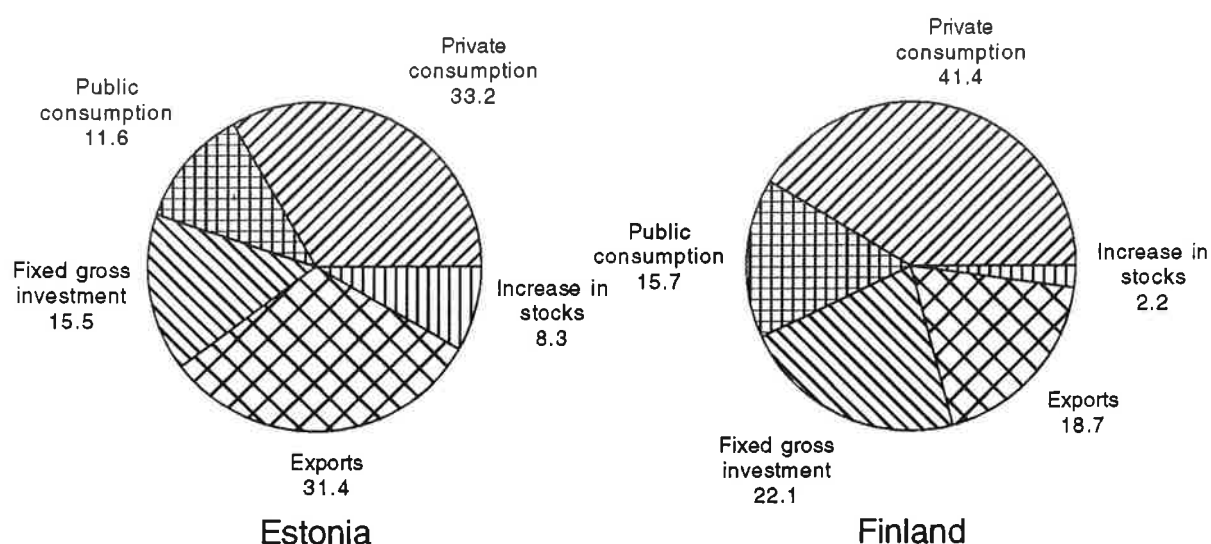
Note: In Finnish data the item 'Increase in stocks' includes also statistical discrepancy.

Sources: Eesti Vabariigi rahvamajanduse 1989. aasta toodangu valmistamise ja jaotamise aruandeline maatriksbilanss väärtuselises väljenduses, ESA, Tallinn, 1990, pp. 4-17; National Accounts, Central Statistical Office of Finland, Government Publishing Centre, Helsinki, 1991.

As we can see the Estonian economy is considerably more open than the Finnish economy. While in Finland the share of imports in resources comes up to 20 %, in Estonia it is even 38 % (see Figure 5). The share of exports is 19 % in Finland and 31 % in Estonia. While in Finland the foreign trade of goods is almost balanced, in Estonia imports exceed exports approximately by 600 million roubles. Thus the annual deficit of foreign trade is about 10 % of GDP.

A separate problem is that the external trade volumes are in domestic prices which considerably differ from world market prices. Therefore turnover in

Figure 5. The structure of aggregate demand in 1989, %



Sources: See Table 4.

domestic prices does not reflect, especially in trade with foreign countries, the actual incomes and expenditures in foreign currency and the state of the balance of payments. Data on economic relations which characterize the trade with other Soviet Union constituent republics are not objective either - in several cases large subsidies distort the real values of goods. For example, both foodstuffs and electric energy exported from Estonia are included in external trade turnover below their actual value. The same applies to fuels imported to Estonia. Though the prices used in interrepublican trade did not correspond to actual costs or world market prices, it must be said that these were real prices in this sense that Estonian enterprises received payments from or made payments to other Union republics in such prices if we discard the specific nature of taxation with the turnover tax and its division between different budgets.

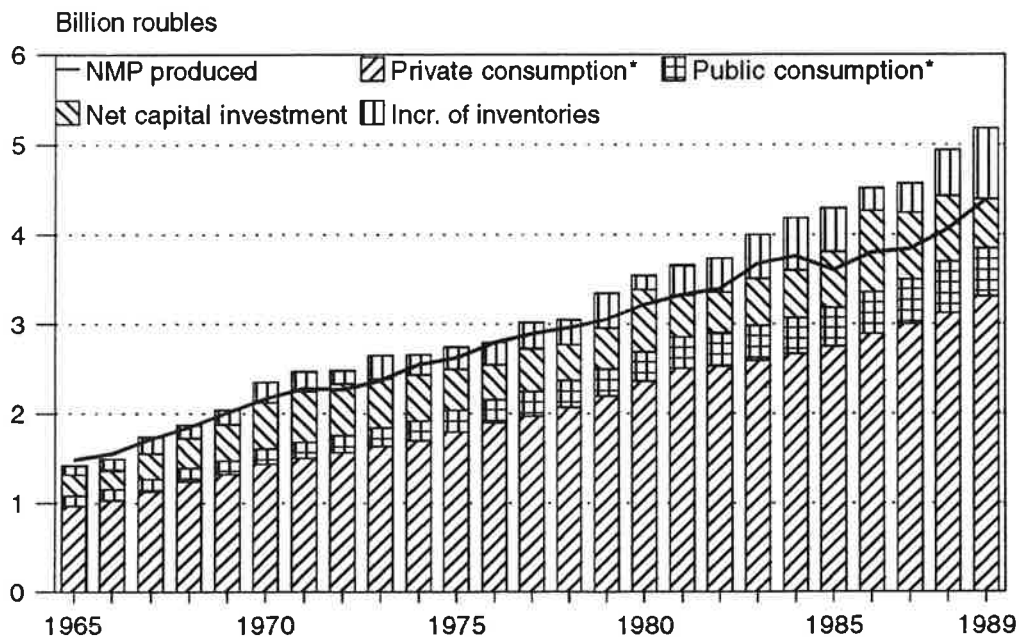
It must also be mentioned that in Estonia services other than transport have not been taken into account in the external trade. At the same time, for example in the sphere of construction services, there exist foreign relations, but we have no data on their volume.

Nevertheless, the Estonian foreign trade is still in deficit, especially with respect

to the trade in convertible currency. The geographical structure of foreign trade is especially unfavourable. The unstable and decaying economy of the Soviet Union holds the share of nearly 85 % in imports and 95 % in exports. This inevitably carries Estonia along into the economic decline. Being within the monetary system of the USSR it is practically impossible to avoid the cost-push inflation generated by imports from the Soviet Union. Therefore the inflation of, to a great extent, an exogenous nature has been characteristic of the Estonian economy in the recent years.

The decline on the USSR economy has also had its effect on Finland. In the mid-80's the share of the USSR in Finnish foreign trade was one fifth. In the beginning of 1990's it has declined to 5 %. Those branches that had greatest shares in eastern trade experienced difficulties. They had to re-organize their marketing and production for the western markets. This has not always been successful.

Figure 6. Production and final consumption of NMP in Estonia



* Consumption of material production.

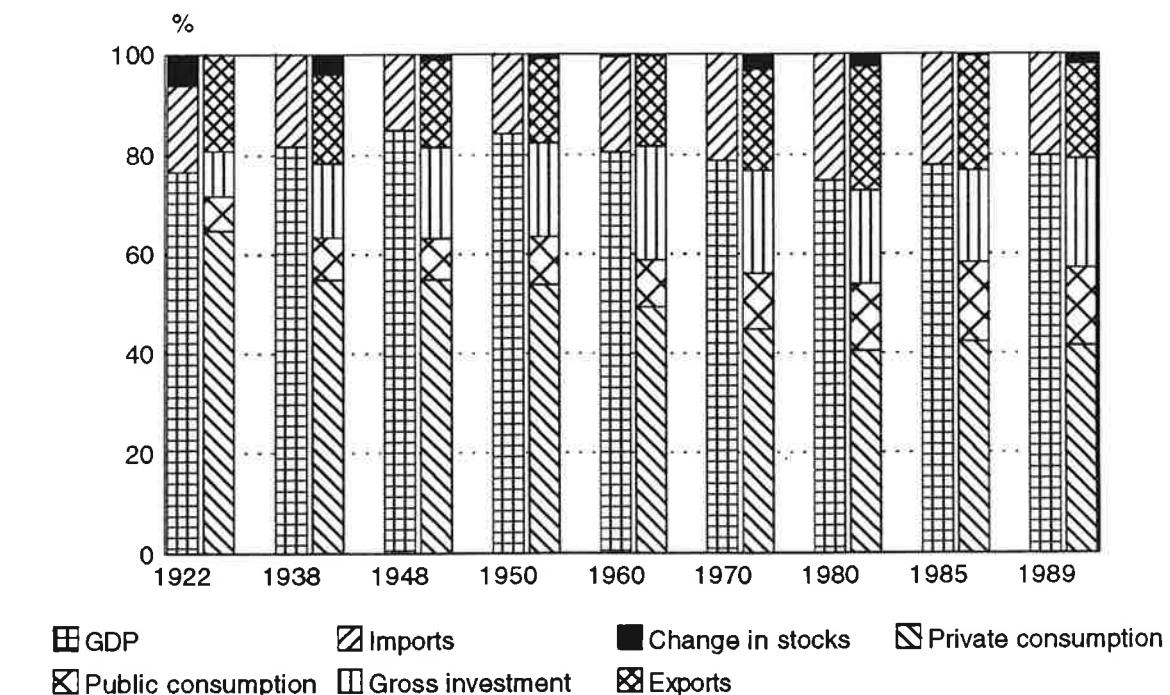
Sources: Valovoj obshestvennyj produkt, Eesti rahvamajanduse bilanss.

The Soviet trade was very good for the balance of the Finnish economy in the 70's and 80's. Crude oil being the main import good, and the trade being based on bilateral countertrade, Finland could go through the oil crisis both in the 70's

and on 80's with only a modest decline in employment. The rise in the value of oil imports could be made up by increasing the volume of eastern exports.

In the Estonian economy the disequilibrium was, of course, increased by the local economic policies. Examining the dynamics of production and consumption of NMP (see Figure 6) we can see that up to the end of the 1970's the production and consumption of NMP were balanced. Decline in economic efficiency gradually increased investments in inventories. The dynamics of the fixed capital formation has also been unstable. Increased investments in inventories could not ensure the undisturbed functioning of economy. Hence, unbalanced investments were the cost of the inefficiency of the economic mechanism. The later attempts at large investments also were supported by the fear of inflation. This increased even more the disequilibrium of the market.

Figure 7. Supply and demand in Finland



The equilibrium problems of the Finnish economy seem minor when compared to those in Estonia (Figure 7). Liberalisation of financial markets caused an over-heating of the economy in the late 80's. It evidenced itself first in very rapid growth, then in a weakening current account and eventually in an explosion in unemployment when the growthrate of the economy turned into a

decline. But the economy is still functioning, and the devaluation of markka and expected growth on the western markets are presumed to give the Finnish economy new momentum to restore a steady growth.

The main problems of the Estonian economy at the present time are the disequilibrium, large dependence on the decaying economy of the Soviet Union and hyperinflation. The first task is to work out a policy for economic stabilization and development of a small independent economy.

2 STRUCTURE OF THE ECONOMIES BY BRANCH

2.1 Agriculture

In Finland the agrarian reforms of the last 100 - 150 years have not been as extensive as in Estonia. Therefore the development of Finnish agriculture has been rather even and steadfast. In between 1860 - 1890 the total production increased 1.8 % annually, while in 1890 - 1913 the rate fell and the average annual growth was 1.0 %. A favourable period was in 1920 - 1938 when the growth rate was 1.8 % a year. In the post-war period from 1946 to 1960 - the growth rate was 1.7 %, but in 1960 - 1974 only 0.3 %. It increased again to 1.8 % a year in 1974 - 1985.

Politics has played an important role in the development of Finnish agriculture. Already before the Second World War the Finnish agriculture was supported by import restrictions. After the war a large number of new farms were founded with government support, partly to give a living to men coming back from the war, partly due to the wartime experiences when food was rationed.

The post-war policies led to a production structure with a large number of small farms. Later, when farming became more capital intensive and less labour intensive, this turned into a problem. Ineffective use of machinery, due to small farm sizes, led to high prices of agricultural products. Import of agricultural products was restricted, and the excess domestic production was exported with government support.

For political reasons the law on agricultural income tied the income of farmers to the income of industrial workers. This led to further rises in the prices of agricultural products and boosted production despite already large overproduction. Only now has there been a discussion whether government support of agricultural exports should be phased out and another way to secure a reasonable income to farmers found. Some experts say that the number of Finnish farms will decline drastically during this decade.

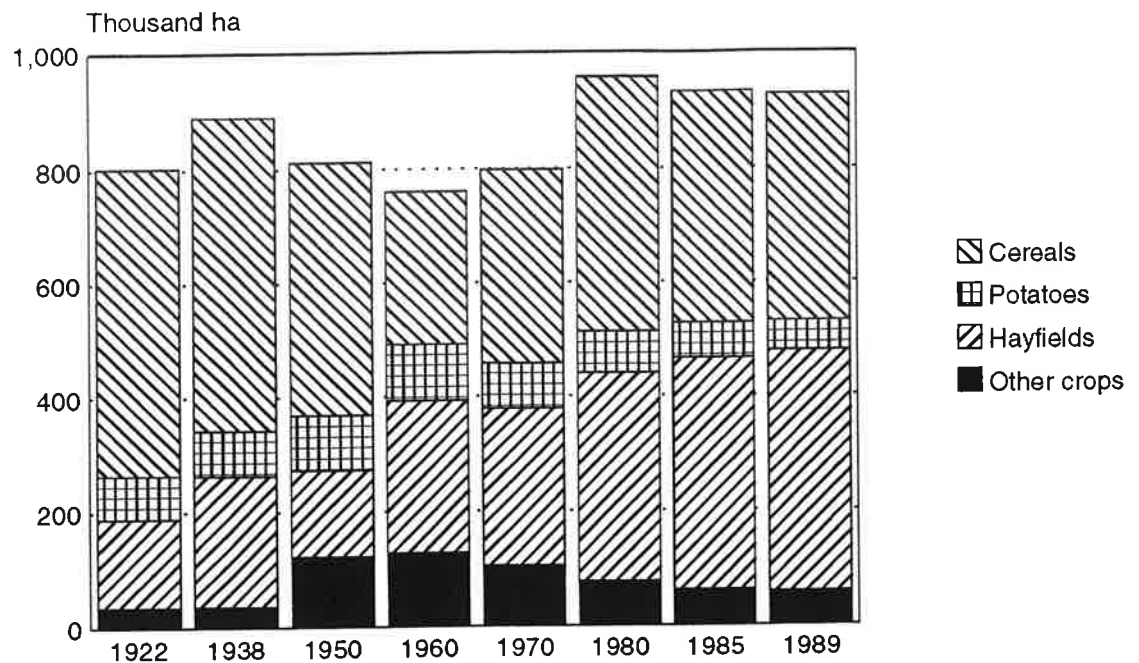
The Estonian agriculture developed like other East- and North-European countries in 1920 - 1940. The agrarian reform of 1919 abolished the feudal manor farms, and agricultural small-scale production became dominating. At the technological production level of that time and with the sufficient number of farm labourers the agrarian reform was carried out successfully. In 1920 - 1940 the development of the Estonia agriculture was rather fast, the self-needs for foodstuffs were fully satisfied and large quantities, primarily butter and bacon, exported. In the 1930's Estonia exported an average of 10000 - 11000 tons of butter and 3000 - 5000 tons of meat, as well as rye, potatoes, flax, raw hides, etc.

Development trends during the next 50 years were determined by the incorporation of the Republic of Estonia into the Soviet Union and the application of the agrarian policy used in this country. The effect of this on the development of agriculture as a whole was unfavourable. Compulsory collectivization was carried out with ideological aims and large-scale production replaced small farms. The collectivization of agriculture took place against a background of mass repressions and in an atmosphere of terror the land and property of the peasantry were expropriated. The production basis of family farming was practically destroyed, but founding the basis for new large-scale production required large expenditures and lasted decades. The number of agricultural workers decreased a lot. In those conditions the volume of agricultural production decreased substantially. In addition the autocratic large-scale production system turned out to be of little efficiency.

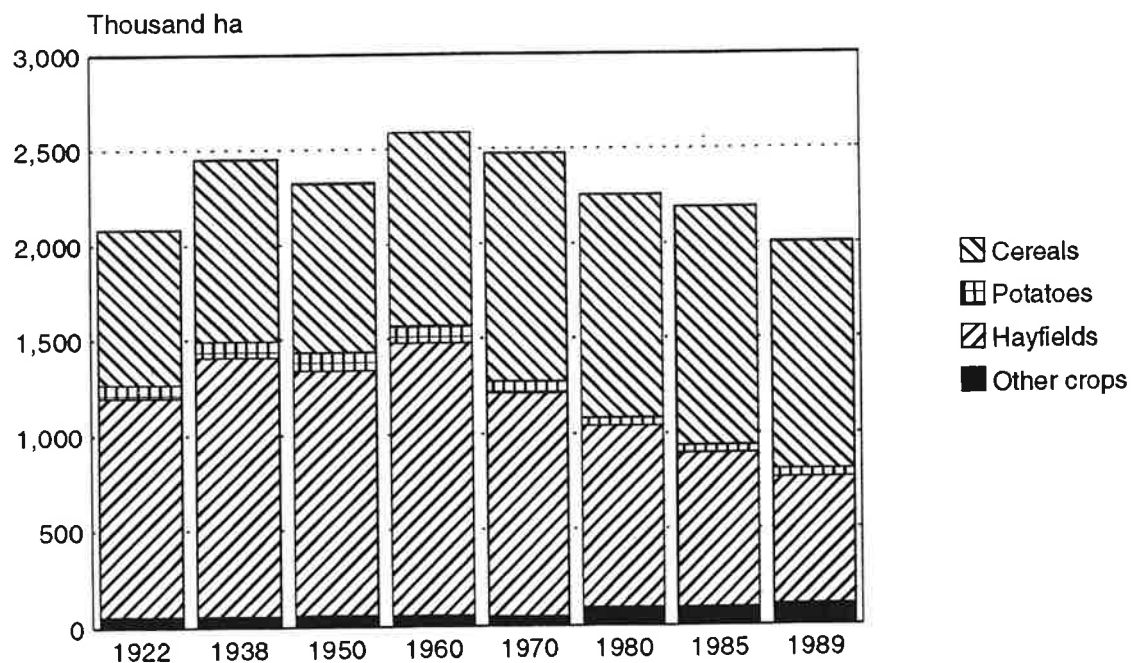
At the same time management conditions obstructing the development were applied to large-scale production: directive centralized planning, restrictions on using the finances, rigid price and vague tax policies, etc.. Overestimation of the possibilities for regional division of labour and specialization in the Soviet Union also had an unfavourable effect on the Estonian agriculture. As a result of that a one-sided and irrational production structure was formed - the development of plant-growing was checked, while the livestock product production increased primarily on the basis of imported concentrated fodder.

The development of agriculture is in general lines characterized by the increase in the total output by 20-year periods. In 1920 - 1940 the total output increased by 52 % as compared with the period 1909 - 1913, 40 % of this in crop-production and 69 % in animal production. In the next period, from 1945 to 1965, the total agricultural output increased by 32 % as compared with 1940, marked by increases in crop- and animal production of 28 % and 37 % respectively. During the next 20 years, from 1965 to 1985, the increase was 57 %; crop- and animal production rose 32 % and 71 % respectively. Thus, the most favourable development period during the last 70 years was in 1920 - 1940 when the crop-production increased considerably and animal production, which had been extensive still at the beginning of the century, had become an intensive branch of production. Production outputs of the later periods were rather modest.

In 1944 233.4 thousand hectares or 4.9 %, among this 3.2 % of cultivable land, of the Estonian territory was cut off and joined to the Russian SFSR. It must be taken into consideration when comparing the volumes of production. The area of the intensively used agricultural land is practically the same as in the 1930's, though it had considerably decreased in the 1940's and 1950's. The area of cultivable land was 1173 thousand hectares in 1938, and 1192 thousand in 1989. Of this the area of arable land has somewhat decreased and that of cultivated

Figure 8. Structure of harvested areas in Estonia

Sources: See Table 5.

Figure 9. Structure of harvested areas in Finland

Sources: See Table 5.

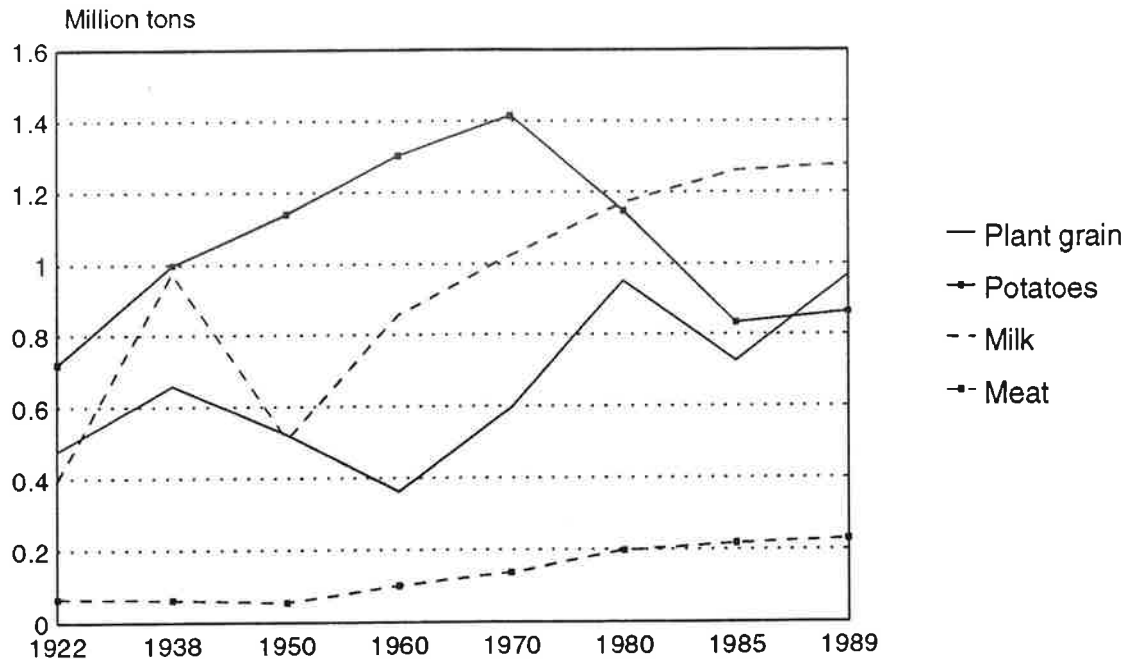
pastures increased.

The acreage under cultivation has also been restored on the level of late 1930's, but considerable changes have taken place in its structure. The share of grain was 61.6 % in 1938, but only 35.9 % in 1960, and by 1989 increased again to 42.8 %. But the share of various feed crops has increased from a quarter to a half of the total acreage under cultivation. Of this the share of perennial field grass increased from 21 % in 1938 to 45.3 % in 1989. The acreage for potatoes was 8.8 % in 1938, 13.1 % in 1960, but only 5.6 % in 1989 (see Table 5).

