DOCUMENT RESUME

ED 438 456 CE 079 777

AUTHOR	Eamets, Raul; Philips, Kaia; Annus, Tiina
TITLE	Background Study on Employment and Labour Market in Estonia.
INSTITUTION	European Training Foundation, Turin (Italy).
PUB DATE	1999-08-00
NOTE	123p.; For background studies of other countries, see CE 079 775-780.
AVAILABLE FROM	For full text: http://www.etf.eu.int/etfweb.nsf/pages/downloadestonia.
PUB TYPE	Reports - Research (143)
EDRS PRICE	MF01/PC05 Plus Postage.
DESCRIPTORS	Adult Education; Developing Nations; *Economic Change; Educational Change; *Employment Patterns; Foreign Countries; *Job Development; Job Training; Labor Economics; *Labor Market; Labor Supply; Postsecondary Education; Secondary Education; *Unemployment; Vocational Education; Welfare Services
IDENTIFIERS	*Estonia

ABSTRACT

During the years 1989-1997 in Estonia, employment has decreased; unemployment and inactivity have increased. Females have tended to move to inactivity while males have become unemployed. The wage patterns are very flat relative to those in market economies. Estonia has opted for very