Table 5. Harvested areas of main crops in 1922-1989, 1000 ha

ESTONIA	Cereals	Potatoes	Hay fields	Other crops	Total
1922	539.7	75.5	153.5	34.9	803.6
1938	548.0	78.9	226.3	36.9	889.2
1950	443.9	96.6	147.9	124.1	812.5
1960	269.2	99.5	263.7	129.3	761.7
1970	340.0	79.5	273.6	105.2	798.3
1980	444.3	72.3	362.4	77.9	956.8
1985	403.9	60.9	404.8	61.6	931.2
1989	395.7	52.1	419.1	59.0	925.9
FINLAND					
1922	817.7	67.4	1145.7	55.4	2086.2
1938	959.6	85.4	1352.2	55.5	2452.7
1950	889.2	95.8	1279.2	59.4	2323.6
1960	1018.8	86.4	1423.8	56.2	2585.4
1970	1196.9	60.1	1170.7	46.9	2474.6
1980	1170.9	40.9	951.4	91.3	2254.5
1985	1254.1	39.4	804.1	92.9	2190.5
1989	1193.8	44.8	656.9	107.4	2002.9

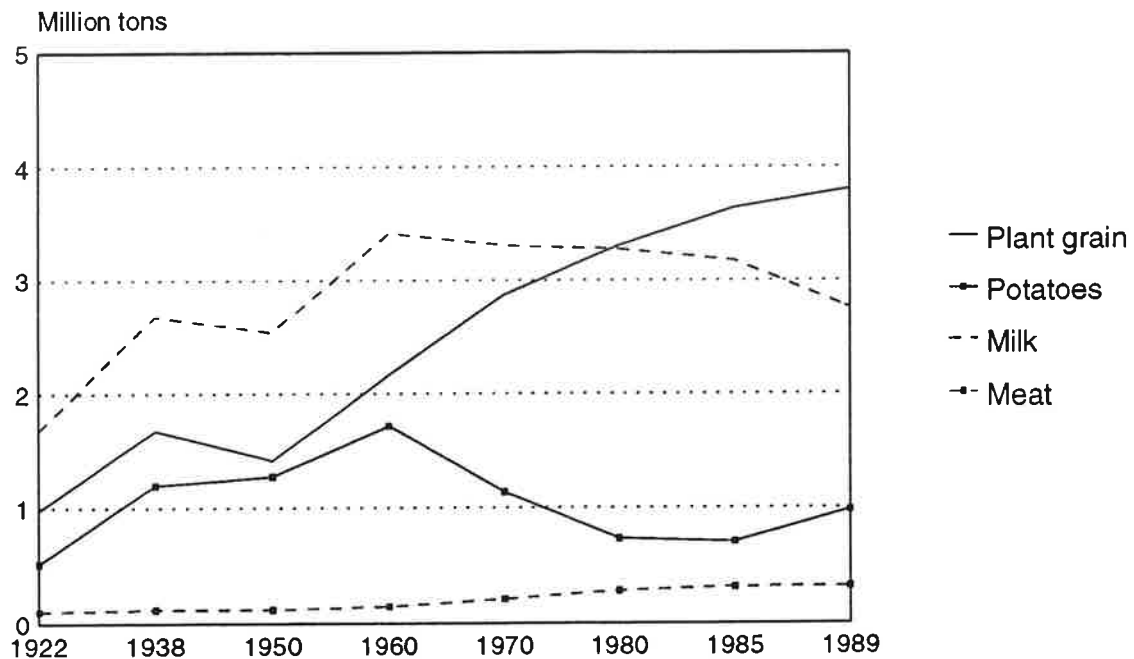
Sources: Eesti 1920-1930, Arvuline ülevaade, Tallinn, 1931, p. 88; XVIII Eesti põllumajanduses, Statistiline aastaraamat 1939, Tallinn, 1940, pp. 22 - 23; Eesti rahvamajandus 1970 aastal, Tallinn, 1971, p. 153; Eesti statistika aastaraamat 1990, Tallinn, 1991, p. 93. Suomen tilastollinen vuosikirja 1925. Helsinki, 1925, p. 74; Suomen tilastollinen vuosikirja 1980. Helsinki, 1981, p. 86; Suomen tilastollinen vuosikirja 1990. Helsinki, 1990, p. 108.

Figure 10. Main products of Estonian agriculture

Sources: See Table 6.

The changes in the production volumes of individual agricultural produce are connected with the changes in the structure of acreage under cultivation. The total yield of the main crops, grain and potatoes, increased considerably in the late 1930's, but decreased again (especially grain) in the post-war period (Table 6). Later on the grain production increased, but still has not reached the level of the neighbouring countries in yielding capacity. The yield of grain per hectare was 940 kg in 1922 and 1220 kg in 1938, and only 600 - 700 kg in the 1950's. In 1965 the yield of grain was 1780 kg per hectare and the level of 2000 kg was reached only in late the 1970's. In 1989 the yield per hectare was 2440 kg.

The acreage and production of potatoes were influenced by the difficult war and post-war years when the potato was one of the staple foodstuffs. It was grown extensively in part-time farms and the total acreage of potatoes increased steadily up to 1960. Henceforth it started to diminish. The decrease was especially steep in the 1980's when difficulties cropped up in the mechanizing of production, plant diseases spread and the use of potatoes for fodder was restricted. The yields of potato were 12800 kg per hectare in 1938, 13100 kg in 1960, 17800 kg in 1970 and 16600 kg in 1989.

Figure 11. Main products of Finnish agriculture

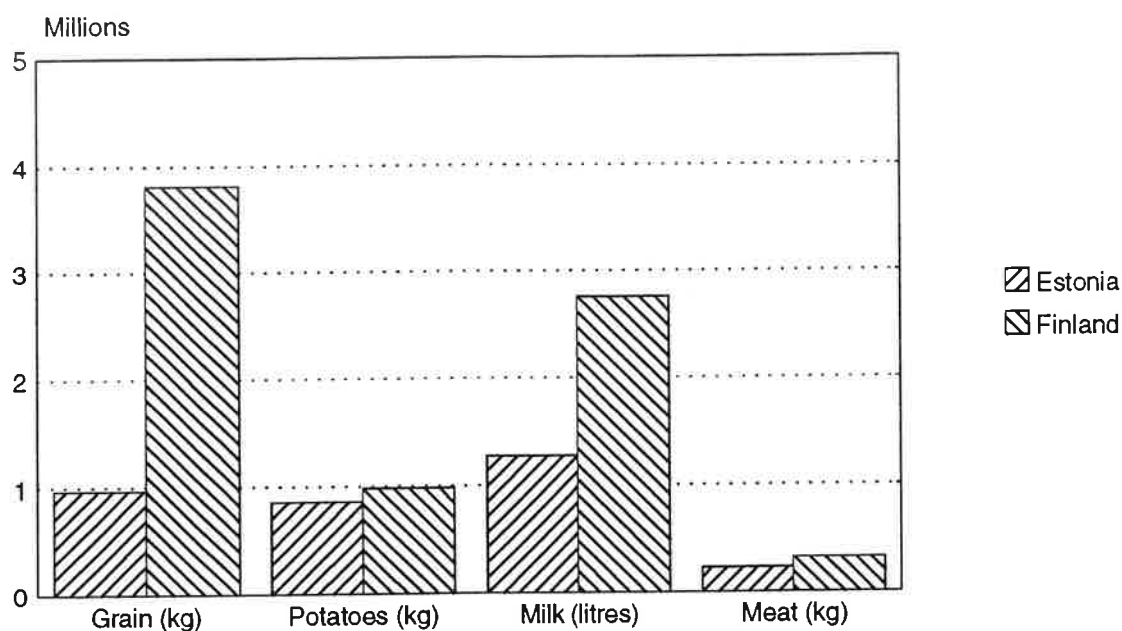
Sources: See Table 6.

The quantities of hay increased considerably in 1920 - 1940. Hay was the main fodder in animal husbandry. 676 thousand tons of field grass and 954 thousand tons of meadow hay, making 1630 thousand tons in all, were gathered in 1938. With the transition to the large-scale production in the 1950's the gathering of meadow hay decreased, yields of field grass were small. The yield of field grass per hectare was 3630 kg in 1938, during the following decades it remained within the range of 2000 - 2500 kg and only in the last few years has it increased to 4690 kg of hay per hectare in 1989. The use of green fodder for making silage has, of course, considerably increased, but the production of green fodder as a whole is insufficient.

In Finland changes in the acreage under cultivation and its structure have been more or less like in Estonia. The acreage under cultivation was 2453 thousand hectares in 1938. It was smaller in the post-war years mainly due to the area lost in the war, but was restored by 1970. From then on, as the effect of agrarian policy measures limited the volume of production, it has decreased and was 2003 thousand hectares in 1989.

The share of grain in the structure of sown acreage of Finland was 39.2 % in

Figure 12. Main products of Estonian and Finnish agriculture in 1989



Sources: See Table 6.

1938, which is smaller than in Estonia. The share of grain increased gradually in the post-war years and reached 48.4 % in 1970 and 59.6 % in 1985 (Table 5). The share of acreage used for fodder grain (barley, oats) has steadily increased, while that of cereals, especially rye, decreased.

The acreage of potatoes made 3.5 % in Finland in 1938 and 4.1 % in 1950, but has decreased to 2.2 % by now. The structure of sown acreage has changed mainly on account of the decrease in the share of field grass, which made up 55.1 % in 1938 and remained on this level up to 1960. Its share in 1989 was only 32.8 %. At the same time the use of field grass for sown hay has considerably decreased and making of silage increased. Unlike in Estonia the cultivation of sugar beets has gradually increased in Finland. Its share was 0.2 % in 1938, but is 1.4 % now. The cultivation of turnips has rapidly expanded as well.

The total yield of grain has rapidly increased in conformity with the changes in the structure of sown acreage. In 1938 the yield of grain was 1675 thousand tons and the yield per hectare 1746 kg. In the post-war years both the yield of grain and yield per hectare decreased, but by 1960 the level of 2000 kg per hectare

Table 6. Main products of Estonian and Finnish agriculture

ESTONIA	Plant grain total mill.kg	Potatoes mill.kg	Milk mill.l	Total meat production mill.kg
1922	477.5	718.5	395.2	65.0
1938	658.3	997.6	975.5	60.8
1950	522.2	1139.6	508.0	54.1
1960	362.7	1302.6	856.6	100.3
1970	594.8	1414.3	1024.6	136.0
1980	952.1	1146.4	1169.7	196.4
1985	725.6	832.9	1260.1	216.5
1989	967.4	864.2	1277.2	228.9
FINLAND				
1922	982.4	525.1	1682.0	104.0
1938	1675.3	1197.9	2670.0	121.0
1950	1415.1	1273.4	2535.0	120.0
1960	2163.2	1716.7	3420.0	147.0
1970	2868.5	1135.9	3310.0	213.0
1980	3305.9	736.2	3275.0	283.0
1985	3642.0	707.7	3174.0	319.0
1989	3808.7	81.3	2753.0	322.0

Sources: XVIII Eesti põllumajanduses, Statistiline aastaraamat 1939, Tallinn, 1940, pp. 22 - 23, 35; Eesti 1920 - 1930, Arvuline ülevaade, Tallinn, 1931, p. 88, 94; Eesti rahvamajandus 1970 aastal, Tallinn, 1971, p. 160, 176; Eesti statistika aastaraamat 1990. Tallinn, 1991, p. 97, 124; Suomen tilastollinen vuosikirja 1980, Helsinki, 1981, p. 86, 430; Suomen tilastollinen vuosikirja 1990, Helsinki, 1990, p. 108, 500; Viita, Pentti: Maataloustuotanto Suomessa 1860 - 1960, Suomen Pankin Taloudellisen tutkimuslaitoksen julkaisuja, Kasvututkimuksia I, Helsinki 1965, pp. 59 - 61.

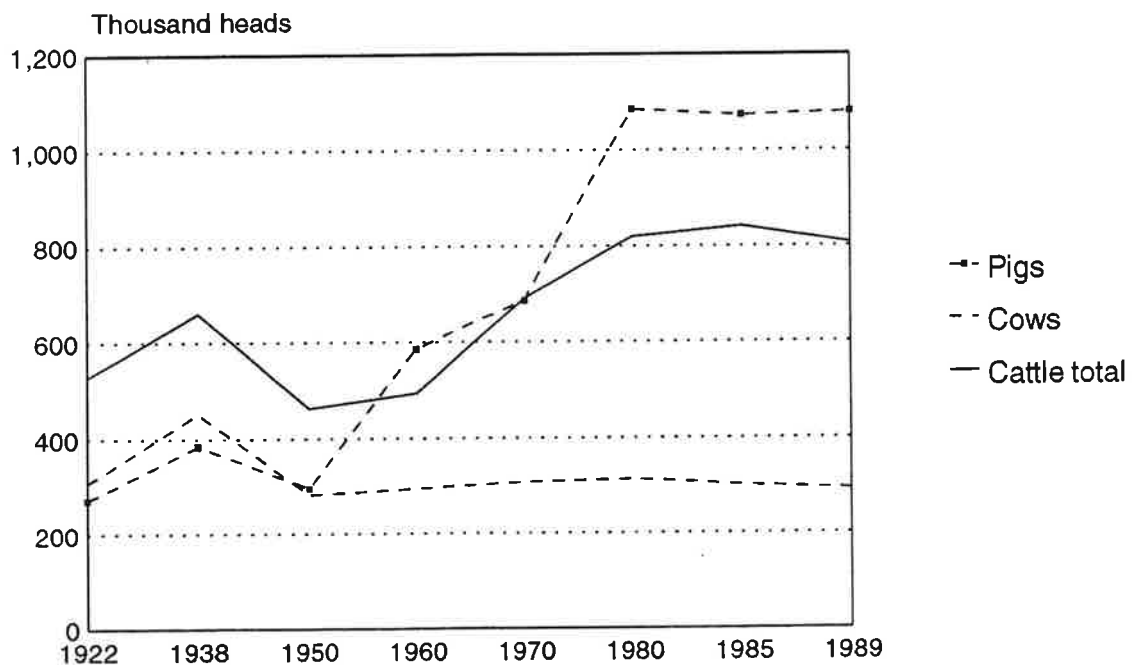
and total yield of 2163 thousand tons was restored. In 1989 the yield of grain was 3809 thousand tons, the average yield per hectare being 3190 kg. The yields per hectare considerably exceed those of Estonia, but do not reach the level of Western European countries because of natural conditions.

The yield of potatoes in Finland was 14032 kg per hectare in 1938, while later it has fluctuated between 14000 - 20000 kg. The total yield of potatoes increased considerably, like in Estonia, in the post-war years, but has dropped due to the

decrease in the acreage used for potatoes by now. The yield of field grass per hectare was 3438 kg in 1938 and remained more or less on the same level up to 1975. During the last decade the yield per hectare has been 3800 - 4200 kg, totalling 4240 kg in 1989.

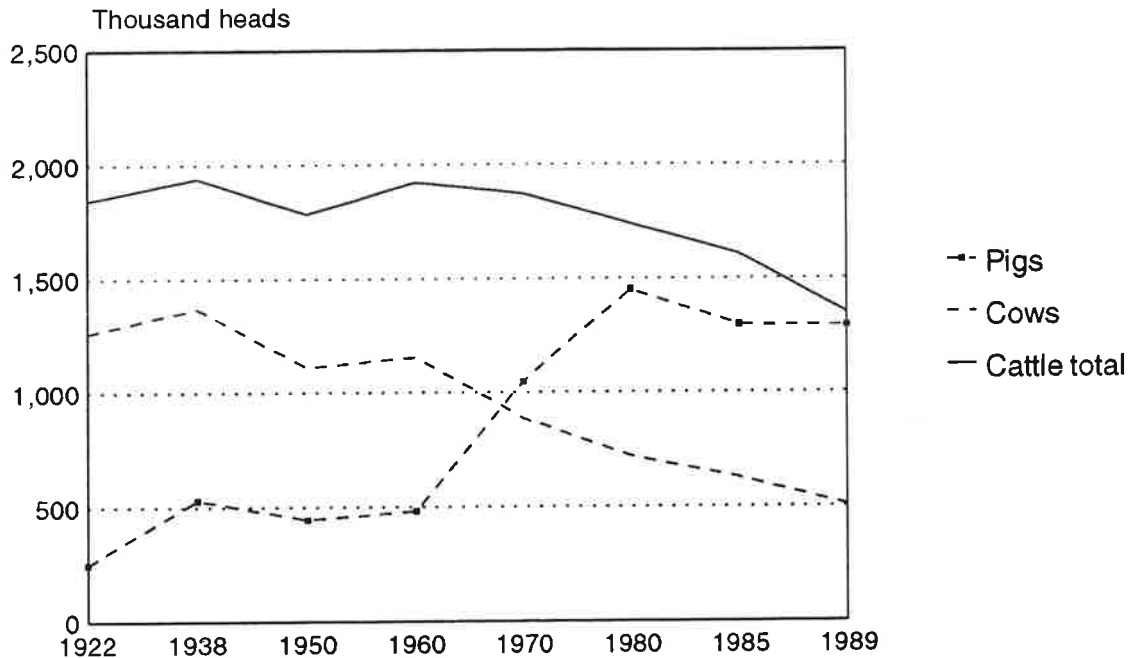
Natural conditions in Finland favour the development of animal husbandry. Changes in the production level taken place during the last decades have been largely due to the agrarian policies. These policies have not always succeeded in taking the market situation into consideration, which has resulted in over-production problems. Even measures to cut the over-production have often been ineffective.

Figure 13. Livestock in Estonia



Sources: See Table 7.

The number of livestock has considerably changed. In 1938 there were 1939.6 thousand cattle in Finland, including 1367.8 thousand cows, which is 70.5 % of the total number of cattle. The number of livestock decreased during the war but was quickly restored. In 1960 there were 1922 thousand cattle, including 1153.1 thousand cows (60 %). Later on the number of cattle, especially that of cows, decreased gradually. In 1989 there were 1346.6 thousand cattle, among this 506.6 thousand cows (37.6 %) (Table 7). This is due to the decrease in demand

Figure 14. Livestock in Finland

Sources: See Table 7.

for dairy products as well as the tendency towards the production of beef. Due to the rise in the milk yield per cow the total yield of milk did not decrease so fast. The milk yield of cows under control was 2847 kg in 1938, 3792 kg in 1960, 4518 kg in 1970, 5580 kg in 1980, and 5919 kg in 1988.

The total number of pigs was 530.7 thousand in 1938. With some in-between falls it persisted on this level up to the mid-1960's. After that the pig-breeding was essentially increased. In 1970 there were 1046.5 thousand pigs and in 1980 1450.7 thousand. During the last decade the production volume decreased again and in 1989 the total number of pigs was 1290.7 thousand only.

The production volumes of main animal products have also fluctuated according to the changes in the market situation and agricultural policies. Finland produced 2670 thousand tons of milk and 121 thousand tons of meat in 1938, and 3724 thousand and 154 thousand respectively as an average of 1961 - 1965. Later on the production decreased. The milk production was only 3275 thousand tons in 1980 and 2753 thousand tons in 1988. But the production of meat increased: it was 283 thousand tons in 1980 and 340 thousand tons in 1987. During the last couple of years the production of meat has also decreased.

Table 7. Livestock in 1922 - 1989, thousands

ESTONIA	Cattle total	Cows	Pigs	Sheep	Horses
1922	527.4	307.3	272.3	744.9	198.8
1938	660.9	451.7	384.6	649.7	219.0
1950	462.0	283.6	297.0	274.4	163.3
1960	493.8	295.9	587.1	266.9	66.0
1970	692.4	308.7	688.0	165.3	31.0
1980	818.7	314.1	1085.5	153.8	13.8
1985	840.2	302.7	1073.6	147.7	10.7
1989	806.1	293.9	1080.4	140.2	9.6
FINLAND					
1922	1843.5	1259.6	247.9	1300.5	356.7
1938	1939.6	1367.8	530.7	951.1	390.3
1950	1782.5	1110.5	445.6	1219.9	408.9
1960	1921.5	1153.1	482.8	341.3	250.9
1970	1872.9	889.1	1046.5	188.6	89.3
1980	1738.1	719.5	1450.7	106.1	22.4
1985	1608.3	627.7	1295.2	111.7	18.8
1989	1346.6	506.6	1290.7	108.4	14.9

Sources: XVIII Eesti põllumajanduses, Statistiline aastaraamat 1939, Tallinn, 1940, p. 31; Eesti 1920-1930, Arvuline ülevaade, Tallinn, 1931, p. 88, 94; Eesti rahvamajandus 1970 aastal, Tallinn, 1971, p. 176; Eesti statistika aastaraamat 1990, Tallinn, 1991, p.119; Suomen tilastollinen vuosikirja 1925. Helsinki, 1925, p. 80; Suomen tilastollinen vuosikirja 1980. Helsinki, 1981, p. 88; Suomen tilastollinen vuosikirja 1990. Helsinki, 1990, p. 110.

In Estonia the development of livestock production, being based on the growth of crop production, was quite favourable in 1920 - 1940. The number of all kinds of livestock, and especially the production of milk increased. It was 395 million litres in 1922, but in 1938 already 976 million litres or more than twice as much. An average yield of milk per cow was 1106 kg in 1922, and 2185 kg in 1937/38. In herds under control the average yield was 2893 kg. The production of meat persisted on more or less the same level, fluctuating between 62-65 thousand tons. A noteworthy quantity of bacon was exported.

During the last 50 years the Estonian animal production has to a great extent

developed on account of imported concentrated fodder, since the development of the volume of crop production was modest here. The production structure was essentially changed: taking into consideration the needs of the Soviet Union the production of meat was increased in a forced pace and the relative importance of milk production decreased. The production of meat has increased over 3 times as compared with the 1930's, but that of milk only 32 % (Table 6). The introduction of industrial production in agriculture has most influenced the production of eggs and poultry.

Taking into consideration the natural conditions, breeding potential of cattle and production experience as well as changes in the purchasing possibilities of concentrated fodder the share of meat production should decrease and milk production remain the main branch in the future in Estonia.

2.2 Industry

Industry is the most important branch of the economy in Estonia. In 1989 32.9 % of the employed persons and 44 % of productive fixed assets were occupied in industry. Corresponding shares in Finnish economy were 22.0 % and 15.7 %. In Estonia 60.2 % of total output (intermediate product included) and 43.7 % of NMP were created in this branch. In Finland the share of gross output was 37.1 % and the share of value added 26.3 %. Industry's share in the profit of the Estonian economy was 44.7 %, in Finland the share of the operating surplus was 31.9 % of that of the whole economy.

According to the Soviet Union statistics industry includes also power engineering, the fuel-producing industry (in Estonia oil-shale mining and providing peat for fuel), fishing and fish-farming, and quarrying of raw materials (clay, sand, stone, etc.) for the building materials industry. In the Finnish figures above, fishing and fish-farming are excluded, but this has only a negligible effect on the comparison. In order to compare Estonian and Finnish manufacturing industries we have subtracted the above-mentioned industries from the data of official statistics in the following study. Due to the imperfection of the existing statistics minor mistakes are possible. The structure of the Estonian and Finnish manufacturing industry by the value of total production is described in Table 8.

It would be proper to exclude also the manufacturing with the features of services (repairs of cars, radios, TV sets, household machines, etc.) but this has not been done in the present paper.

The comparison of the Estonian industry with the Finnish industry is also obstructed by the fact that several big enterprises of the munitions industry ('Dvigatel', 'Baltijets', Chemistry-Mechanics Integrated Plant of Sillamäe, etc.) have been left out of the statistical reports. Obtaining data on these enterprises has been extremely complicated or quite impossible up to 1991.

The dynamics of the size of personnel of Finnish and Estonian manufacturing industry in 1922 - 1989 has been presented in Figure 15. The number of people employed in the Estonian and Finnish manufacturing industry by branch in 1989 is given in the Table 9. Table 10 presents the amount of industrial employees from 1922 to 1989. The volumes of industrial production of Finland and Estonia have been presented in Figure 16 and in Table 11.

The volume of production of manufacturing industry has been recalculated into indices (1926 = 100). As sufficiently accurate information about the exchange rate between the Estonian kroon and the Soviet Union rouble between the years 1938 and 1950 was not available for this study (the rate of kroon and chervonets

Table 8. Total value of output of Estonian and Finnish industries in 1989

Industry	Estonia		Finland	
	Output in Wholesale Prices		Value added	
	mill SUR	%	mill FIM	%
Food industry	1605	26.4	11487	11.2
Textile, wearing apparel and leather industries	1519	25.0	4335	4.2
Forest, wood, pulp and paper industries	591	9.7	20384	19.9
Chemical industry	522	8.5	11199	10.9
Building materials industry	309	5.1	5173	5.1
Metal and engineering industry	1103	18.1	38777	37.9
Other industries	434	7.1	10964	10.7
TOTAL INDUSTRY	6082	100.0	102319	100.0

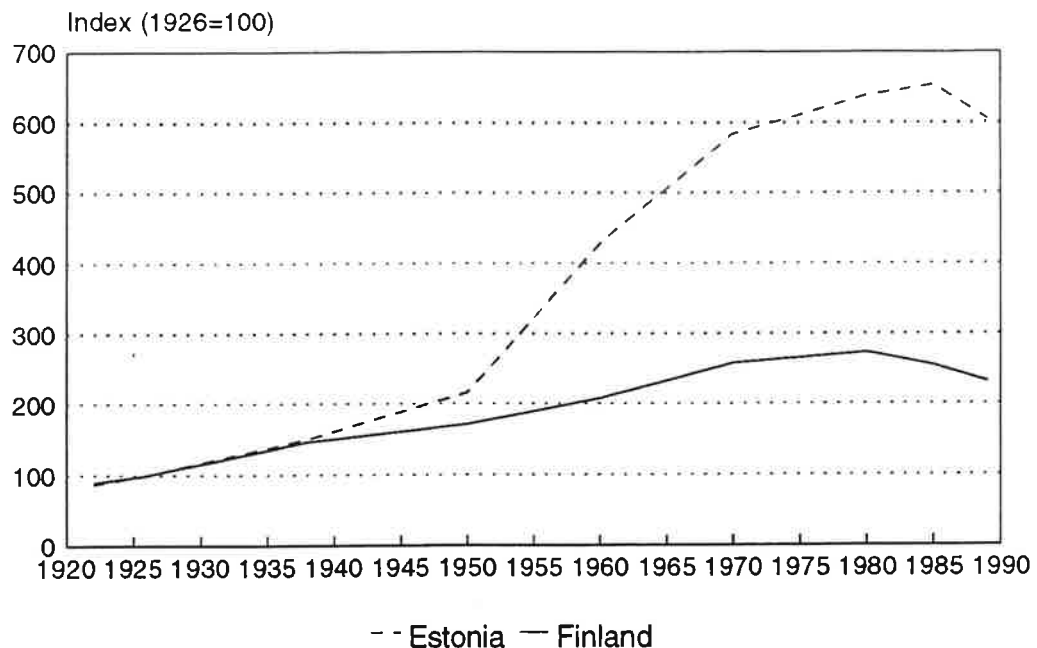
Sources: Estonian data: Calculated on the basis of data from Estonian Statistics Department. Finnish data: National Accounts, Central Statistical Office of Finland.

Table 9. Number of People Employed in Estonian and Finnish industries in 1989

Industry	Estonia		Finland	
	persons	%	persons	%
Food industry	30365	13.7	57400	12.0
Textile, wearing apparel and leather industries	44222	19.9	38600	8.1
Forest, wood, pulp and paper industries	30895	13.9	78400	16.4
Chemical industry	16198	7.3	38100	8.0
Building materials industry	16204	7.3	21000	4.4
Metal and engineering industry	68711	30.9	183800	38.5
Other industries	15843	7.1	60000	12.6
TOTAL INDUSTRY	222438	100.0	477300	100.0

Sources: Eesti Statistika Aastaraamat 1990, Tallinn; Finnish National Accounts, Central Statistical Office of Finland, Helsinki.

Figure 15. Size of production personnel in manufacturing in Estonia and in Finland in 1922 - 1989



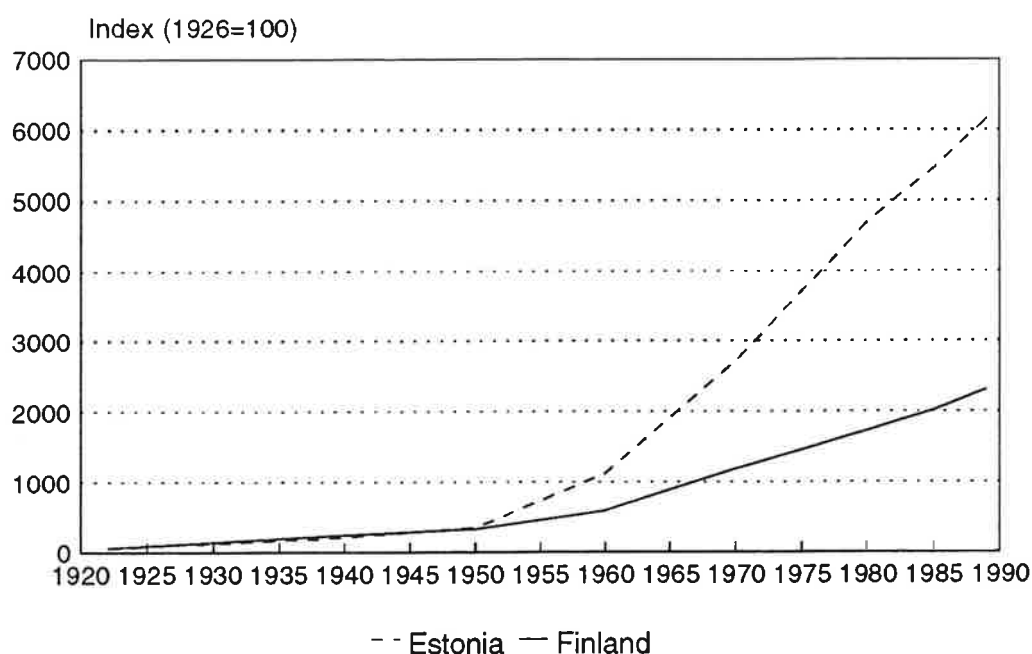
Sources: See Table 10.

Table 10. Labour force in Estonian and Finnish industry

Year	Number of employed people		Index	
	Estonia	Finland	Estonia	Finland
1922	32000	184400	87.7	89.4
1926	36500	206200	100.0	100.0
1938	54674	301100	149.8	146.0
1950	78834	353400	216.0	171.4
1960	156224	427500	428.0	207.3
1970	212811	531800	583.0	257.9
1980	232692	562700	637.5	272.9
1985	238334	525100	653.0	254.7
1989	222438	477300	609.4	231.5

Sources: Eesti statistika 1936, Riigi Statistika Keskbüroo, Tallinn, 1936, pp. 84 - 100; Eesti statistika 1938, Riigi Statistika Keskbüroo, Tallinn, 1938, pp. 60, 212, 420, 596; Eesti 1920 - 1930, Arvuline ülevaade, Riigi Statistika Keskbüroo, Tallinn, 1931, pp. 136 - 156; Eesti Statistika Aastaraamat 1950, 1960, ..., 1990, Tallinn; Suomen taloushistoria, osa 3, Finnish National Accounts.

Figure 16. The volumes of industrial production of Estonia and Finland in 1922 - 1989



Sources: See Table 11.

against the US dollar was 2.4567:1 in 1933; in 1940 the rouble was exchanged at the rate of 1:1) they have been taken as equivalent by their exchange rates in the present paper. The mistake due to the approximate exchange rate and different methods for estimating the production volumes might disturb the comparison of Estonian manufacturing before and after the year 1940. After 1950 the characterization of the general development differences of Estonian and Finnish manufacturing industries is more reliable, even though there might be some effect of price changes in the dynamics of the volume of the Estonian manufacturing industry. This would result in too rapid growth in the volume of the Estonian manufacturing industry, especially during the last few years of the period under examination.

It appears from Figures 15 and 16 that the most obvious conclusion when comparing the development of Finnish and Estonian industries is that the post-war development of the Estonian industry has been much faster than that of Finnish industry. The development of labour resources lends support to this view. Therefore it remains unclear why the standard of living in Estonia is much lower than in Finland.

Table 11. Volume of production of Estonian and Finnish industry

Year	Volume of production	Index	
	Estonia	Estonia	Finland
1922	57	58	69
1926	99	100	100
1938	191	194	228
1950	342	346	327
1960	1107	1120	591
1970	2683	2716	1126
1980	4648	4705	1735
1985	5393	5458	2019
1989	6082	6156	2304

Note: 1922 and 1938 Gross Value of Industrial Production, in 1950 - 1989 in wholesale prices. The volumes of production for 1922 - 1938 are in million Estonian kroons, for 1950-1989 in million roubles. The Estonian data of 1922 and 1926 covers large scale production only. The Estonian data for 1938 concerns the year 1936.

Sources: Estonia: See Table 10; Finland: R. Hjerppe, Suomen Talous 1860 - 1985 and Finnish National Accounts.

One reason might be that the Finnish and Estonian statistics are not comparable and that on the basis of the official statistics of Estonia no correct conclusions can be made. This could be due to several problems in Estonian statistics. It is argued that during the socialist era the statistics were used for propagandistic purposes and were for this reason tendentious. The problem of appropriate accounting for price changes has already been mentioned. This price problem is a common one in the statistics of the former Soviet Union (see Ruoho & Havukainen 1991 pp. 59 - 76). In addition to these problems Estonian statistics might also have the shortcoming of multiple accounting. The used intermediate products are included in the value of output. If the industry diversifies and the use of intermediate products increases over time this, is reflected in the production statistics as excessive growth.

Since in the conditions of the socialist planned economy Estonian industrial enterprises had to fulfill large development plans to a large extent by means of concealed price rises and multiple accounting the official statistics did not correspond to the reality very well. It might even be said that industrial enterprises did not produce products as much as economic indicators. While the

rapid growth of the Estonian industry up to 1975 was due to the large capital investments, the further growth of production can be explained mainly by the change in prices.

The physical output of Estonian industry is also sizeable. For example, in 1989 Estonia produced

- 17.6 mill.kWh of electric energy (11.188 MWh per capita in 1988);
- 215.3 thousand electric motors with the total capacity of 1509 MWh;
- 214 thousand tons of mineral fertilizers (156 kg per capita in 1988);
- 40.8 thousand tons of synthetical washing powder;
- 1129 thousand tons of cement (762 kg per capita in 1988);
- 1892 thousand sqm of window glass;
- 187.5 million sqm of cotton cloth (122 sqm per capita in 1988).

The growth of output of some industrial goods is given in the Table 12 for Estonia and in Table 13 for Finland. Those and many other figures for Estonia not mentioned in this paper are really high as compared with the most developed industrial countries of the world.

Although we take into consideration all the problems mentioned above, the question of a lower standard of living in Estonia remains unanswered. When we look at the employment statistics and the statistics on physical quantities of goods produced, we must draw the conclusion that the reason for the lower standard of living in Estonia does not lie in the development of the volume of Estonian manufacturing industry.

One reason might be that the share of the means of production (A-group) was 56.2 % and the share of consumer goods (B-group) 43.8 % in the industrial production of Estonia in 1989. A large part of the production is used for the so-called intra-industrial circulation and the outcome is relatively small. Though in Finland the share of consumer goods in industrial production was only about 30 %. The rest of the goods consumed are purchased abroad.

The waste and uneconomic methods used in Estonian manufacturing can be part of the explanation, but their effect should also be visible in the volume of production, except for the effects on the quality of the production.

Table 12. The production of selected manufactured goods in Estonia in 1922 - 1989

Product	Unit	1922	1938	1950	1960	1970	1980	1985	1989
Oil shale	thous.t	42	1473	3543	9246	18902	31334	26406	23331
Electric energy	GWh	8	155	435	1950	11575	18898	17827	17611
Bricks	mill.pcs.	9	14	109	310	337	267	255	253
Cement	thous.t	35	83	91	101	964	1213	1094	1129
Window glass	thous.m ²		792	470	1832	1932	1987	2297	1892
Pulp	thous.t	7	90	45	95	118	87	104	92
Paper	thous.t	26	19	37	87	105	93	90	92
Plywood	thous.m ³		11	11	23	33	30	32	31
Cotton textile	mill.m ²	19	20	21	109	193	178	198	188

Sources: Eesti statistika 1936, Riigi Statistika Keskbüroo, Tallinn, 1936, pp. 84 - 100; Eesti statistika 1938, Riigi Statistika Keskbüroo, Tallinn, 1938, pp. 60, 212, 420, 596; Eesti 1920 - 1930, Arvuline ülevaade, Riigi Statistika Keskbüroo, Tallinn, 1931, pp. 136 - 156; Eesti Statistika Aastaraamat 1950, 1960, ..., 1990, Tallinn; Eesti arvudes 1989, Tallinn, 1990, pp. 60 - 72.

Table 13. The Production of selected manufactured goods in Finland in 1922 - 1989

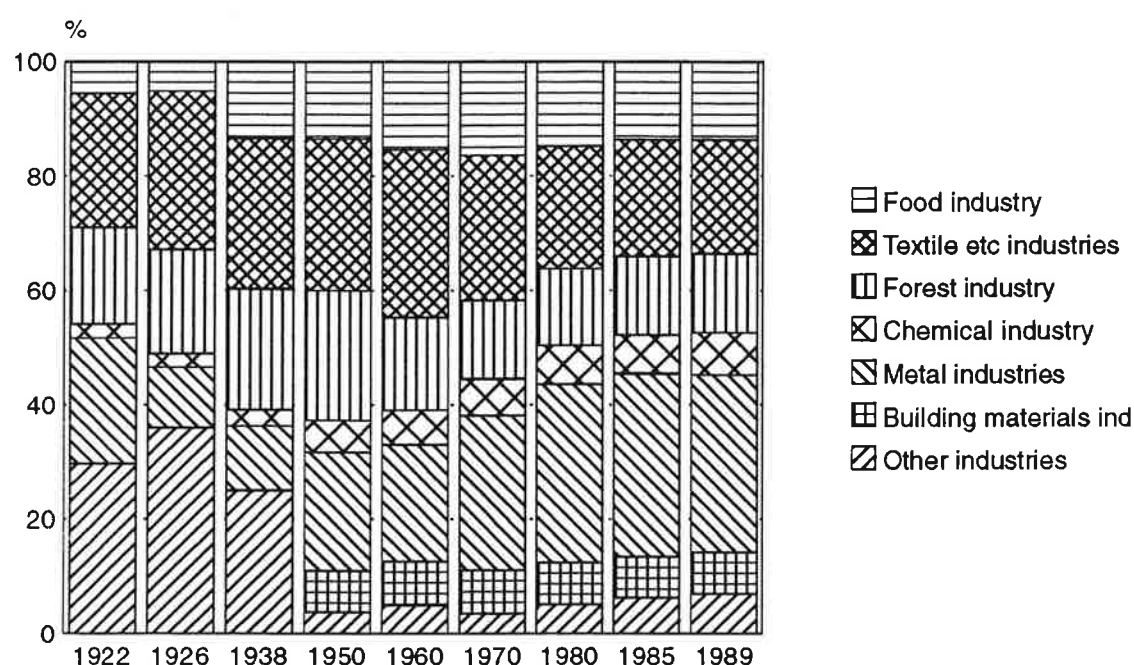
Product	Unit	1922	1938	1950	1960	1970	1980	1985	1989
Crude steel	thous.t	14	73	97	246	1169	2509	2518	2921
Electric energy	GWh	257	2974	4176	8628	21185	38655	48629	53391
Bricks	mill.pcs	58	144	184	128	126	135	144	137
Cement	thous.t	106	500	473	1257	1875	1787	1695	1693
Window glass	thous.m ²		1097	2553	6441	9984	10771	10789	7520
Pulp	thous.t	525	2110	1912	3693	6471	7440	8031	9068
Paper	thous.t	213	562	629	1432	2889	3887	5339	6500
Sawn wood	thous.m ³	3364	4818	4792	6569	6225	9477	6990	7763
Cotton textile	tons	2177	8710	7154	13535	16806	15122	13043	8310

Note: Some figures concerning the year 1989 are uncertain estimates due to classification change in Finnish Industrial Statistics.

Sources: Statistical Yearbook of Finland, Central Statistical Office of Finland; Yearbook of Industrial Statistics, Central Statistical Office of Finland; Federation of Finnish Metal, Engineering and Electrotechnical Industries.

One possible explanation is the structure of the Estonian manufacturing industry. It was not designed to promote the welfare of Estonia, but rather the goals were set on the all-Union level. With large export and import shares and an administrative price setting system the benefits of Estonian industrial production could be easily transported to other, probably more backward areas of the Soviet Union. The result would have been that only a part of the effect of the Estonian industrial production would have been seen in the standard of living in Estonia.

Figure 17. Employment structure in Estonian industry

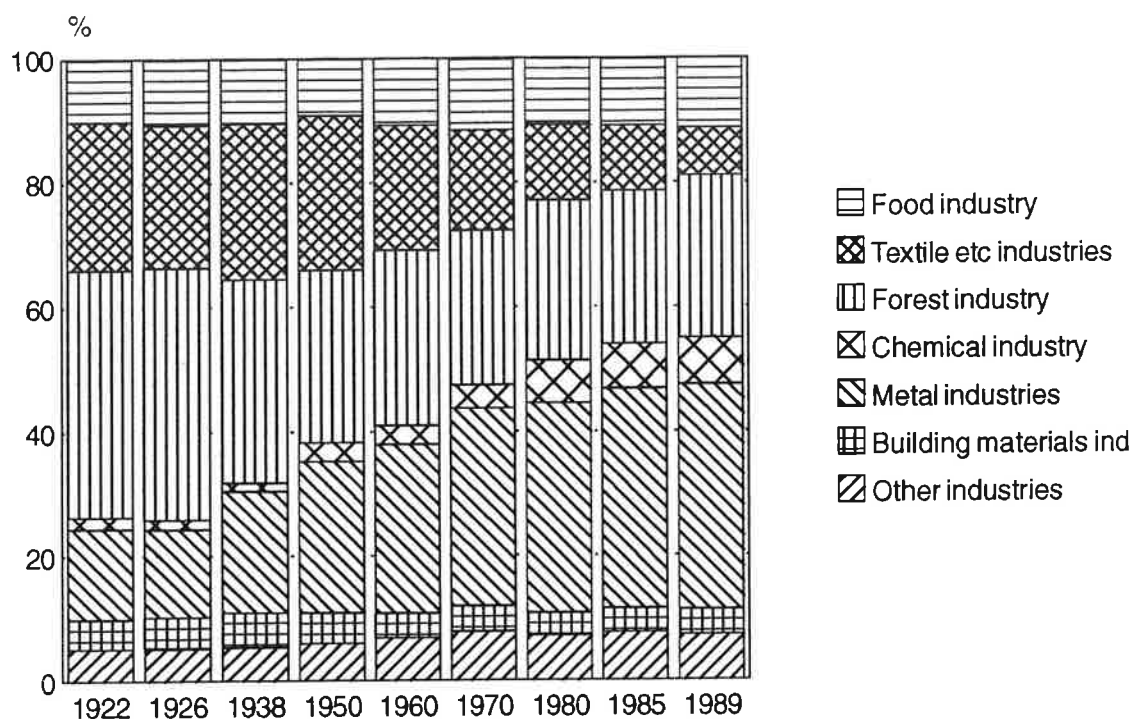


Sources: Eesti 1920 - 1930, Eesti statistika, Statistika Aastaraamat.

It seems that the Finnish and Estonian industry can be best compared on the basis of indirect indicators, expert opinions or a few more subjective indicators. Aggregate information on the value and volume of industrial production is of limited use. One possible way to compare the structure of industry in the two countries is to use labour force data as in Figures 17 and 18, though changes and differences in classifications seem to be a nuisance even in this approach.

Industry can be characterized also by the supply of electricity. Estonia produced 11188 kWh of electric energy per capita in 1988, Finland produced a bit less - 10846 kWh. But Estonia used only 58.2 % of its electricity itself. The use of electric energy in manufacturing was 30200 kWh per worker. In Finland the

Figure 18. Employment structure in Finnish industry



Sources: Hjerpe (1988), Finnish National Accounts.

corresponding figure was 97900, which suggests that the technical level of industry and thus also productivity is much higher in Finland.

This opinion is confirmed by the fact that the productive fixed assets (see Table 14) in Estonian industry have rapidly grown out of date. Such a tendency is quite logical, since a relatively small number of outdated productive fixed assets are replaced by new ones. The share of new productive fixed assets (percentage of the total cost of fixed assets by the end of the period) in the Estonian industry was 27.8 % in 1976 - 1980, 26.3 % in 1981 - 1985 and 18.2 % in 1986 - 1989. In Finland the fixed capital stock has grown every year except in 1978 during the recession of the late 1970's. In Estonia the share of outdated productive fixed assets fallen out of production was 7.2 % in 1976 - 1980, 7.6 % in 1981 - 1985, 6.9 % in 1986 - 1989. It is also characteristic that in 1989 more than a third of the workers did manual work.

In the paper industry which in Estonia has traditions in the remote past, the superiority of the Finnish industry is especially obvious. By the per capita output

Table 14. Productive fixed assets by industries in Estonia and Finland in 1989

Industry	Estonia		Finland	
	Productive Fixed Assets		Net Fixed Capital Stock	
	mill SUR	%	mill FIM	%
Food industry	713.6	18.5	22.8	12.9
Textile, wearing apparel and leather industries	450.0	11.6	6.2	3.5
Forest, wood, pulp and paper industries	430.2	11.1	56.8	32.3
Chemical industry	559.9	14.5	25.8	14.7
Building materials industry	394.2	10.2	6.8	3.9
Metal and engineering industry	997.4	25.8	46.4	26.3
Other industries	320.9	8.3	11.1	6.4
TOTAL INDUSTRY	3866.2	100.0	176.1	100.0

Sources: Eesti Statistika Aastaraamat 1990, Tallinn 1990; Central Statistical Office of Finland, Helsinki.

of paper Estonia was behind Finland by 22.4 times (60 and 1345 kg respectively) in 1988. However, it must be remembered that in Finland the forest sector has a more central role in the economy than in Estonia. Some 85 % of Finnish paper production is exported.

The analysis of the territorial location of Estonian industry shows that approximately two thirds of production capacities have been concentrated in three North-Estonian towns - Tallinn, Kohtla-Järve and Narva (71.5 % of productive fixed assets, 66.8 % of production personnel and 64.7 % of the total value of production). Therefore the regional structure of Estonian industry is rather uneven. Although a large part of the Finnish industry has also been concentrated in the southern part of Finland, the regional structure of Finnish industry can be considered much more even. This is partly due to the Finnish regional policies, which, though, has not been completely successful in the longer run.

The intensive development of industry in Estonia after World War II was probably conditioned by several intertwined goals, reasons and circumstances. The foundation of new industrial enterprises and extension of the existing ones enabled creation of new jobs and with that contributed to the political goals of the Soviet Union by means of the organized import of labour. The change in the

economic structure and national composition of workers was used to ensure the attachment of Estonia to Russia. This was also one of the reasons why the Estonian economy was integrated into "the unitary national economy complex of the USSR". The development led to a strong dependency between the Estonian economy and the economy of the USSR.

It must be born in mind that the forced development of Estonian industry was not a unique undertaking in the Soviet Union of that time. The industrialization campaign was going on in the whole country. There was a firm faith in the preferential development of the production of means of production (heavy industry). New industrial enterprises were founded and the existing ones extended practically everywhere in the Soviet Union. Therefore the majority of the direct executors of the Soviet Union industrial policy did not need to acknowledge all political and strategical aims and the consequences of their actions.

In Estonia it was possible to make capital investments much more effectively than in most other Soviet Union regions in this period and also later. In Estonia the industry was on a relatively high level and its working class rather educated, there were certain historical traditions, enough foodstuffs for industrial workers and it was possible to use the already existing infrastructure.

A large part of the German war reparations in the form of equipment were transported to the Soviet Union by sea through the Tallinn port. Since transport worked very badly and equipment tended to be heaped in the harbour, it was easier and more expedient to use them in Estonia.

The Finnish industry was also influenced by the consequences of the war. A large part of the war reparations Finland had to pay to Soviet Union were the products of metal industries. Their share in Finnish exports was rather small before the war, so new capacity had to be built and new products had to be designed. Even after the war reparations had been paid the Soviet trade was important for the Finnish metal industries.

In any case, Finnish industrial policy could be derived mainly from the national interests of Finland. Interweaving of economic and political aspects have sometimes led to economically less satisfactory solutions. Every now and then the government has been forced to support the international competitiveness of Finnish industry with a devaluation of the markka. The diversification and internationalization of Finnish industry has succeeded satisfactorily, but never the less Finnish economy is now rather weak in light of the competition from the uniting Europe.

The government has supported the development of the Finnish industry also more directly. Some basic industries, like the basic metal and chemical industries have at least partly been in the hands of government. Government has also played a role in forest industries in the more remote parts of Finland. The attempts of government to support the diversification of Finnish industry into the field of electronics have been less successful.

The forests are the most important natural resource of Finland, so the forest sector has a central role in the Finnish industry. Also a large part of the metal and chemical industries produce machinery or chemicals for the forest sector. The diversification of Finnish industry has proven to be rather difficult. Only recently has there been some success in the electronics industry. The metal industry and textile and wearing apparel industries have had large export markets in the former Soviet Union. Now those markets have vanished. The metal industry is trying to market its production in the western markets with at least some success. For the textile and especially wearing apparel industries this has proven to be more difficult. The Finnish building materials industry and food industry are mainly home market industries. The intensifying international competition will make the future difficult also for these branches.

Estonia had an important energy resource - oil shale - which was extensively taken into use during the industrialization process. Also the forest resources and a possibility to produce building materials were taken advantage of. The Estonian textile industry was also developed, but at the same time it became very much dependent on raw material supplies from other Union republics.

Extensive capital investments have been made into the Estonian industry during the post-war period (in 1945-1989 over 7.8 billion roubles). A large part of the post-war investments in the Estonian industry were probably covered from reparation payments. Industrialization in Estonia was carried out according to the previous practice of the Soviet Union marked by the destruction of most part of the existing structures and the discontinuation of natural self-regulation in the economy, which was, of course, accompanied by structural changes, social, demographic and ecological consequences.

Investments were made primarily in the branches oriented toward consumers outside the republic (to the Soviet Union market), i.e. fuel (oil shale mining and processing) and the textile industries in the post-war decade. For example, the Estonian oil-shale industry was restored and developed in order to supply the population of Leningrad with oil shale gas and its industry and transport with oil fuel. While the Kohtla-Järve-Leningrad gas main was put into operation already in 1948, the gas main between Kohtla-Järve-Tallinn did not start until 1953.

During the post-war five-year periods oil shale mining (1.9 mill.t in 1940; 3.5 mill.t in 1950; 9.2 mill.t in 1960; 18.9 mill.t in 1970; 31.3 mill.t in 1980) and on the basis of that also power engineering was developed tempestuously (1947 - Kohtla-Järve TPS (56 MW), 1951 - Ahtme TPS (72.5 MW), 1966 - Baltic TPS (1624 MW), 1973 - Estonian TPS (1610 MW). The oil shale based chemical industry grew also considerably in Kohtla-Järve and Kiviõli.

Functioning as a part of the centrally planned economy of the USSR diminished the importance of Estonia as an economic whole. It became dependent on all other republics by means of specialization, extension of cooperation relations, distribution of production, supply of raw materials, etc. For example, the biggest cotton producer Uzbekistan, where there were a lot of free labour resources, was prevented from extending its cotton industry. Instead the textile industry was extended in Estonia who was suffering from a shortage of labour. Since there were no interrepublican direct contacts at that time, such an industrial policy of the Soviet Union made both republics dependent on the central authorities in Moscow. Uzbekistan could sell its cotton only to Moscow and Estonia could buy cotton only from Moscow. This enabled the Moscow authorities to have full control over the industry of the Union republics.

The whole post-war development has carried Estonian industry to the situation that is not very favourable from the point of view of the economically independent Estonia. A large part of the Estonian industrial complex is oriented toward the eastern markets, which are at least temporarily not able to buy Estonian products. It might be that these markets will never again emerge so that Estonian industry in its old form could sell its products to them. Estonian industry must compete with the industry of western economies, and it is questionable how much use can be made of the industrial resources built under the socialist era.

2.3 Construction

The Republic of Estonia (1920 - 1939) started its economic activity with reorganizing its ruined and technically backward industry. In Finland there was also a need for reconstruction. The development of the production of main building materials is characterized for Estonia in Table 15 and for Finland in Table 16.

Table 15. Production of building materials in Estonia

	O u t p u t			Growth
	1913 /14	1920 /21	1939	1920/21-39 (times)
Bricks (mill pcs)	50.0	6.0	65.0	10.8
Cement (1000 tn)	202.0	2.7	77.2	28.6
Lime (1000 tn)	96.0	4.5	30.1	6.7
Window glass (1000 m ²)	210.0	35.0	1036.0	29.6

Sources: E.Veski, Ehituskompleksi arengust Eesti NSV-s aastail 1940 - 1990. Tallinn, 1990, p. 8; K.Kala, Tööstuspoliitika ja tööstuse areng Eesti Vabariigis 1930.aastate teisel poolel. - Eesti TA Toim., Ühiskonnateadused, 1991, 40, nr. 2, p. 130.

Table 16. Production of building materials in Finland

	O u t p u t			Growth	
	1914	1922	1938	1938/ 1922 (times)	yearly average %
Bricks (mill pcs)	76	58	144	2.5	5.8
Cement (1000 tn)		106	500	4.7	10.2
Lime (1000 tn)	66	203	1387	6.8	12.8
Window glass (1000 m ²)			1097		

Sources: Suomen taloushistoria, osa III; Finnish Statistical Yearbook, Central Statistical Office of Finland.

When comparing the indices we can see that though the production of the main building materials progressed also in the period of independent statehood of Estonia the production volumes of cement and lime remained even in 1939 substantially smaller from the level attained before World War I. Only the production of window glass surpassed the pre-war level nearly by 5 times, as a result of which 70 % of the output of the Järvikandi glass factory were exported to other countries (Krinal, Karma, Ligi & Sauks 1979 p. 145). The total output of bricks (clay, silicate, ash) exceeded the pre-war level by 1.3 times. The Finnish data is scarce, but in those building materials about which we have data the pre-war production was well surpassed before 1938. The main features of the Finnish building materials industry in this era were substituting imported building materials with domestic ones and rapid changes in the volume of production.

The construction industry in Estonia advanced quite intensively in the last few years of independent statehood (see Table 17). The dominating organizational form was construction enterprises of medium size with an average number of 13 workers. The number of employed persons in most large-scale construction enterprises was 75 - 100. For Finland data on construction enterprises were unavailable from official statistics. During the inter-war period the share of special construction enterprises in the total construction was rather limited especially outside the largest cities.

Table 17. Number of construction enterprises and people employed in them in 1928 - 1939

Year	Number of enterprises			Employed persons		
	Large-scale	Medium-scale	Total	Large-scale	Medium-scale	Total
1928	10	5	15	750	66	816
1933	11	5	16	1121	64	1185
1938	71	72	143	5929	916	6845
1939	84	132	216	6538	1726	8264

Notes: Large-scale industry: over 20 workers, Medium-scale industry: 5 - 19 workers. Figures refer to the situation on 1th of July in each respective year.

Source: Eesti Entsüklopeedia täiendusköide I, Tartu 1940, p. 363.

The first state-owned construction enterprise in Estonia, 'Ehitaja', was founded only in 1937. Its task was the planning, construction and capital reconstruction of public buildings. Data characterizing the building materials used for residential buildings in Estonia are presented in Table 18.

Table 18. Building materials used for residential buildings in Estonia in 1922 - 1934 (in per cent)

	Wooden houses		Brick houses		Mixed and other materials	
	1922	1934	1922	1934	1922	1934
Towns, boroughs	85	85	11	10	4	5
Rural districts	91	91	5	5	4	5
Average of Estonia	90	90	6	6	4	5

Source: Eesti 1920-1930, Arvuline ülevaade, Tallinn, 1931, pp. 329, 331.

In Finland the share of completed residential stone buildings was 64 % in towns and boroughs in 1941. For the whole country there are no statistics available before 1952, when the share of stone buildings of all completed residential buildings was 27 %.

Total value of buildings was estimated at about 1.5 billion kroons in the last years of the Republic of Estonia, 1939 (20 aastat ehitamist... 1939, p. 3). Of this total there were for approximately 900 million kroons worth of residential buildings, 500 and 400 million kroons respectively in towns and in the countryside (Eesti teatmeteos III osa 1949 p. 122, Eesti Entsüklopeedia täiendusköide I 1940 p. 363). Approximately 26 million kroons were invested in new buildings annually, 77 % of which was private capital. In that period the main building material was brick, architecturally beautiful dwelling that have been preserved well up to the present time.

In the 1920's building in Finland was particularly intense in the residential sector and in the countryside. The main building material was wood. Stone became a more common building material in industrial building in the 1930's (Hjerppe 1988 s.124). The recession in the 1930's struck hard particularly on residential building.

Some 45 % of the capacity of Estonian industrial enterprises and 57 % of the housing stock of Estonian towns was destroyed during World War II. The total

damage to the national economy of Estonia due to the war was over 1.6 billion roubles (25 aastat Nõukogude ... 1965 p. 4).

In Finland, in addition to direct war damages, a large part of residential and other buildings were lost with the land area extracted from Finnish territory as a consequence of the war. The population from those areas was evacuated, so there was a huge shortage of dwellings. Residential building was intense during the first ten years after the war. During the first few years of this era the shortage of building materials was an obstacle to construction.

In Estonia, after World War II, ensuing from the needs of national economic development, the building materials industry was promoted more than other industries. A considerable part of its output was used for industrial construction. During the immediate post-war period (1946 - 1950) 40 % of the capital investments of Estonia were made to develop industry, including the building materials industry, the fast development of which lasted up to 1975. After that the growth of building materials production slowed down or even decreased very much due to the deterioration of productive fixed assets in this industry. And within the last 25 years they have not been modernized up to the modern standards. Therefore the quality of building materials has also considerably dropped, which in turn has affected the final result of construction.

The output of the main building materials have been presented in Table 19 and Figure 19 for Estonia and in Table 20 and Figure 20 for Finland.

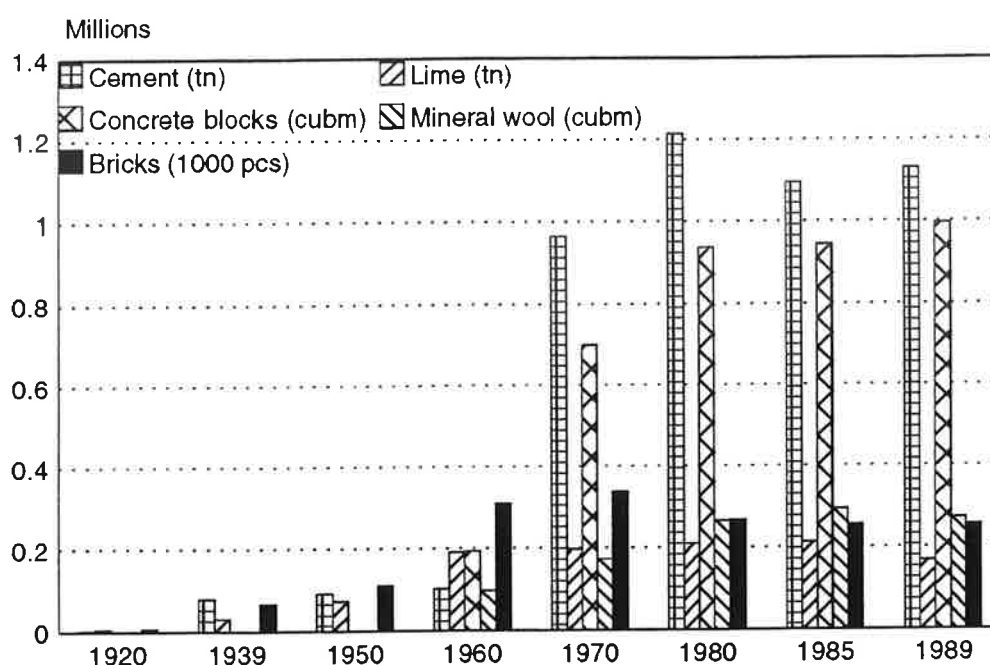
Table 19. Output of Building Materials in Estonia in 1950 - 1989

	1950	1960	1970	1980	1985	1989
Cement (1000 tn)	91	101	964	1213	1094	1129
Lime (1000 tn)	71	190	196	210	212	167
Bricks (mill. pcs)	109	310	337	267	255	253
Concrete blocks and details (1000 m ³)	-	192	699	937	943	995
Mineral wool and products of it (1000 m ³)	-	97	172	265	293	271
Asbest roofing (mill.stand.boards)		-	-	61	58	7272
Window glass (1000 m ²)	470	1832	1932	1987	2297	1892

Sources: Eesti arvudes 1989, Lühike statistika kogumik, Tallinn, 1990, p. 66. Eesti NSV rahvamajandus 1967.aastal, Statistiline kogumik, Tallinn, 1968, p. 79; Eesti NSV rahvamajandus 1985.a, Tallinn, 1986, p. 61;

The output of cement in Estonia and Finland are compared in Table 21 and Figure 21. In 1939 Finland produced 7.3 times more cement than Estonia. By

Figure 19. Output of building materials in Estonia in 1920 - 1989



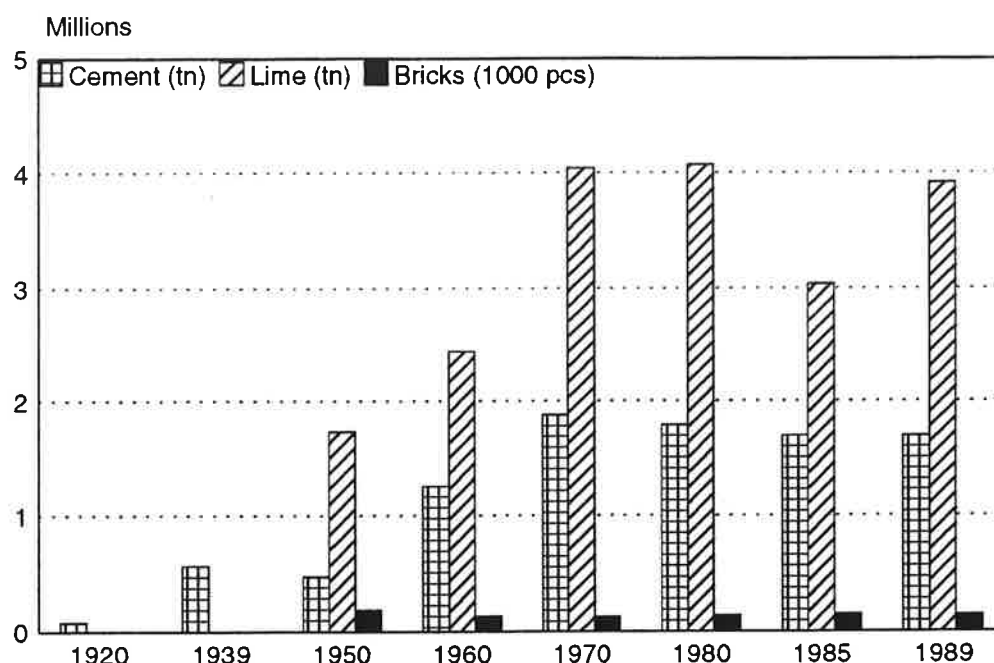
Sources: See Table 19.

Table 20. Output of building materials in Finland in 1950 - 1989

	1950	1960	1970	1980	1985	1989
Cement (1000 tn)	473	1257	1875	1787	1695	1693
Lime (1000 tn)	1731	2439	4042	4074	3037	3914
Bricks (mill pcs)	184	128	126	135	144	137
Window glass (1000 m ²)	2553	6441	9984	10771	10789	7520

Source: Statistical Yearbook of Finland, Central Statistical Office of Finland.

1989 - 1990 this ratio had considerably decreased and was only 1:1.4. The production of cement in Estonia started to increase after 1964 when 2 new production lines were put into operation in the Cement Mills 'Punane Kunda'.

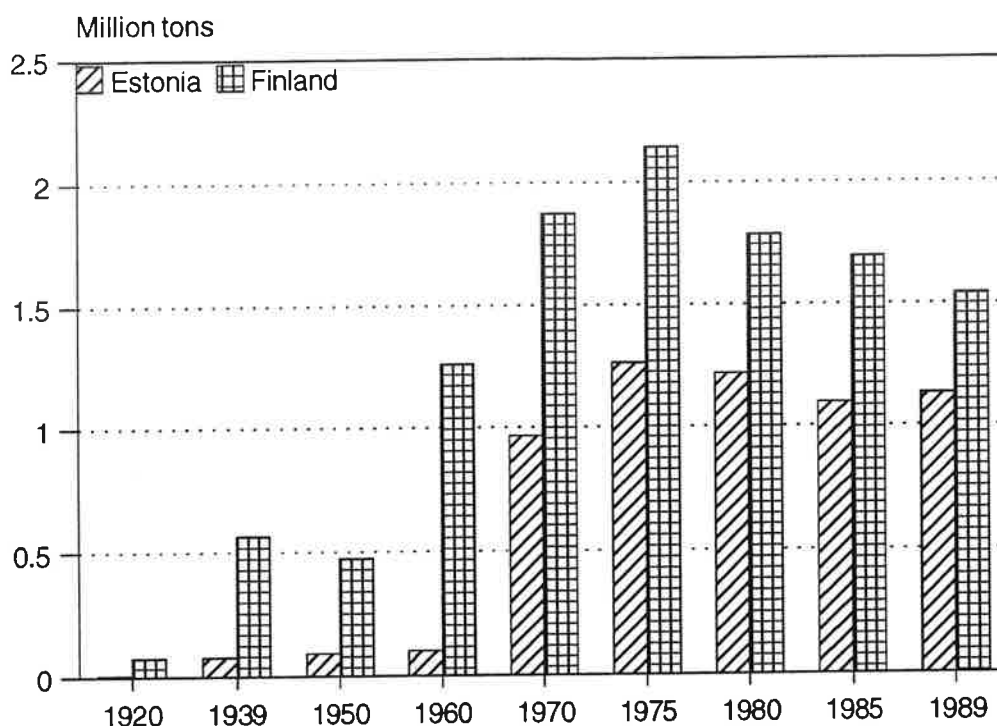
Figure 20. Output of building materials in Finland in 1920 - 1989

Sources: See Table 20.

Table 21. Output of cement in 1920 - 1989, thousand tons

Year	Estonia	Finland
1920	3	75
1939	77	563
1950	91	473
1960	101	1257
1970	964	1875
1975	1260	2142
1980	1213	1787
1985	1094	1695
1989	1129	1540

Sources: Veski, E.: Ehituskompleksi arengust ..., Tallinn 1990; Suomen taloushistoria 3, Historiallinen tilasto, Helsinki 1983, p. 153; Suomen tilastollinen vuosikirja 1990, Helsinki 1990, p. 147.

Figure 21. Output of cement

Sources: See Table 21.

The main export articles in the Estonian building materials industry in 1981 were portland cement (37 % of the output), mineral wool (48 %), dolomite last touch slabs (96 %) and ceramic wall bricks (63 %). In addition to that window glass (15 %), lime (18 %) and bricks (8 %) were also exported in smaller quantities (Aader 1985 p. 43). These materials were exported to the Soviet Union as well as to other countries. The volume of exports has remained approximately the same up to the present time, though the exports of building materials through unofficial channels by way of barter trade has increased, but this is not included in the official statistics.

In Finland the building materials industry has been producing almost exclusively for the home market. Development towards greater use of industrial methods in building has boosted also the demand of the products of building materials industry.

The development of construction enterprises in Estonia in the post-war period is characterized by the centralization of management, while the share of state-

owned construction organizations increased (see Table 22). The average number of workers in an enterprise was 370 in that period which is nearly 10 times more than in 1939 (Table 17).

Table 22. Number of construction enterprises by ownership in Estonia in 1940 - 1989

Year	Number of construction enterprises	of which, %	
		state-owned	cooperative*
1940, Oct.	36	100	-
1955	119	77	23
1960	121	74	26
1970	131	89	11
1980	152	89	11
1985	147	88	12
1989	155	89	11

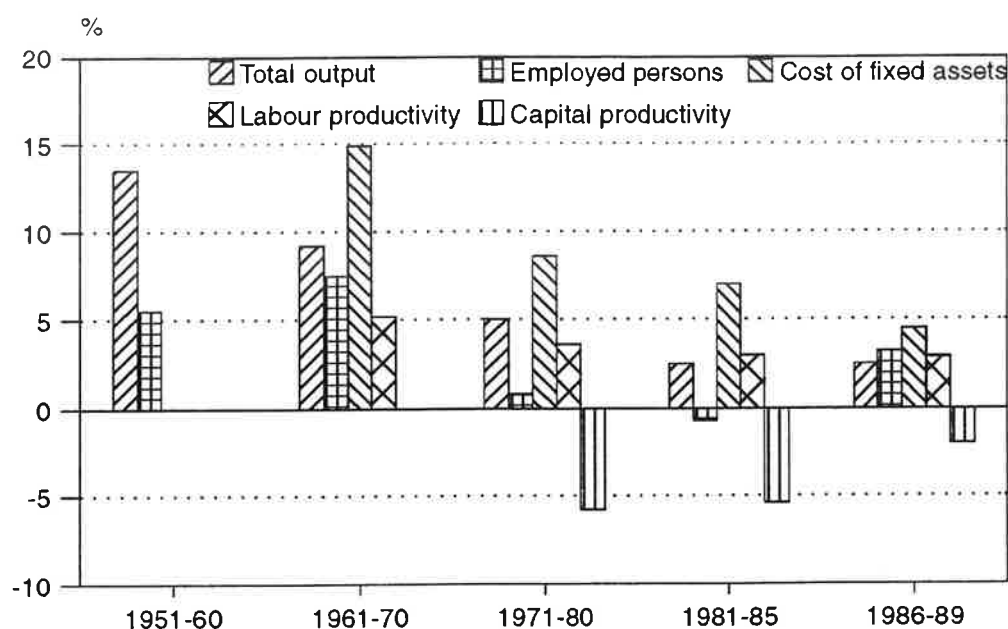
* construction enterprises of collective farms and of the Estonian Union of Consumers Cooperatives.

Sources: Eesti arvudes 1989, Lühike statistika kogumik, Tallinn, 1990, p. 83; Kapital'noje stroitel'stvo v Estonskoi SSR, Statisticheski sbornik, Tallinn, 1986, p. 162.

Starting in 1989 state-owned small enterprises and cooperatives have been established en masse in Estonia. The number of such cooperatives in construction (their field of activity included also research and design) reached 780 by the end of 1990. They employed on an average 20 persons (Statistika Aastaraamat 1991 p. 62). In Finland the total number of construction enterprises was 9181 in 1984 and 13265 in 1989. This number has declined after 1989 due to the downswing in the construction business. The number of large construction enterprises, carrying out larger construction projects, is rather limited, but there is a vast amount of small contractors and sub-contractors. During the latest upswing in the construction business a high number of small construction firms were established for only a single small building project. These small firms tend to vanish after the project is completed. The recession that followed the upswing is giving a hard time to the larger construction firms too.

The main indicators characterizing the economic development of the activity of Estonian construction enterprises are presented in Table 23 and Figure 22. Output of construction enterprises is in comparable prices (budgetary prices of construction fixed by the state as of January 1st, 1984).

Figure 22. Average annual growth rates of construction enterprises in Estonia in 1951 - 1989



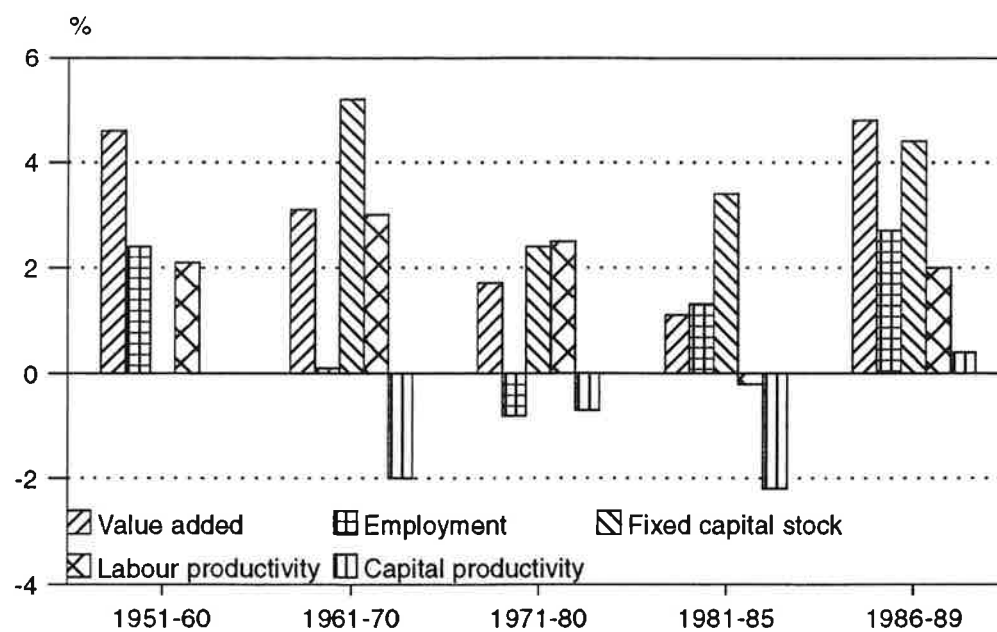
Sources: See Table 23.

Table 23. Development of Construction Enterprises in Estonia in 1951 - 1989 (average annual growth rates, in per cent)

Indicators	1951-1960	1961-1970	1971-1980	1981-1985	1986-1989
Total output	13.5	9.2	5.0	2.5	2.5
People employed	5.5	7.5	0.8	-0.7	3.2
Cost of productive fixed assets		14.9	8.6	7.0	4.5
Labour productivity		5.2	3.6	3.0	2.9
Capital productivity ratio			-5.8	-5.4	-2.0

Sources: Eesti arvudes 1989, Lühike statistika kogumik, Tallinn, 1990, pp.27, 73, 83; Eesti NSV rahvamajandus 1988.a, Tallinn, 1989, pp.65, 73, 195, 197; Eesti NSV rahvamajandus 1986.a, Tallinn, 1987, pp. 19, 55; Eesti NSV rahvamajandus 1975.a, Tallinn, 1976, p. 210.

Figure 23. Average annual growth rates of construction branch in Finland in 1951 - 1989



Sources: See Table 24.

Table 24. Development of construction branch in Finland in 1951 - 1989, average annual growths

Indicators	1950-1960	1960-1970	1970-1980	1980-1985	1985-1989
Value added	4.6	3.1	1.7	1.1	4.8
Employment	2.4	0.1	-0.8	1.3	2.7
Net fixed capital stock		5.2	2.4	3.4	4.4
Labor productivity	2.1	3.0	2.5	-0.2	2.0
Capital productivity		-2.0	-0.7	-2.2	0.4

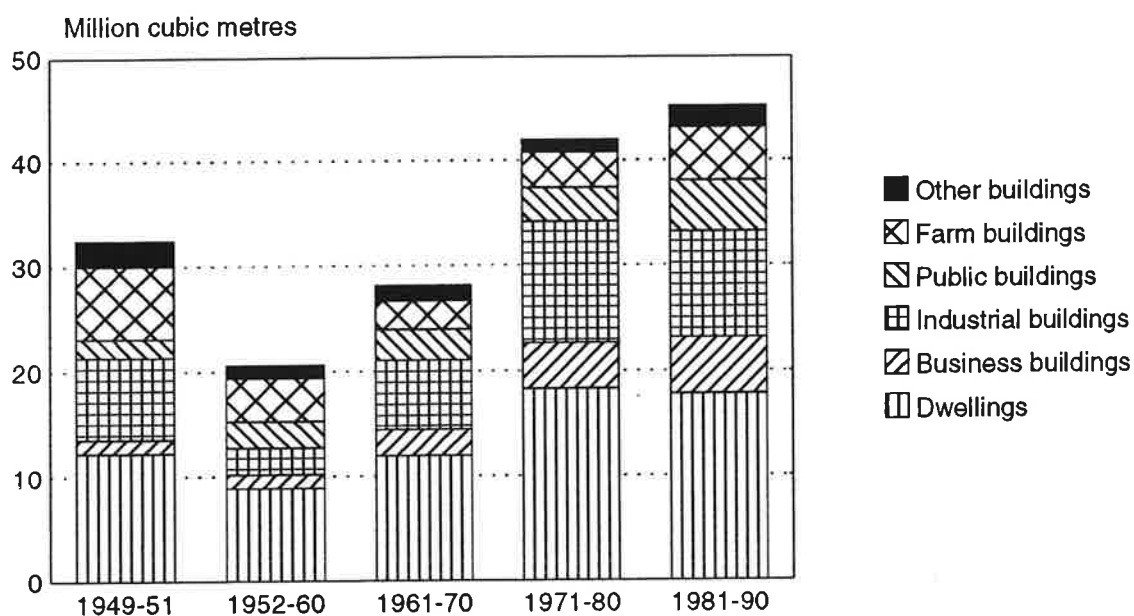
Source: National Accounts, Central Statistical Office of Finland

It must be explained here that total output includes the monetary value of construction-installation works and constructive capital repairs, and number of employed persons - people employed in construction-installation works and auxiliary production. Labour productivity is calculated in the official statistics

according to the latter category of workers.

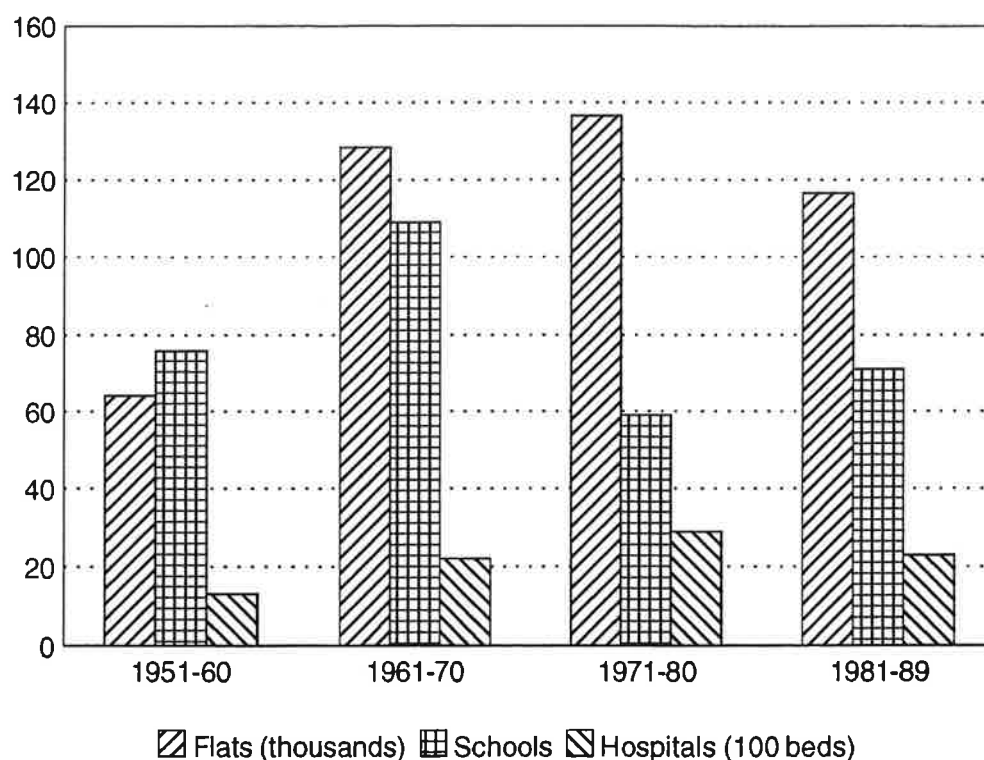
In 1985 out of the total volume of construction works (restoration, industrial construction, etc.) a share of 70 million roubles (8 %) was carried out by foreign firms (Polish, Finnish). At the same time the Estonian builders built every year up to 1991 approximately 17 million roubles worth of roads (40 km) and 5 - 10 million roubles worth of buildings outside Estonia. Since then the volume of construction has somewhat decreased.

Figure 24. Completed buildings in Finland, yearly averages



Period 1949 - 1951: Building permits granted.
Data on year 1990 is based on estimates.
Sources: See Table 25.

In the second half of the 1950's there was a transition to cheap industrial construction in Estonia, mainly by all-Union standard projects, the use of which was compulsory in residential construction as well as for public and manufacturing buildings. It was accompanied by the need to use standard installation constructions, and armoured concrete, which in turn caused the development of relevant auxiliary production at the construction enterprises. In Finland a similar shift towards more industrial building methods was seen during the 1960's and 1970's. One reason for this was the growing demand for dwellings due to the migration from the countryside to towns. Tables 25 and 26 present a survey of the buildings completed in Finland and in Estonia during the

Figure 25. Buildings completed in Estonia

Source: See Table 26.

post-war era. Figures 24 and 25 deal with the same issue graphically.

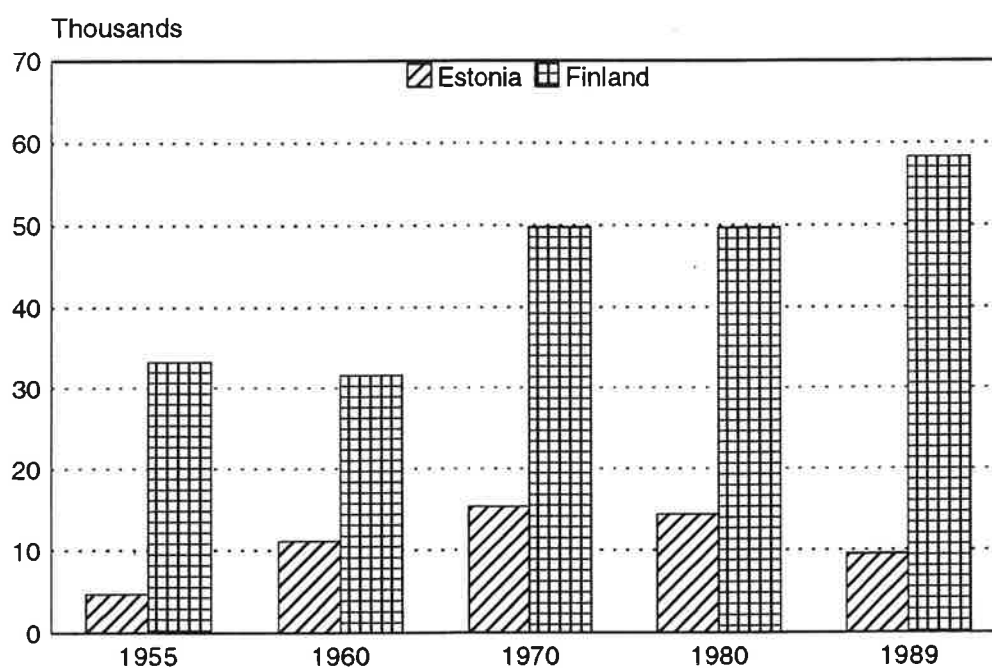
Only volumes of residential construction had steadily increased in Estonia up to 1987. During the last few years they have dropped to the level of the 1960's (a decrease of nearly a third). At the same time the construction of cultural establishments and general education schools has considerably increased. In Finland there was an enormous upswing in construction towards the end of 1980's. The main reason for this was the liberation of financial markets, which released pent-up demand for credit. The growth was particularly intense in residential construction, but also other branches of construction grew rapidly. During the year 1991 construction declined sharply. The structure of construction activity in Estonia and Finland is compared in Tables 27 and 28 and Figures 26 and 27.

Table 25. Buildings completed in Finland 1949 - 1990, mill m³, yearly averages

	1949- 1951	1952- 1960	1961- 1970	1971- 1980	1981- 1990
Dwellings	12.3	8.9	12.0	18.3	17.8
Business buildings	1.3	1.3	2.5	4.3	5.3
Industrial buildings	7.7	2.6	6.5	11.6	10.1
Public buildings	1.8	2.5	2.9	3.2	4.9
Farm buildings	6.9	4.1	2.8	3.4	5.1
Total	27.4	20.6	28.1	42.0	45.2

Notes: Period 1949-1951: Building permits granted. Figures for the year 1990 are estimates.

Sources: Suomen taloushistoria, osa III, p. 392; Statistical Yearbook of Finland.

Figure 26. Dwelling units completed

Source: See Table 27. Estonian data for 1955 is estimated.

Table 26. Buildings completed in Estonia in 1946 - 1989

	Unit	1946-1950	1951-1960	1961-1970	1971-1980	1981-1989
Large-scale enterprises and their departments	number	28	227	225	160	..
Total floor space of dwellings completed	1000 m ²	1181	3078	6024	7436	6783
among this flats	1000 un	..	64	129	137	117
General education schools	number	41	76	109	59	71
Nursery schools and baby nurseries	1000 beds	16	9	32	24	29
Hospitals	beds	1200	1300	2200	2900	2300
Sanatoria, rest homes	beds	2500	600	1300	1300	1300
Cultural establishments, (theaters, cinemas, clubs)	number	169	176	82	26	36

In agriculture:

Cow-houses	1000 cows	4	176	243	240	101
Pigsties	1000 pigs	9	342	560	493	177
Poultry-farms	1000 birds	..	1120	1830	2900	1900

Sources: Eesti NSV rahvamajandus 1988.a, Tallinn, 1989, pp. 285, 288, 155, 312, 317, 329, 341, 350; Kapital'noje stroitel'stvo v Estonskoi SSR, Statisticheski sbornik, Tallinn, 1986, pp. 12, 94, 95, 131, 152, 154, 155; Eesti arvudes 1989, Lühike statistika kogumik, Tallinn, 1990, pp. 75, 77, 79.

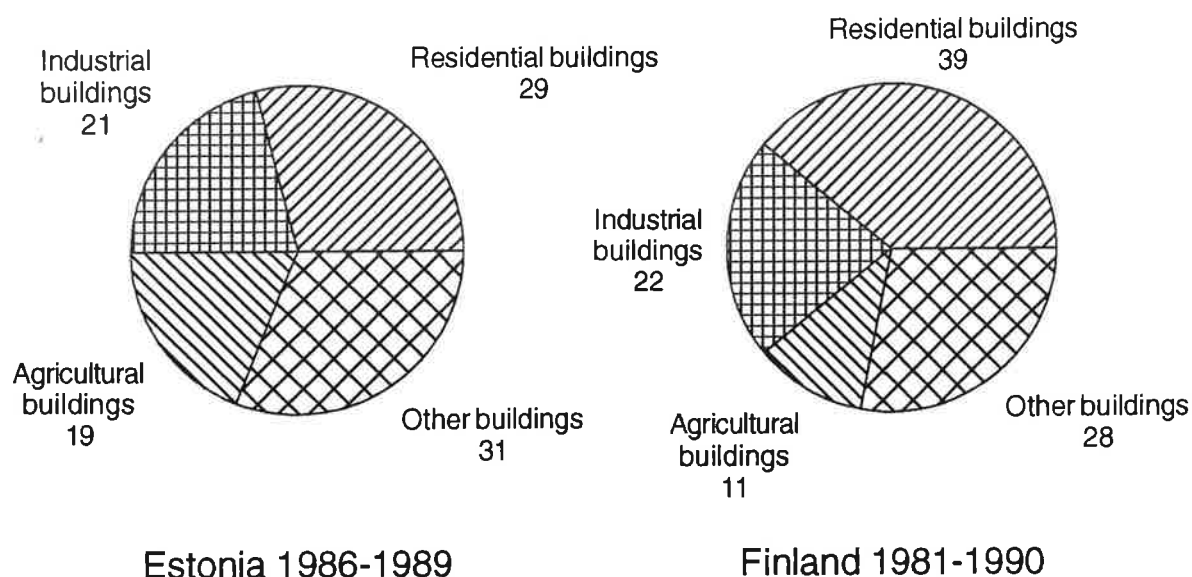
Table 27. Dwelling units completed in 1951 - 1989

Years	Estonia	Finland
1955	23300*	33191
1960	11100	31191
1970	15300	49747
1980	14400	49648
1989	9500	58244

* Built in 1951-1955

Sources: Eesti NSV rahvamajandus 1975.a, Tallinn, 1976, p. 247; Eesti NSV rahvamajandus 1986.a, Tallinn, 1987, p. 152; Eesti statistika aastaraamat 1990, Tallinn, 1991, p. 198; Suomen tilastollinen vuosikirja 1990, Helsinki 1990, p. 158 .

Figure 27. Completed buildings by their main use, %



Sources: See Table 25 and Table 28.

It appears from the above-presented data that the main difference in the structure of construction output between Estonia and Finland has been in residential and agricultural buildings. In Finland the main stress has been laid on residential construction, but in Estonia there has been no great differences in the construction volumes of residential and agricultural construction. In 1960 the number of dwelling units completed in Finland exceeded that of Estonia by nearly 3 times, and in 1989 by already 6 times. Here it must be remembered that the year 1989 was by no means normal in Finnish residential construction. If one bears this in mind in addition to the different sizes of the two countries, it might be said that when measured by the number of dwellings completed there are no great differences between the two countries. On the other hand, the assessment of the quality of dwellings could change this view.

Tables 29 and 30 provide a survey about the development of the cost of residential construction in Estonia and in Finland. The average cost of one square metre is in the Finnish data calculated by dividing the value of the construction by the floor area of completed dwellings. This might cause some

Table 28. Completed buildings by their main use (in per cent)

Years	Type of building				Total
	Residential	Industrial	Agricultural	Other	
ESTONIA (by cost of construction-installment works)					
1951-55	20	27	14	39	100
1961-65	24	27	21	28	100
1971-75	25	25	25	25	100
1981-85	29	22	21	28	100
1986-89	29	21	19	31	100
FINLAND (by m ³ completed)					
1950	47	10	22	21	100
1960	43	25	8	24	100
1970	43	27	9	21	100
1975	38	29	7	26	100
1980	42	17	11	30	100
1985	39	18	11	32	100
1989	41	16	9	34	100

Sources: Building Statistics, Central Statistical Office of Finland; Nõukogude Eesti entsüklopeediline teatmeteos, Tallinn, 1978, p. 147; Suomen taloushistoria, osa 3, Historiallinen tilasto, Helsinki 1983, p. 392;

fluctuations in the cost of one square metre during times of rapid price and volume changes, for some dwellings may not be completed during the same year in which they are mainly constructed.

Up to the year 1980 there took place a fast transition to industrial residential construction in Estonia. The aim was to abolish the shortage of flats. But at the same time the immigration into Estonian towns increased. The floor space of an average newly built flat was 55 sqm. Many hostels and communal flats were built in that period. The floor space of auxiliary rooms was reduced to a minimum in order to save on construction costs. The share of private houses in residential construction fell below 5 % by 1985, while it was 25 % in 1960's. By today the outward appearance, design of apartments, conveniences as well as the quality of construction has considerably improved. This applies especially to the houses built by individual projects, the share of which in residential construction has increased considerably recently. All this has brought about a

Table 29. Residential construction in Estonia in 1960 - 1990

Year	Capital investments mill.rbl.	Turned over to tenants 1000 sqm	Average cost of 1 sqm roubles	Price index
1960	60	537	112	100
1970	125	765	163	146
1980	146	812	180	161
1985	171	785	218	195
1989	179	589	304	271
1990	211	468	451	403

Sources: Eesti NSV rahvamajanduse 1988.a, Tallinn, 1989, pp. 191, 285; Eesti Statistika 1990.a, Tallinn, 1991, pp. 195, 285.

Table 30. Residential construction in Finland in 1960 - 1990

Year	Value of construction mill FIM	Floor area of completed dwellings 1000 sqm	Average cost of sqm FIM	Price index	Building cost index
1960	821	1918	428	100	100
1970	2747	3645	754	176	170
1980	11111	4184	2656	621	508
1985	16375	3933	4163	973	736
1989	28820	4555	6127	1478	923
1990	29450	5226	5635	1317	990

Source: Statistical Yearbook of Finland, Central Statistical Office of Finland.

4-fold increase in the average cost of floor space (by 1990) as compared with 1960. Since 1990 the conventional prices have been used in construction that has brought about a steep rise in prices of residential construction. In 1991 the cost of 1 sqm was 1128 roubles already, and only 265 thousand sqm were built. As compared with 1980 the volume of residential construction has decreased 3 times, but the cost of 1 sqm has increased over 6 times.

In Finland the construction of dwellings has also been forced to grow by migration. In the beginning of the 1970's about 70000 dwellings were built,

which is the largest figure in Europe, when calculated on a per capita basis (Suomen taloushistoria osa 2 1982 p. 233). In the 1960's and 1970's also the size of completed dwellings grew from 60 to 75 sqm. After that the growth of the dwelling size started to slow down.

The construction in Finland, though it is mainly performed by private firms, is regulated in many ways by authorities. The planning of land use is the monopoly of cities, towns and municipalities. This limits the availability of building sites particularly in larger cities and towns. Earlier the so-called ARAVA system, which provides loans for residential investments was an important source of standards for dwellings. The effects of these regulatory measures on the quality of dwellings have not always been only positive.

To sum up, it may be said that the Estonian construction policies have been to a large extent dependent on all-Union tendencies. It has, first of all, accompanied the excessive development of industry, approximately 90 % of which was subordinated to all-Union or Union-republican administration. As a result, approximately 50 % of total construction capacities were engaged in industrial and residential construction. The share of the construction of agricultural buildings has also been rather high (20 - 25 %). Therefore there has not always been sufficient construction capacity for building up a consumer-oriented services sector (Veski 1990).

The Soviet period is characterized by the relatively high growth rates in construction and the building materials industry up to 1980, after which a decline began. The reason for intensive construction activity was the industrialization and the extensive development characteristic of the Soviet economic policy. This in turn brought about high migration and the need to promote the social sphere. Extensive development signified also gigantomania and numerous campaigns. Pig factories, large cattle-sheds and inhumane residential districts were built. Only large mechanisms were produced for construction, while small mechanisms were ignored. The picture was as gloomy as regards the quality of construction works and materials that led to high maintenance costs and the falling into disrepair of buildings. And on account of that more money is needed for capital repairs of buildings now, which is a direct result of cheap and shoddy building.

Intensive construction activity has been restrained by the reduction of public investments and shortage of building materials. The building materials industry of the Republic has become fully outdated. Production technology has remained on the level of the 1970's and the product range has not been innovated practically at all.

2.4 Services

The service sector in Finland, as in other developed market economies, has emerged as one of the most important and dynamic sector. But in Estonia, as is typical of the centrally planned economies, development priorities were generally given to the rapid expansion of the production sphere of the economy, particularly industry. As a result of this, services in Estonia have tended to be neglected and lagged behind the growing demand for them.

So, differences in the service sector in Estonia and Finland are expressed not only in its role in the economy, but also in the specification of the essence of services and in the development level of service branches.

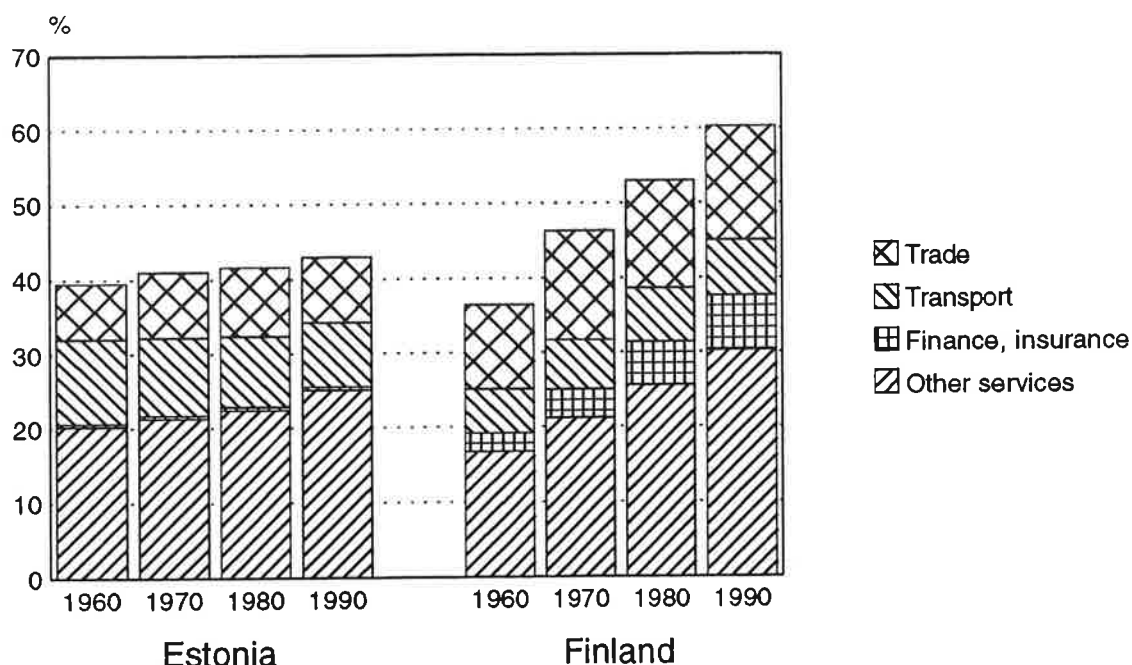
According to the classification scheme of the USSR statistics all activities are divided into productive and non-productive. Trade, public restaurants and part of the personal services (production and repair of commodities by individual orders) are included in the productive sphere, other services in non-productive sphere.

On the basis of the functional trends of services, taking into consideration the nature of the consumer's physical and intellectual needs, service branches are mainly classified into four groups: 1) intellectual services - education, culture, art; 2) health and related services - medical care, physical culture and sports, recreation; 3) commercial services - trade and public restaurants; 4) services for meeting personal needs - public utilities, personal services, transport and communication.

The Finnish classification of industries is based on international recommendations (see for example United Nations 1968). The 1988 SIC (Standard Industrial Classification of Finland) includes 19 main classes of which the service industries in the so-called tertiary sector constitute 13 including a complex of all activities of the national economy outside agriculture, forestry, construction and industry. The main classes of services are as follows: wholesale and retail trade; hotels and restaurants; transport; communication; finance and insurance; real estate, cleaning and rental services; technical and business services; public administration and defence; education and research; health and social welfare services; recreational and cultural services; organizational and religious activities; other services.

Differences in the classification make it difficult to compare adequately statistical indices. In the following we try compare the statistical indices of service sector in Estonia with those of Finland.

Figure 28. The share of employment in the service sector in 1989



Sources: See Table 31.

The development level of services can be estimated by the percentage of people employed in the service sector relative to the total employed population. In 1989 60.3 % of the economically active Finnish population were employed in the service sector - nearly a third more than in Estonia (Table 31, Figure 28). The number of those employed by services in Finland has increased by 78 % during the last 30 years (on an average 1.9 % a year). In Estonia the service sector employed 42.9 % of the total employed population in 1990, while the increase of the last nine years has been modest - only 3.4 % (0.1 % annually). The main agent of such a development was the above-mentioned different priorities in the economic policy of Estonia and Finland.

When analyzing the structure of services we must take into consideration the differences in statistical indices. For example, in Finland hotels are classified in one group with trade and restaurants. In the Estonian statistics we find indices concerning recreation (hotels, holiday inns, etc.) in one group with health care, physical culture and sports - i.e. in the group of community, social and personal services. Storage is in one group with transport and communication in Finland, while in Estonia it is in trade sector and defence is not reflected in the Estonian statistics at all, etc. Therefore, when estimating the structure of services we must

Table 31. Percentage of population employed by services in the total number of employed population, %

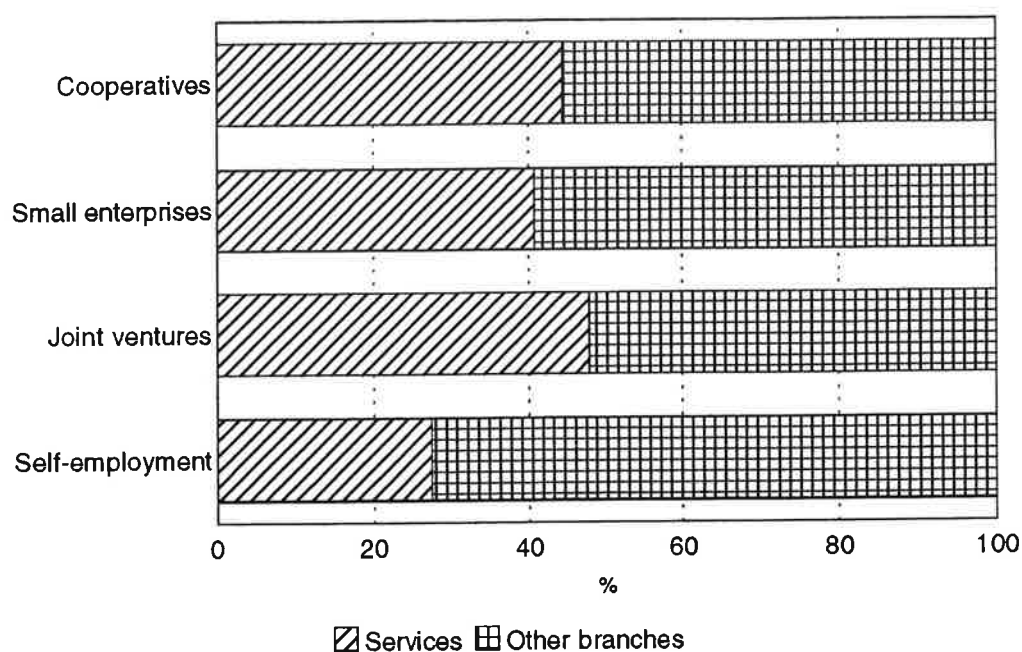
	Estonia				Finland			
	1960	1970	1980	1990	1960	1970	1980	1990
Trade, catering, hotels	7.4	8.8	9.2	8.7	11.4	14.6	14.4	15.3
Transport, storage, communication	11.5	10.5	9.5	8.6	5.9	6.7	7.2	7.4
Financial institutions and insurance	0.4	0.4	0.5	0.5	2.5	3.8	5.8	7.3
Community, social and personal services	20.2	21.3	22.4	25.1	16.7	21.2	25.6	30.3
Total of services	39.5	41.6	41.6	42.9	36.5	46.3	53.0	60.3
Total employed population	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Sources: Eesti Statistika Aastaraamat 1990, Tallinn, Olion, 1991, p. 236; Statistical Yearbook of Finland 1990, Helsinki, 1989, p. 360.

take into consideration certain fluctuations in indices of the groups presented in Table 31. It is clear that the subdivisions of service sector presented in Table 31 (excluding transport and communication) lag essentially behind of those of Finland, which has an effect on the total as well. But on the basis of the above-presented groups it is not possible to estimate the share of service branches (it would be necessary to present a more thorough estimation later on). And in addition to that, only the state-owned sector is reflected in Estonian statistics. Rapid development of new forms of entrepreneurship (cooperatives, joint-stock companies, private enterprises and self-employed workers) during the recent years (since 1987) has never the less had an effect on the structure of Estonian economy and above all inspired the development of services. This is confirmed by the structural analysis of the new forms of entrepreneurship by kinds of activities.

In 1990 according to the Estonian Statistics Department 47468 people were employed as full-time workers in cooperatives, state-owned small enterprises and joint ventures, 43.7 % of whom are employed in various service establishments (Table 32 and Figure 29). State-owned small enterprises should be regarded as a transitional form of new entrepreneurship given much wider liberties as compared with the rather strictly regulated operation of the other state-owned enterprises.

Figure 29. The share of services in the new entrepreneurship sector, percentage of employees in 1990



Sources: See Table 32.

Table 32. Number of employees in new entrepreneurship forms in Estonia in 1990

	Cooper- atives	State-owned small enterprises	Joint ventures	Total
Total number of full-time workers	29479	13716	4271	47468
of which in services	13121	5595	2043	20759
Share of those employed in services, %	44.5	40.8	40.8	43.7

Source: Data of the Statistics Department of the Republic of Estonia

The new entrepreneurship forms are characterized by a large share of part-time workers. For example the initial years of the development cooperatives the percentage of half-time employees in 1987 was 72.5 % of the total number of employees. The number of part-time workers was quite large also in small enterprises and joint ventures. It means that a considerably higher share of the population was occupied in new entrepreneurship than is reflected in the statistics on full-time workers. Later on this percentage has decreased.

The high share of secondary employment is a consequence of unstable economic policy as well as of the necessity of earning extra incomes under the conditions of falling living standards and inflation. The increasing share of full-time employees (53.1 % in 1990) is a sign of the growing confidence in the development prospects of entrepreneurship, better opportunities for earning good wages, but also of intensive work at small-scale enterprises (cooperatives etc.), which makes it hard to have two jobs.

Due to difficulties with the supply of resources and rental of space for production, cooperatives pursued mainly activities as services, catering etc. requiring less raw materials and financial resources. In addition to that the innovational potential and other factors were conducive to the development of entrepreneurship in its starting phase precisely in services (80 % in 1987). But numerous cooperatives which started with services, requiring less resources and simpler working conditions, have now in addition more profitable pursuits, which are predominating in their activities. At the same time, services are rendered to people and enterprises by cooperatives whose main activities are production of consumer goods, construction, catering or something else. For this reason, the share of services in the activities of cooperatives is actually considerable bigger than appears from the official statistics. The realization of the economic reform presumes further growth of the share of services.

For comparison, 28.7 % of those employed in the Finnish economy are working in the public sector and 71.3 % in the private sector (calculated according to the conventions in the Finnish national accounts). Practically all public sector production is included in the service sector. Public services in Estonia and Finland have been based on different ideological and socio-political programmes. Proceeding from the development concept of the so-called welfare state, the primary task of the Finnish public sector has been, besides providing the necessary infrastructure for economic growth, the development of social protection of people and guaranteeing social and also some other services for the members of society. In Estonia the development of the service sector, including public services, being subordinated to the Soviet Union economic development conception, has been of second-rate importance. Due to the different developments there are differences both in the volume of services and in the

structure of the service sector. Determination of the structural differences in public services demands more thorough analysis, which is presented in a separate study.

In the private sector the share of employees of the service branches is about 46 % in Finland. The highest share of the private sector is in trade (98.6 %) and financing (93.8 %), and the lowest share in social and personal services (24.9 %).

When comparing the development level of service branches the, following indices are important: density of service networks, qualitative level of enterprises and work places, structure of rendered services, etc.

In the following we compare the development of some service branches such as trade, public restaurants, hotels, and transport.

2.4.1 Trade, public restaurants, hotels

According to the economic census of 1937 there were 7974 shops and 3413 street, market and travelling shops in the Estonian retail trade. This makes an average of one shop per 93 inhabitants of the Republic of Estonia. The selling area of shops was 281.7 thous.m² or 249 m² per 1000 inhabitants. Most of the legal structure of enterprises - 88 % - constituted sole owners, 3 % were economic associations and 7.2 % cooperative enterprises (Kaubandus ja transport 1939). The Estonian retail trade of that period is therefore characterized by the dominance of the private sector, high number of shops and therefore their nearness to consumers.

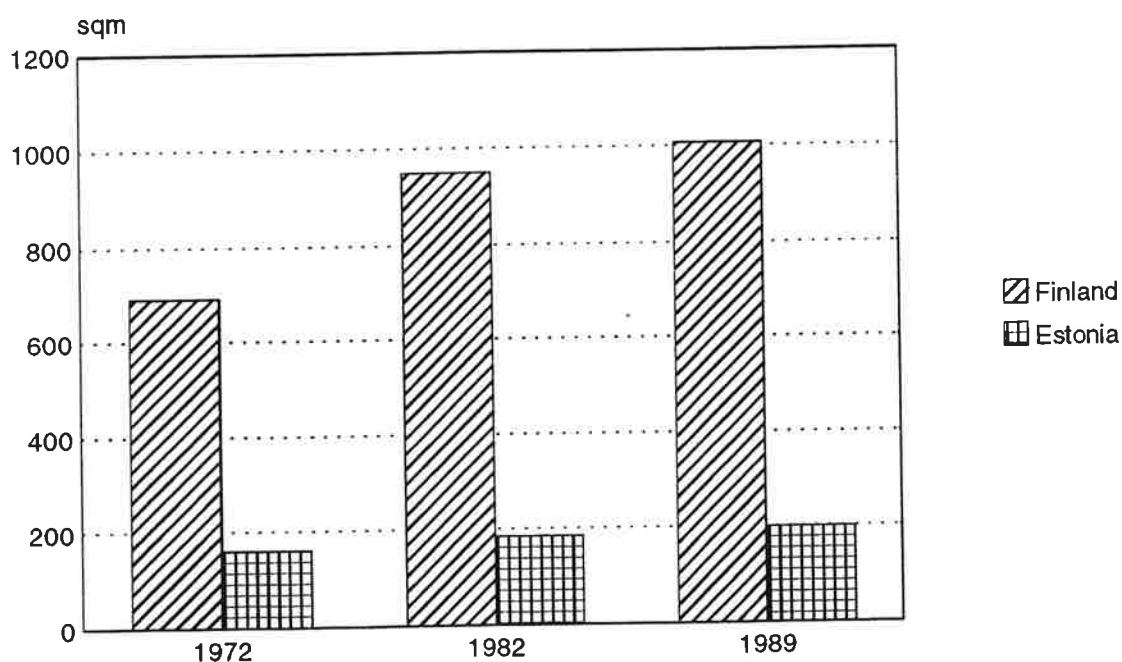
In Finland there were 30300 retail trade enterprises in 1930, 32200 in 1940, and an estimate for 1937 would be 31600 (Forssell 1979). But one enterprise might have more than one shop. On the other hand, new shops were well accounted for by the authorities, whereas closing the down a shop might go unnoticed. The number of inhabitants per shop would have been 121 calculated on the basis of the above-given indices. Although there is no data on the selling area of Finland we can consider the selling area per capita approximately equal in Finland and Estonia. The structure of ownership forms was more or less similar as well. The share of different legal structures in Finland would have been approximately as follows: sole owners 75 %, joint-stock companies 10 % and cooperatives 15 %.

Today there are great differences in the Estonian and Finnish retail trade as regards the density of businesses and therefore the nearness of services to consumers: in 1989 one shop served an average of 375 inhabitants in Estonia,

while in Finland the corresponding figure was 186. The number of shops per 1000 inhabitants has decreased by 4 times in Estonia as compared with 1937. We can conclude here that during the past 50 years the supply of commercial services in Estonia has fallen to only a fraction of consumer demand and lagged behind the retail trade of Finland.

Trade in Estonia has developed towards the centralization of management. The management of retail trade has mainly been subordinated to two organizations, namely the Ministry of Commerce of the Republic of Estonia and the Estonian Union of Consumers Cooperatives. In 1989 the trade turnover of those organizations was 82 % of the total retail turnover of the republic. Therefore, in essence the state monopoly is dominating in the Estonian retail trade, since over the course of time the system of consumers cooperatives has turned into an object of state administration as well, regardless of collective ownership.

Figure 30. Selling area per 1000 capita



Sources: See Table 33.

The development of the Finnish retail and wholesale trade has been steadfast. Since the beginning of the century a large number of cooperative retail societies has been founded side by side with the private shops. The free entrepreneurship and competition under the conditions of the market economy created conditions

for the fast development of the trade sector. In 1989 98.6 % of the employees of trade (retail and wholesale trade, restaurants, hotels) were employed in private sector. At the present time the Finnish retail and wholesale trade is quite concentrated into four central organizations - Kesko, Tuko, Sok and Eka (Raumolin 1990). They account for 90 % of the sales of perishable goods. Excessive concentration in the trade sector never the less impedes the integration into the European market.

For the selling area of the retail trade we have data for 1972 - 1989 (Table 33). Within this period the selling area of retail trade establishments increased by 40.7 % in Estonia, while the total selling area of 1937 was reached only in 1983, but the level per 1000 inhabitants of 1937 has not been reached even by now. The growth of the selling area of retail trade establishments in Finland was 55.2 %, shops are on an average 1.4 times larger than in Estonia. This is caused both by differences in the types of shops and services rendered. In 1989 Finnish retail trade selling area per 1000 inhabitants was 5 times that of Estonia (Figure 30). Ensuing from that we can estimate the differences in the commercial services level in both these countries.

Table 33. Selling area in retail trade in 1972 - 1989

	Estonia			Finland		
	1972	1982	1989	1972	1982	1989
Selling area (1000 m ²)	221	276	311	3221	4595	5000
Number of shops	3183	3106	3251	38117	35780	38000
Area per shop (m ²)	69	89	96	85	128	132
Population (1000)	1391	1496	1565	4653	4842	4969
Shop area/1000 capita	159	184	199	692	949	1006

Sources: Eesti NSV rahvamajandus 1972.a, Statistika Aastaraamat, Tallinn, 1974, p. 270; Eesti NSV rahvamajandus 1982.a, Statistika aastaraamat, Tallinn, 1983, p. 197; Eesti Statistika Aastaraamat 1990, Tallinn, Olion, 1991, p. 298; Rytkönen, P.: Vähittäiskauppa 1970 - 80 -luvulla, Finnish Statistical Office, pp. 68 - 69; Finnish data on 1989 is based on expert opinions.

Differences and development tendencies analogous to the retail trade can be also found when comparing the wholesale trade of Finland and Estonia. In 1936 there were 1533 wholesale enterprises registered in Estonia, 97.7 % of which were owned by private persons and 2.3 % by cooperatives. As of January 1, 1989 the retail and wholesale trade had 687 warehouses in Estonia, while their number has

gradually decreased (for example, in 1970 there were still 951 warehouses) on account of old buildings which have fallen into disrepair. The warehousing capacity has increased as a result of building new warehouses (in 1970 an average warehousing capacity of a warehouse was 303 m², in 1989 614 m²). Wholesale establishments are strictly specialized in certain commodity groups and every establishment has a monopolist status in its group. They supply only retail trade and public restaurants. Wholesale and retail trade and catering in Estonia function in a state planned closed system where there are no preconditions for competition between enterprises.

In the Finnish wholesale trade there were 8201 enterprises in 1986. Taking into account the number of commercial and catering enterprises and hotels, one Finnish wholesale establishment has to supply on an average 4 enterprises, while in Estonia the corresponding figure is almost 10 enterprises. Unfortunately we have no information on the size of Finnish wholesale establishments and on their organization as a whole, which does not allow us to draw concrete conclusions. The major difference between the wholesale trade system in Finland and in other western countries is that in Finland the volume of wholesale trade is concentrated to fewer firms and the competition is not very keen. This is going to change when Finland joins the European Community.

Comparison of public restaurants points out great differences in the number of establishments. In 1989 there was one public catering establishment per 2525 inhabitants in Estonia, in Finland one establishment serves 947 inhabitants. This reflects almost a threefold difference in the number of establishments, ensuing from the fact that the capacity and level of catering services are different as well.

As for tourist hotels and related establishments (camping sites, boarding-houses, etc.) Estonia has considerably lagged behind the level of Finland. By the official statistics of 1989 there were 4 beds per 1000 inhabitants in Estonian tourist establishments, in Finland 16 beds. At the same time many Estonian hotels do not correspond to modern standards for conveniences and services rendered. During recent years, in connection with the development of new entrepreneurship, a rather large number of cooperatives, joint ventures and joint-stock companies have started to accommodate tourists and organize tours, meaning that there is reason to expect an increase in the number of beds and a rise in the quality of services. Development of new entrepreneurship, without doubt, creates favourable conditions also for the development of trade, catering and hotels.

2.4.2 Transport

The comparison of the Estonian and Finnish transport is to some extent obstructed by the insufficiency of statistical data for the earlier years of the period of comparison. Still, the comparison of existing data also provides some sort of picture about the differences in the development of transport on both sides of the Gulf of Finland.

Table 34. Length of traffic routes (at year-end)

Year	Railroads km		Public roads thous.km		Trams and metros, km		Waterways km	
	Est.	Fin.	Est.	Fin.	Est.	Fin.	Est.	Fin.
1922	1020 ¹	4091	18	48	9			
1938	1434	5409	22	66	27			
1950	1389	4726	21	60	27	114	738	
1960	1422	5323	18	67	36	114	564	
1970	1204	5841	24	72	38	107	520	
1980	993	6096	27	75	38	72	520	
1985	1009	5900	28	76	37	98	520	9330
1986	1014	5899	29	76	39	82	520	9350
1987	1026	5884	..	76	39	82	520	9410
1988	1026	5884	30	77	39	82	520	9460
1989	1026	5844	30	77	39	84	520	9460

¹Data for 1921

Sources: Eesti arvudes, 1920 - 1935, Tallinn 1937; Eesti Statistika 1938, Riigi Statistika Keskbüroo, Tallinn 1938; Eesti Statistika Aastaraamat, Tallinn (various years); Statistical Yearbook of Finland, Central Statistical Office of Finland, Helsinki (various years); Transport and Communications Statistical Yearbook of Finland 1991, Helsinki 1991.

The comparison should be started with traffic routes, the lengths of which are presented in Table 34. Because of the difference in the areas of Estonia and Finland, the density of route networks - i.e. length per 1000 km² of area - produces a more objective picture. Corresponding data are presented in Table 35. Since the densities of tram routes and metro routes convey very little - other transport facilities are also operating in towns - they have been omitted. Besides, there is no metro in Estonia nor any trolley-buses in Finland. Waterways depend strongly on the natural conditions and change little. In Estonia there are 11.5 km

of inland waterways per 1000 km², in Finland 28.5 km.

Table 35. Length of traffic routes per 1000 km² (at year-end)

Year	Railroads in operation km/1000 km ²		Public roads km/1000 km ²	
	Estonia	Finland	Estonia	Finland
1922	25.0 ¹	10.5	373.0	123.6
1938	29.7	14.1	448.1	168.6
1950	30.8	14.0	459.0	184.0
1960	31.5	15.8	390.2	199.7
1970	26.7	17.3	541.0	213.6
1980	22.0	18.1	605.3	222.6
1985	22.4	17.5	623.0	225.1
1986	22.5	17.5	634.1	225.4
1987	22.7	17.4	-	226.0
1988	22.7	17.4	667.4	226.3
1989	22.7	17.4	669.6	226.9

¹Data for 1921.

Sources: See Table 34.

As we can see from Table 35 networks of both railroads and roads are on the average much denser in Estonia than in Finland. And yet Finland is a highly developed country. The fact is that the northern part of Finland is sparsely populated so that there is not much need for a dense transport infrastructure. Estonia, at the same time, is populated rather evenly. The average population density is also bigger in Estonia. While Finland is 7.5 times larger than Estonia in terms of area, its population is only 3.2 times higher.

As we can see from Table 34 the length of railroads in operation in Estonia is not bigger at present than it was in 1922. During subsequent years it even decreased due to the liquidation of narrow-gauge railway in the 1960 - 70's. In those times petrol was relatively cheap and freight transport by cars was economically more effective than by trains. Therefore it was decided to liquidate the narrow-gauge railway due to under-utilization. In recent years the length of railroads has remained stable both in Estonia and Finland.

In Estonian passenger transport by bus transport is dominating (see Figure 31). In Finland air transport has the biggest share in passenger turnover. In Estonia

Table 36. Turnover of passengers, mill.p. km

Mode of transport	1960		1970		1980		1985		1989	
	Est.	Fin.	Est.	Fin.	Est.	Fin.	Est.	Fin.	Est.	Fin.
Railway	798	2300	1254	2200	1584	3200	1649	3200	1562	3200
Buses	500	5000	2610	7500	3658	8500	4279	8600	4516	8500
Water transport	5	8	16	56	36	74	44	85	54	103
Air transport	56	228	414	1295	990	3683	1130	5243	1261	9363
Total	1745	7536	4294	11051	6268	15457	7102	17128	7393	21166

Sources: Eesti Statistika Aastaraamat, Tallinn (various years); Eesti Arvudes 1989, Lühike statistika kogumik, Tallinn 1990; Transport and Communications Statistical Yearbook of Finland 1991, Helsinki 1991.

Table 37. Turnover of passengers by modes of transport, %

Mode of transport	1960		1970		1980		1985		1989	
	Est.	Fin.	Est.	Fin.	Est.	Fin.	Est.	Fin.	Est.	Fin.
Railway	45.7	30.5	29.2	19.9	25.3	20.7	23.2	18.7	21.1	15.1
Buses	50.8	66.4	60.8	67.9	58.4	55.0	60.3	50.2	61.1	40.2
Water transport	0.3	0.1	0.4	0.5	0.6	0.5	0.6	0.5	0.7	0.5
Air transport	3.2	3.0	9.6	11.7	15.8	23.8	15.9	30.6	17.1	44.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Sources: See Table 36.

the share of bus transport in passenger turnover has steadily increased, though in recent years slowly. In Finland this share has decreased, especially in recent years. The share of railway transport has decreased both in Estonia and Finland.

Data on interstate water transport of Finland is unavailable for the years before 1985, so that only internal transport has been taken into account. Thus only internal freight turnover is reflected in Tables 38 and 39. In freight turnover the railway transport has the biggest share in Estonia. In Finland the lead is held by motor transport, the share of which seems to have increased even more in recent years.

If taking into account also the freight turnover of interstate sea transport, the share of water transport is the highest in both countries. The share of water

Table 38. Freight turnover, mill. tkm

Mode of transport	1970		1980		1985		1989	
	Est.	Fin.	Est.	Fin.	Est.	Fin.	Est.	Fin.
Railway	5049	6270	5919	8336	6446	8066	7609	7958
Lorries	2345	13200	4218	18400	4406	20800	4761	25700
Water transport	144	2359	138	3395	164	2692	54	2727
Air transport	6	1	12	2	11	2	9	2
Total	7544	21830	10287	30133	11027	31560	12433	36387

Sources: See Table 36.

Table 39. Domestic freight turnover by modes of transport, %

Mode of transport	1970		1980		1985		1989	
	Est.	Fin.	Est.	Fin.	Est.	Fin.	Est.	Fin.
Railway	66.9	28.7	57.5	27.7	58.5	25.6	61.2	21.8
Lorries	31.1	60.5	41.0	61.1	40.0	65.9	38.3	70.6
Water transport	1.9	10.8	1.3	11.3	1.5	8.5	0.4	7.5
Airt transport	0.1	0.0	0.1	0.0	0.1	0.0	0.1	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Sources: See Table 36.

transport in Estonia has increased a lot as compared with 1985. It is connected with vessels carrying grain from America.

As it was not possible to freely obtain private cars in Estonia, the state had to take care of the development of public transport. The result is the rather well-developed public transport network in Estonia. The use of public transport in Estonia and Finland is characterized in Table 42 and Figure 31. Estonian inhabitants use public transport on an average twice as much as Finns. This is due to the fact that the percentage of the Estonian population who has a possibility to use private cars is much smaller than that of Finns. In Finland there are nearly 3 times as many private cars per 1000 inhabitants as in Estonia.

Table 40. Freight turnover, including interstate transport, mill. tkm

Mode of transport	1985		1989	
	Estonia	Finland	Estonia	Finland
Railway	6446	8200	7609	8100
Lorries	4406	22000	4761	27000
Water transport	9334	169840	14583	148307
Air transport	11	84	9	137
Total	20197	200040	36962	183544

Sources: See Table 36. Data for Finland is partly estimated.

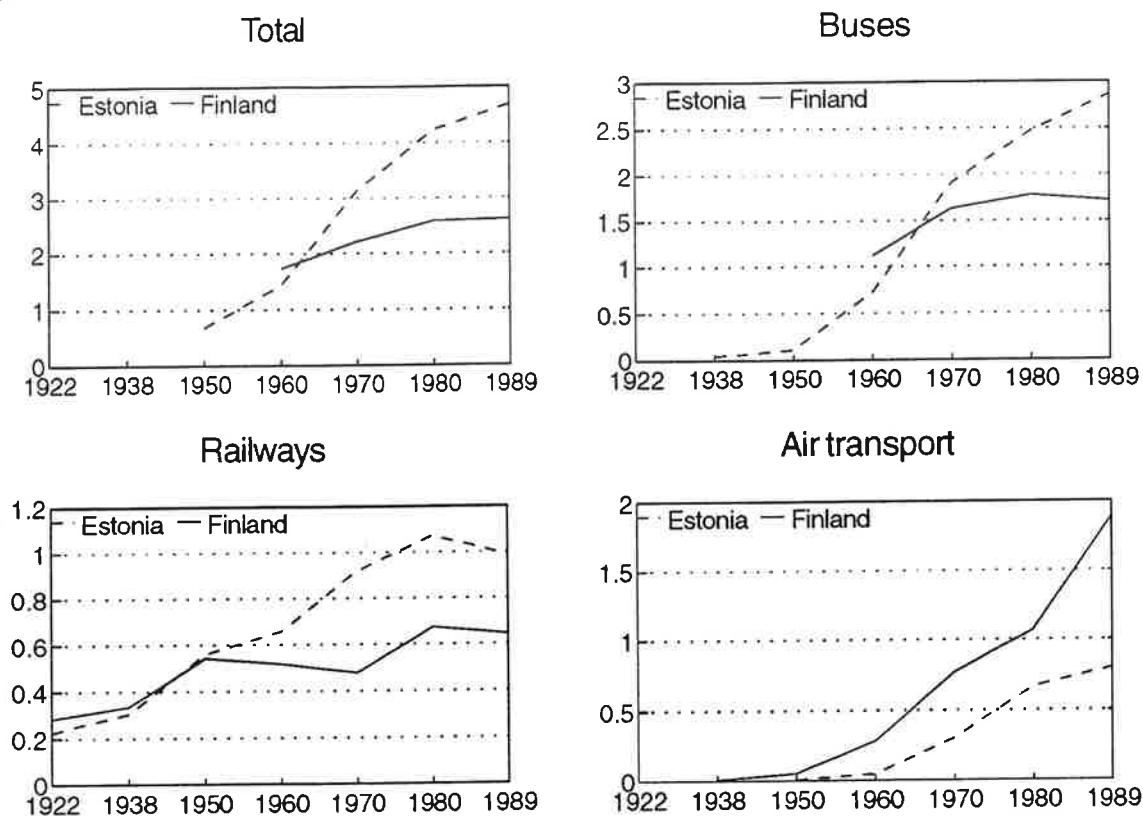
Table 41. Freight turnover by modes of transport, including interstate transport

Mode of transport	1985		1989	
	Estonia	Finland	Estonia	Finland
Railway	31.9	4.1	20.6	4.4
Lorries	21.8	11.0	12.9	14.7
Water transport	46.2	84.9	66.5	80.8
Air transport	0.1	0.0	0.0	0.1
Total	100.0	100.0	100.0	100.0

Sources: See Table 36 and Table 40.

Especially noteworthy is the wide difference in the use of buses. One reason here may be the sparse population of the northern part of Finland, which does not enable creation of a dense transportation network. At the same time Finns use air transport more than twice as frequently as Estonians. The cause has to be sought for in the openness of the Finnish community. Air transport is one of the most important types of transport fostering close ties with other countries. In Estonia extensive opportunities for intercommunicating with foreign countries have presented themselves only in the recent years. But within this time air transport has not been able to adapt itself to the increased demand. Besides, air transport was only recently still under the administration of the Soviet Union.

As we can see from the Table 42 and Figure 31 the use of public transport as a whole has decreased in Estonia. Only in the air and water transport can further growth be noticed. It can be explained by the general economic recession, fuel

Figure 31. Use of public transportation, 1000 km/year per capita

Sources: See Table 42.

crisis, political situation and probably also by the effect of the increase of private cars. The increase in the use of water transport in the last few years is connected with the increasing traffic between Estonia and Finland. In 1990 a shipping line between Tallinn and Stockholm was also opened.

From the point of view of the use of transport facilities and attending to passengers the productivity of transport facilities is of great interest. Productivities of public buses and lorries are presented in Table 43.

As we can see the productivity of lorries is on more or less same the level in both countries. In Estonia the productivity has consistently increased, in Finland remained practically unchanged. The situation is quite different in passenger transport. In Estonia the productivity of a bus seat has been almost three times higher than in Finland in the last few years. At the same time in Finland this index is falling. When trying to analyze the essence of the productivity of a bus seat, we can see that the higher the productivity the more crowded the buses are, which in turn means a lower quality of service. At the same time we cannot say

Table 42. Use of public transport per capita, km/year

Year	Total		Buses		Railway		Water transport		Air transport	
	Est.	Fin.	Est.	Fin.	Est.	Fin.	Est.	Fin.	Est.	Fin.
1922					225	284				
1938			43		305	336				
1950	679		111		560	542	3		6	7
1960	1436	1732	729	1125	656	517	4	2	46	51
1970	3146	2218	1912	1631	919	478	11	12	303	282
1980	4236	2590	2473	1775	1071	672	24	15	669	769
1985	4625	2627	2786	1751	1074	656	29	17	736	1068
1986	4729	2492	2840	1746	1111	543	28	19	750	1167
1987	4835	2612	2912	1741	1128	629	28	18	765	1423
1988	4844	2624	2931	1736	1096	646	28	21	789	1650
1989	4686	2612	2862	1711	990	644	34	21	799	1884

Sources: See Tables 34 and 36.

Table 43. Productivity of public motor transport

Year	Productivity of a bus seat thous.km /a year		Productivity of 1 ton cargo-carrying capacity of lorries thous.tkm/a year	
	Estonia	Finland	Estonia	Finland
1960	45.3	24.2		
1970	54.9	24.2	34.9	42.4
1980	57.0	21.7	42.6	37.2
1985	58.8	21.0	38.4	37.9
1986	58.6	20.8	38.9	37.6
1987	59.3	19.9	39.6	38.7
1988	59.6	20.0	40.2	38.3

Sources: See Table 36.

that when productivity is three times higher the quality of service is three times lower. First, the concept of the quality of service is rather difficult to define and secondly, when the crowdedness of a bus decreases to a certain level the quality

of service does not rise any more, and thirdly, the quality of service depends not only on the crowdedness of buses but on many other factors too.

The reason for such a situation in the productivity of buses and lorries must be sought from the economic development as a whole. In the conditions of the slow development of the Soviet economy the quality of personal services has not been paid sufficient attention. Attainment of economic indicators has been much more important, though they were on the low level as well. Paying attention to the quality of services could have lowered the economic indicators even more. In the use of lorries the situation is different: every society is interested in using them more effectively. Therefore there are no major differences in the productivity of lorries.

2.4.3 Financial sector

In this section the Estonian financial sector is discussed more thoroughly, because the arrangements in Estonia have so many different features when compared to financial sector in western countries. The treatment of the Finnish financial sector is mainly conducted so that the banks are taken as one production sector among the others, while actual financial policy issues are left aside.

From 1940 till the end of the period under discussion the Estonian financial sector was a part of the USSR finances and the Estonian budget was subordinated to the USSR budget.

The monetary policy and emission of money was controlled by the State Bank of the USSR (Gosbank). In addition to that there were several branch banks, for example for construction, industry, agriculture etc. in the USSR which provided banking services to enterprises. These banks had their offices in the Union republics, including Estonia. At the same time it should be mentioned that banks had a secondary role in the Soviet economy. Problems of allocation of investments or credit as well as the problems concerning the interest rates were in principle solved on the government level through plans. The banks actually had to carry out the financing of these activities which were included in the plans. Possibilities for extra-plan financing of economic activities were very small. As the banks were specialized there was no competition between them.

The banking system of the USSR was used for introducing economic pressure against Estonia in the late 1980's. At first transactions were concentrated into the central banks in Moscow to have total control over economic activities of Estonia. Later there arose problems of very slow transactions - sometimes it took

half a year to transfer sums from one account to another. The foreign exchange rates of the rouble were kept unrealistically low for quite a long period. About 2000 additional coefficients for converting export revenues into internal roubles and import expenditures from roubles into foreign currencies were used for running foreign trade. At the end of 1980's a tourist rate was introduced, which meant a devaluation of the rouble by about 10 times, as compared with the official rate, for currency exchange to individuals. In 1991 the commercial rate for enterprises was introduced, which devalued the rouble approximately 3 times. The Bank of Estonia began the notation of the rouble for residents and tourists in 1991, at the same time the currency auctions for enterprises were started.

At the end of 1991 the quotations of the Bank of Estonia exceeded 200 and auction rates 400 times the official exchange rate of the rouble. In order to promote the independent monetary policy and protect the Estonian economy from the uncontrolled inflation of the rouble Estonia introduced its own currency, the kroon, in 1992.

Interest rates on savings and loans were kept low even at the end of the 1980's when the inflation was increasing. It added tension to the consumer goods market and to the investment goods market as well. The situation may be described as a loose budgetary constraint both for enterprises and individuals. The debts of agricultural enterprises are large and actually nobody is responsible for them now that agriculture is going to be privatized.

After World War II the Soviet Union borrowed from its population great sums as the population was forced to buy the state loan certificates. This period lasted up to the end of the 1950's. These bonds were finally paid back to inhabitants by the end of the 1980's. In 1991 compensations were partly paid to the people who had suffered from the Stalinist terror. But all these compensations were paid back in currency which had lost its purchasing power.

The savings of the population in savings banks increased from 1.1 to 2.3 billion roubles in 1981 -1989 and then dropped to 2.0 billion roubles at the end of 1991. Since the inflation processes accelerated at the end of 1980's there developed an almost permanent shortage of cash. People lost their trust in the rouble, so they tried to invest their money in durables or any kind of consumer goods. Banks were not able to pay out cash from deposit accounts, in 1991 the difficulties with refunding wages and salaries became extremely complicated. All these difficulties were accelerated by the aversion of inflation and monetary reform. As the accounting between banks had become complicated and many enterprises had lost their trust in banks, cash was partly introduced (illegally) into accounting between enterprises.

Banking system changed at the end of 1980's. At first some commercial banks were established. Then the Central Bank of Estonia was founded. The Estonian Office of State Bank of the USSR was merged into the Bank of Estonia finally on January 1, 1992. The total number of employees in the field of finance and state-owned insurance activities was about 4 thousand (0.5 % of the total number of employees) throughout the 1980's.

The budgeting system of Estonia was subordinated to the budget of the USSR during the whole socialist period. The budgets of the Soviet republics had no independent meaning at all and they served as means for funding the activities included in the plans. The budgetary expenditures were fixed first, then the possible revenues of the republican budgets were calculated. Since the revenues were smaller than expenditures then from the central budget of the USSR, some sums were added to the revenue side of the republican budgets. These transfers were fixed as a percentage from the turnover tax which was regarded as the centralized revenue of the USSR budget.

In addition to that one must bear in mind that a considerable share of enterprises were subordinated to the all-Union ministries. The financing of these enterprises was organized through the all-Union ministries (besides defence, security, police forces etc. also such ministries as electricity and power generation, chemicals, several ministries in the field of engineering, railroad and sea transportation, etc.) and these transfers were not reflected in republican budgets at all. Hence, the budget of Estonia up to 1990 gives a very restricted and not very reliable picture of the Estonian economy.

Insurance services were formerly provided only by the state-owned insurance companies through the whole socialist period of Estonian economy. There was actually no competition in this field. Competing insurance companies have been established only in the 1990's.

The Finnish banking sector has been functioning on a private basis during the whole post-war period. The government has been present in the banking business through Postipankki, which was reformed into a joint stock company only recently. Government still owns all the shares. Government has also other means to be present in the field of banking. It has also some institutions for granting loans for special purposes, such as for housing, agriculture and industry in the underdeveloped areas of the country among other things. Government has also participated in the financial markets as a borrower by issuing bonds on both the domestic and foreign markets.

The private banks can be divided into two blocks. The commercial banks are

located mainly in cities and towns and are organized in joint stock company form. The savings banks and cooperative banks are mainly based in rural areas. Nowadays all groups of banks are functioning nationwide.

Although Finnish banks are privately owned the financial markets have been rather heavily regulated until recently. The Bank of Finland, which is controlled by the Parliament, set the base interest rate, against which the interest rates of all loans and deposits were tied with a margin which likewise could not be freely set by the banks. Also the capital movements between Finland and other countries were regulated.

The regulation led to strange phenomenon in the competition between banks. When the banks could not compete for deposits with the price of the money, the interest rate, they had to find other ways. All kinds of services were attached to the accounts free of charge. The quality of services was also enhanced by building more and more luxurious premises in which bank service took place.

On the loan market the situation was also strange. Although the government and The Bank of Finland did not have any influence on individual loans, the average interest rate of loans was kept down by regulation. For many years the real interest rate was even negative. There was a constant excess demand for loans. When the price of money could not keep the loan market in balance, other ways had to be found out. Banks could select very carefully to whom they gave a loan. Good security for a loan could be arranged easily in a situation where property prices were constantly rising with inflation. For private persons many kinds of preconditions were set before granting a loan, for instance part of the loan sum had to be saved in advance in the bank or the borrower had to accept an arrangement in which his salary went directly to his account in the bank.

This regulated environment gave the banks a good change to expand their operations and services. Only in the late 1980's, when regulation was abolished, was it found out that improvement would have been needed instead of expansion.

In the liberation process of the Finnish financial markets the loan market was liberated first. This led to tremendous loan expansion, during which the need of safe securities was often forgotten when the banks went on in their battle for market shares.

First signs of difficulties were seen when the interest rates on deposits were likewise set free and banks had to compete for deposits, which drove their interest rates up. At the same time borrowing from abroad was gradually set free and the money of Finnish banks seemed to be too expensive at least for the best

clients. Banks had to settle for those customers that had no alternative but to pay the higher interest rates.

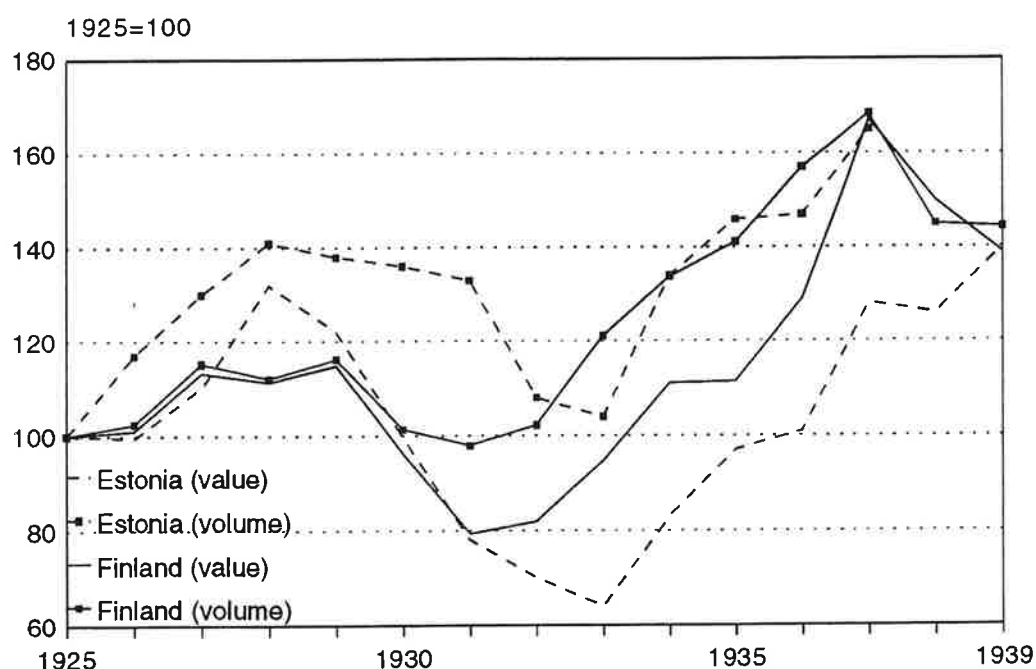
When the rest of the economy sunk into the recession the difficulties of the banks started. The sum of non-performing loans rose sharply and thereafter so did soon credit losses. In 1991 credit losses were about 6 billion FIM and the year 1992 is expected to be worse. The Bank of Finland has already taken control of one bank and a fund of 20 billion FIM has been raised to save the banks from bankruptcy. The banks are now in the process of cutting back on their operations and personnel.

The insurance branch in Finland is largely based on private insurance companies, although a large part of the insurance is obligatory, for instance pension insurance and insurance for employees against accidents. Also insurance for motor vehicles is partly obligatory. On the part of obligatory insurance the operations of the insurance companies are regulated by government. Obligatory insurance constitutes more than half of the entire insurance business.

3 FOREIGN TRADE

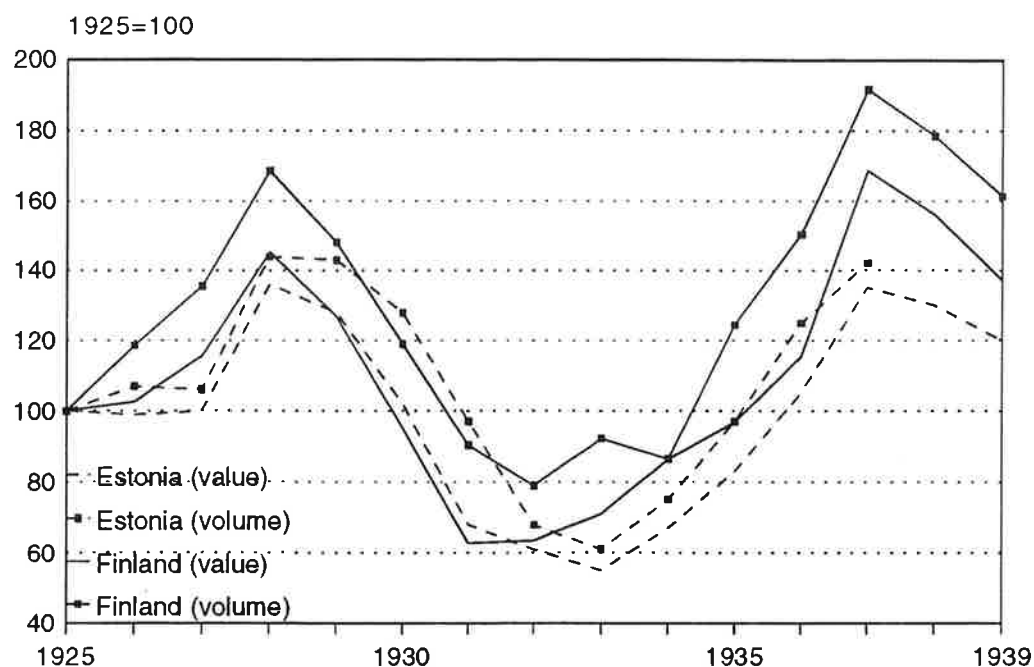
In the development of the foreign economic relations of Estonia and Finland there are relatively few informative fixed points so that the comparative analysis of the two neighbouring countries proves to be more complicated than in most other spheres of economic activity. In the inter-war period the unitary economic-statistical criteria were just being established. Later the foreign economic relations between Estonia and Finland have been difficult to compare already because of their essence.

Figure 32. Export of Estonia and Finland in 1925 - 1939



Sources: See Table 44.

Term 'Estonian foreign trade' must be used with reservations for the post-war period. Economic relations of Estonia with other areas of the Soviet Union were not usually called foreign trade but simply economic relations or commodity exchange. In the communication with the outside world Estonia was not an independent subject either since this was a monopoly of all-Union foreign trade associations up to 1987. In addition to that for the unitary economic system of the Soviet Union union republics almost did not exist. Only the years 1957 - 1964, i.e. the time of the so-called economic model of Hrushtchov, were a kind of exception. As there were no republics they had no economic relations either.

Figure 33. Import of Estonia and Finland in 1925 - 1939

Sources: See Table 44.

This statement is confirmed by the lack of even primitive statistical reports on the 'economic relations' of the union republics. Complete statistical information on the Estonian imports and exports, i.e. relations with other union republics as well as with foreign countries, were collected in the course of separate studies which were necessary for preparing the input-output tables for 1961, 1966, 1972, 1977, 1982 and 1987.

Since 1940 Estonia and Finland have developed in different ways. This naturally holds also for their foreign economic relations, which in 1920 - 1930 had developed rather synchronously (Figures 32 and 33). After World War II Finland integrated ever more into the world economy, while for Estonia the end of independent statehood meant the beginning of isolation from the world market. The share of Finland in world trade has been around 0.7 - 0.8 per cent during the past decades. Estonia, on the other hand, ceased to be an internationally recognized entity in the world market in 1940. Integration of the Finnish economy into the world economy in the post-war period is marked primarily by such events as joining the IMF (1948) and GATT (1950) and becoming an associate member with EFTA (1961, full and equal member since 1985) and the EEC (1973). Former economic relations of Estonia with foreign countries had

to be replaced by 'dense brotherly cooperation with other Soviet republics', the result of which is the abnormally swollen eastern trade and low competitiveness of the Estonian production in the world market. The eastern trade of Finland developed from the war reparations worth 300 million gold dollars paid to the Soviet Union.

Table 44. Foreign trade turnover of Estonia and Finland in 1920 - 1939, in the prices of each respective year

	E S T O N I A				F I N L A N D	
	Mill.FIM*		Mill.Est.kroon		Mill.FIM	
	Export	Import	Export	Import	Export	Import
1920	263	299	19.6	22.2	2896	3626
1921	330	647	24.2	47.4	3341	3585
1922	714	829	52.8	61.4	4436	3969
1923	666	1088	61.8	101.0	4365	4600
1924	767	799	75.3	78.5	4884	4715
1925	1021	1019	96.6	96.5	5555	5519
1926	1016	1009	96.2	95.6	5615	5667
1927	1118	1019	105.8	96.4	6286	6385
1928	1351	1385	127.1	131.4	6190	8012
1929	1244	1303	117.5	123.0	6376	7001
1930	1018	1039	96.4	98.4	5345	5247
1931	799	689	71.1	61.2	4403	3464
1932	715	619	42.6	36.9	4551	3502
1933	651	558	45.6	39.0	5259	3928
1934	852	682	69.0	55.3	6171	4776
1935	989	849	80.1	68.8	6192	5344
1936	1027	1072	83.2	86.8	7159	6369
1937	1309	1371	106.0	111.1	9282	9306
1938	1283	1323	103.9	107.2	8334	8607
1939	1431	1227	118.2	101.4	7710	7572

* By the average annual exchange rates of the Tallinn exchange.

Sources: Hjerpe, R.: The Finnish Economy 1860 - 1985, Growth and Structural Change, Helsinki, 1989; Recueil Mensuel du Bureau Central de Statistique de l'Estonie, Tallinn Statistical Yearbook of Finland, Central Statistical Office of Finland, Helsinki; Statistique Economique de l'Estonie, Commerce Extérieur, Tallinn.

The foreign trade turnover of Estonia and Finland in 1920 - 1939 is presented in Table 44 and in 1940 - 1989 in Table 45.

Table 45. Foreign trade turnover of Estonia and Finland in 1940 - 1989, in the prices of each respective year

	E S T O N I A		F I N L A N D	
	Mill. SU roubles		Mill. FIM	
	Export	Import	Export	Import
1940			2870	9160
1945			5220	6820
1950			81470	89140
1955			181250	176960
1960			316470	340300
1961	497	529	337400	369020
1966	927	941	4817	5524
1972	1650	1785	12082	13107
1977	1990	2171	30931	30708
1982	2405	2949	63026	64751
1987	2904	3634	85516	2807
1989	3123	3818	99782	105519

* In 1963 the nominal value of the FIM was changed: 100 old FIM equals 1 modern FIM.

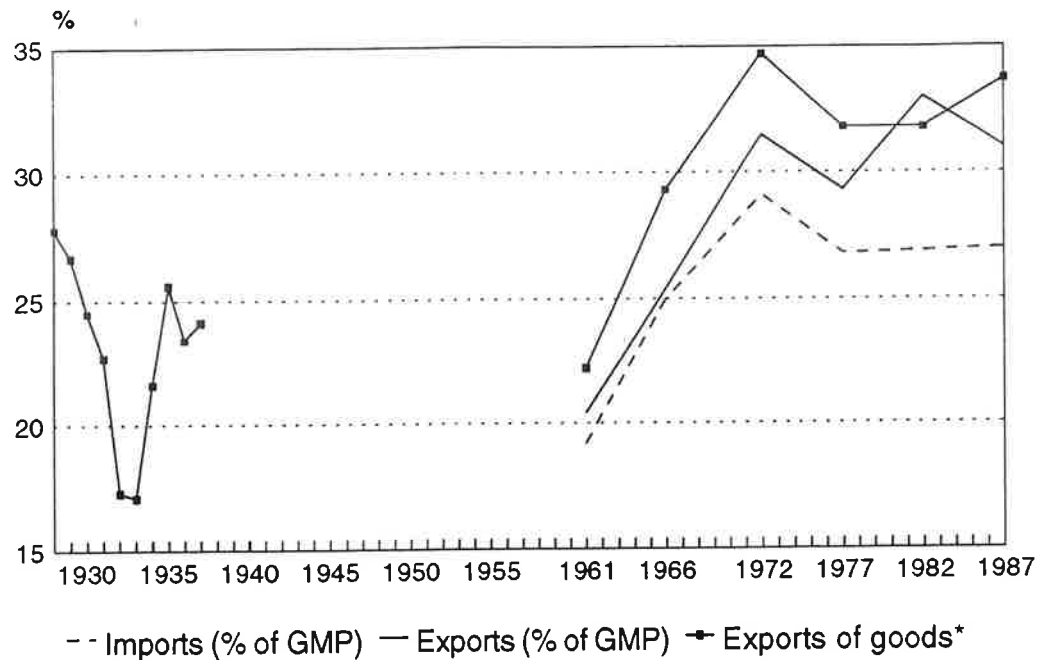
Source: The input-output tables of Estonia (1961...1989); Finland's Balance of Payments Statistics, Central Statistical Office of Finland; Hjerpe, R.: The Finnish Economy 1860-1985, Growth and Structural Change, Helsinki, 1989; Statistical Yearbook of Finland, Central Statistical Office of Finland, Helsinki.

3.1 Openness of the national economy

The Finnish and Estonian economies have always been characterized by extensive foreign relations. Unfortunately we have no statistical information which would enable comparison of the openness of the Estonian and Finnish economies and the changes which have taken place during a longer period. We have to use different indicators (Figures 34 - 36) which have had a different methodical essence in the course of time.

As to Estonia, only a few indicators, mainly those of the so-called casual character, are suitable for international comparisons. For example, as regards the volume of exports per capita (data of the League of Nations) Estonia occupied

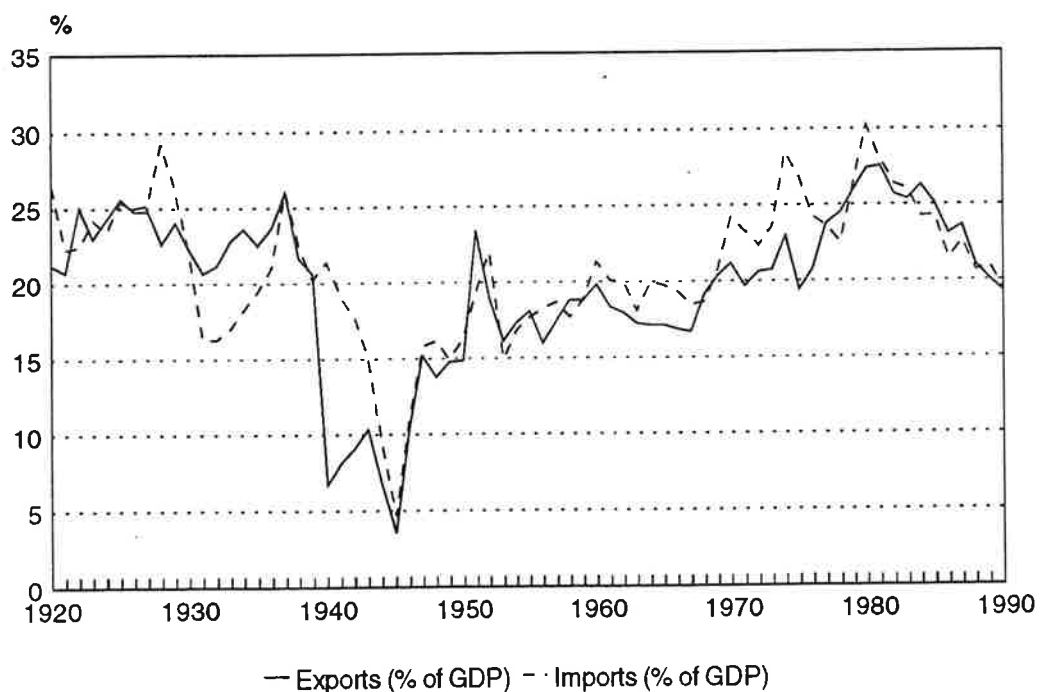
Figure 34. Intensiveness of Estonian foreign trade in 1928 - 1987



* Exports of industrial and agricultural goods as a percentage of their production.

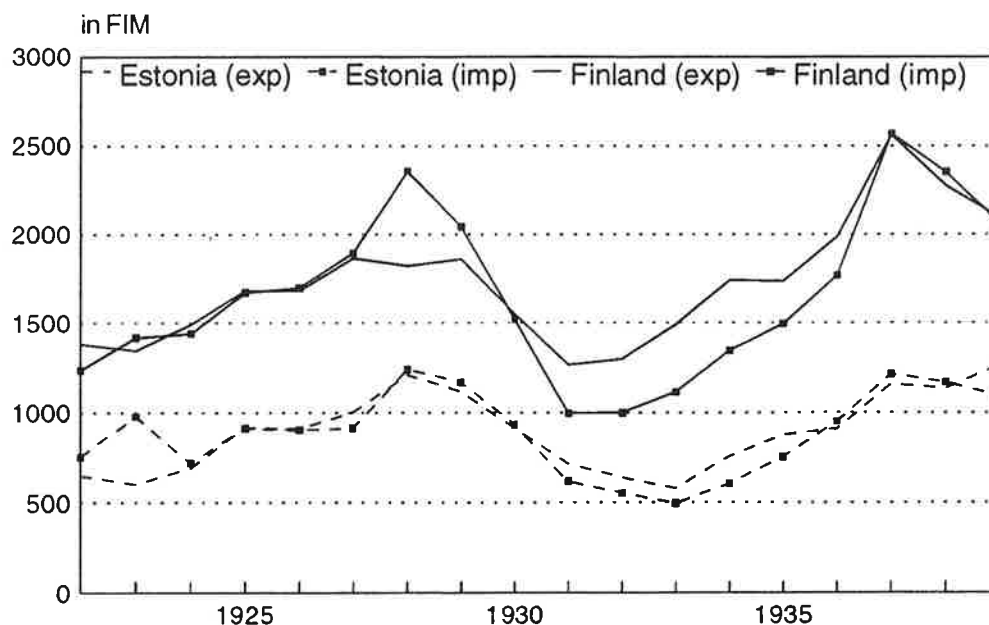
Sources: Eesti majandus 1938. a., The input-output tables of Estonia.

Figure 35. Intensiveness of Finnish foreign trade



Sources: Hjerpppe (1988), Finnish National Accounts.

Figure 36. Foreign trade per capita in Estonia and in Finland in 1922 - 1939



Sources: As in Table 44, also Eesti statistika and Statistical yearbook of Finland.

in 1938 the 12th place in Europe with 14.6 old gold dollars, and the 13th place with 15.2 gold dollars by the volume of imports. Finland occupied the 8th (29.1 old gold dollars) and 10th (29.5 gold dollars) places respectively (Statistical Year-book of the League of Nations, 1940). Figure 36 is presented to compare Estonia and Finland for this indicator during the whole inter-war period.

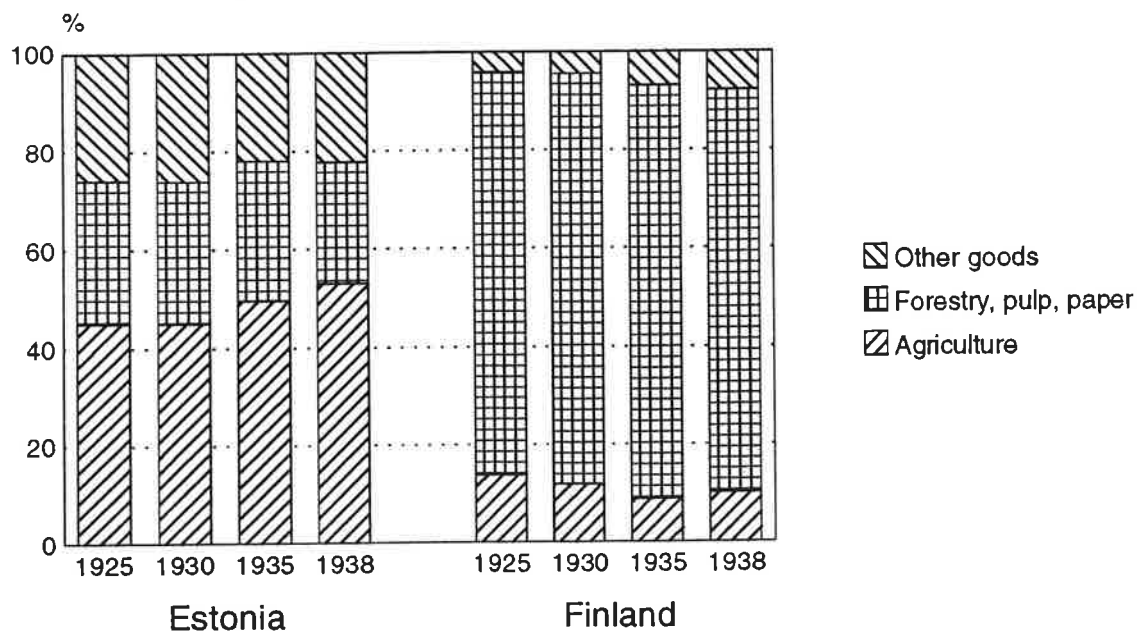
Finland occupies approximately the 10th place by the per capita volume of imports and exports in Europe also today. In 1987 its imports were 4484 USD and exports 4422 USD (United Nations, Monthly Bulletin of Statistics, 1991). The Soviet Union State Department of Statistics estimated the exports and imports of Estonia per capita respectively at 2087 and 3524 USD (Argumenty i fakty, 1989, No 50). This was done in connection with the discussion concerning the debts of the republics which culminated in 1987 - 1988.

The ratio of exports to GDP of Estonia was 49 - 50 % in 1987 - 1989 (excluding export of services), which is more than twice as much as that of Finland (see Figure 35). In 1991 the ratio of exports to GDP in Finland was less than 22 %, which is considered to be too low to restore the balance of the Finnish economy.

3.2 The structure of foreign trade

The structure of foreign trade, especially that of exports in both countries, has considerably changed in the course of time owing to internal and external factors. From 1920 to 1930 the export structure of Estonia was more varied than that of Finland. For example, the share of forest products (timber, wood products, pulp, paper) in Finnish exports approached 85 % in some years, besides which agricultural production was the only noteworthy class of goods (Figure 37). The major exports of Estonia at that time were butter (17 - 36 % of the total value of exports in 1925 - 1938), timber (6 - 18 %), textile products (9 - 19 %), pulp (8 - 13 % in 1930's), paper (6 - 12 % in 1920's) and flax (10 - 22 % in 1923 - 1927). The share of machinery and equipment was 1 - 3 % in both Finnish and Estonian exports.

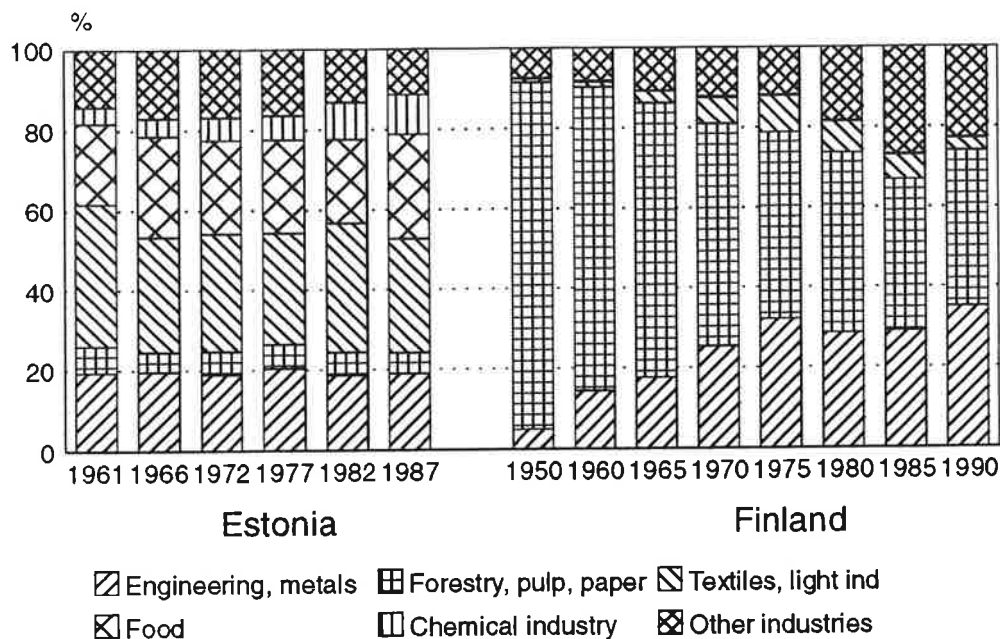
Figure 37. The structure of Estonian and Finnish exports in 1925 - 1938



Sources: Statistique Economique de l'Estonie, Statistical yearbook of Finland.

Within the post-war decades the structure of Estonian exports was still more diverse than that of Finland, but at the same time, unlike in Finland, without distinct development trends. In Finland the aim was to reduce the share of wood products and increase the share of machinery and equipment. This goal was also partly achieved, due among other things to the exports to Soviet Union, which

Figure 38. The structure of Estonian and Finnish exports after 1950



In Finnish data 'other industries' includes food industry, chemical industries and basic metal industry.

Sources: The input-output tables of Estonia, Finnish customs statistics and Hjerpe (1988).

included a smaller share of products of forest industries than exports to western countries (Figure 38).

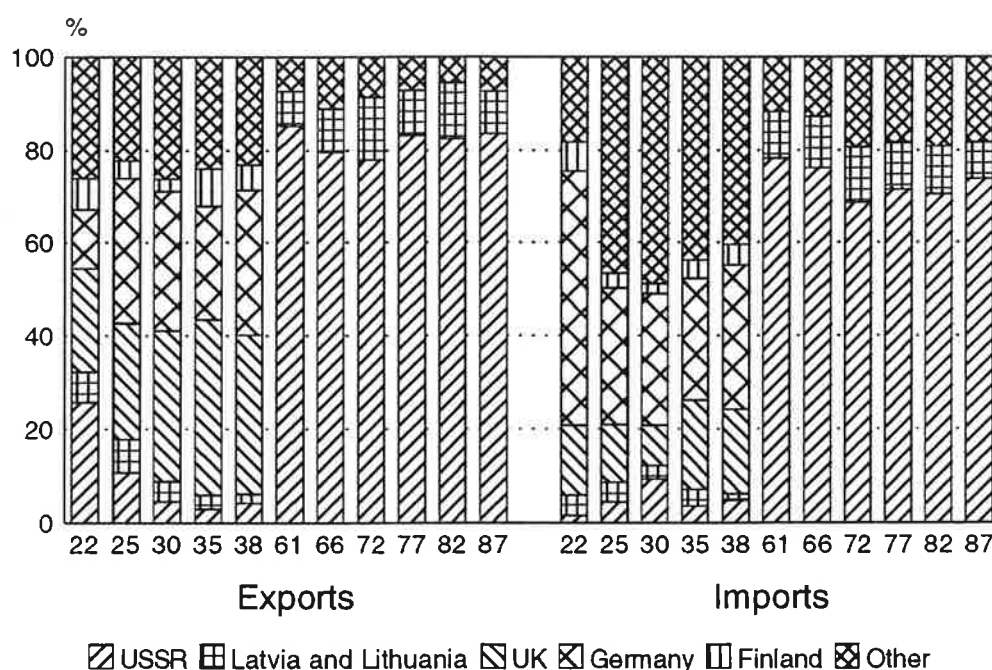
The structures of Estonian and Finnish imports have been relatively more stable and at the same time more alike. Raw materials, intermediate products and energy carriers have predominated in the imports of both countries (in Finland 60 - 75 % of the total imports, in Estonia 25 - 35 % in the inter-war period and 40 - 45 % in the last few decades). Some 10 - 15 % of the Finnish imports has usually fallen to investment goods. The same applies to the imports of Estonia of the last decades, in the 1920's and 1930's their share was 8 - 25 % of the Estonian imports. The share of consumer goods in the import structure of Finland has usually been 15 - 20 %, in Estonia approximately 25 - 30 %.

3.3 Geographical structure of foreign trade

In the 1920's and 1930's there were many common features in the geographical structure of foreign trade of both countries. Both Estonia and Finland exported mainly to Great Britain, with the biggest import partner of both countries being

Germany. Common features were also the decaying trade with the Soviet Union and modest contacts, as compared with later years, with neighbouring countries (Finland with Sweden and Estonia with the other Baltic states). Their mutual trade was important mostly for Estonia as Finland was the 3th to 4th among her export partners (in 1922 - 1938 the share of Finland in Estonian export was 2.6 - 8.4 %) and 5 - 7th among her import partners (1.7 - 6.4 %). The share of Estonia in the foreign trade of Finland was around 1 % in the best years.

Figure 39. Geography of the Estonian foreign trade

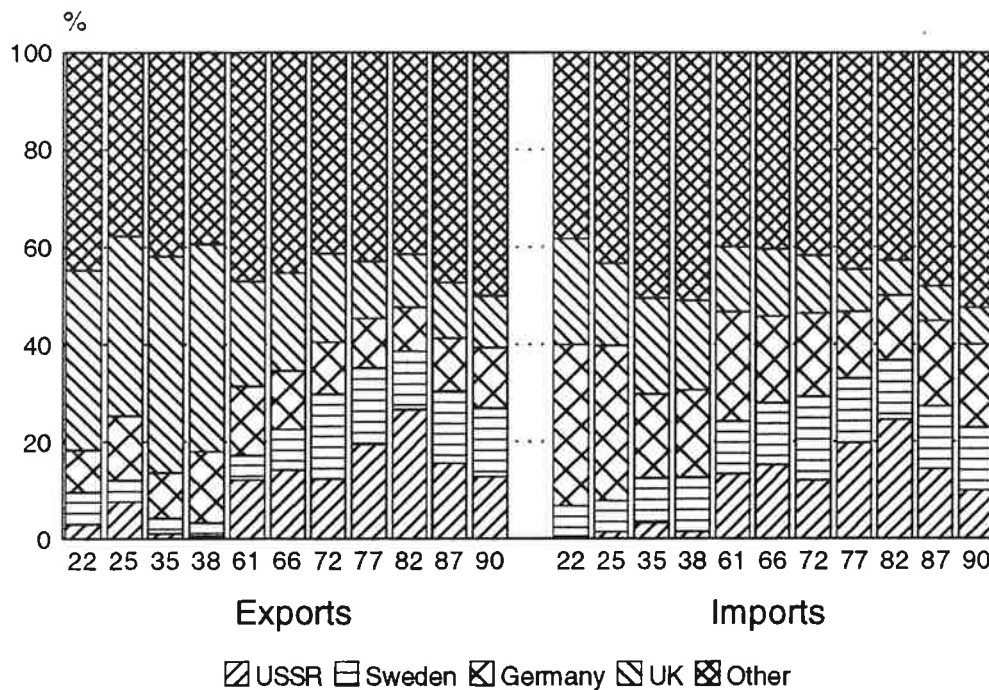


From 1961 on the group 'Other' includes Great Britain, Germany and Finland.

Sources: The input-output tables of Estonia, Statistique Economique de l'Estonie.

After World War II the geographical structure of both Estonian and Finnish foreign trade changed considerably. The annexation of Estonia by the Soviet Union signified a 'pure' eastern orientation for Estonia in its foreign relations. The term 'eastern market' appeared also into the Finnish foreign trade - in connection with war reparations to the Soviet Union, the share of which was 28 % of the total exports of Finland in 1945 - 1949. A new boom in trade between Finland and the Soviet Union, based on the 5-year bilateral trade agreements, started in the 1970's in connection with the rise of world market prices of oil and raw materials. During the recent decades the four major trade partners of Finland have been Germany, Sweden, Great Britain and the Soviet Union (Figure 39).

Figure 40. Geography of the Finnish foreign trade



Sources: Statistical yearbook of Finland, Suomen taloushistoria, osa 3.

The former orientation of Estonian foreign trade towards the west was overnight replaced by eastern trade. For example, in the 1980's 93 -95 % of the Estonian exports went to the Soviet Union and only 5 - 7 % to foreign countries. The share of foreign countries in Estonian imports was somewhat higher (nearly 20 %) which was "attained" by establishing high domestic prices on goods imported from there as well as on account of goods later re-exported to other areas of the Soviet Union for roubles. Such a one-sided geographical structure of the Estonian foreign trade is the result of autarchic economic policy of the Soviet Union. On the one hand, the appearance of the production of Estonian enterprises to the world market did not depend so much on the competitiveness of production as on the all-Union export possibilities and needs. On the other hand, the overcentralized foreign economic mechanism regulated by the Moscow authorities down to the minute details dampened the interest of a producer in entering the world market.

The major trade partners of Estonia in the Soviet Union were Russia, Ukraine, Latvia, Byelorussia and Lithuania. Outside the Soviet Union the most important countries were the members of CMEA. Among OECD countries Finland has been the biggest trade partner of Estonia.

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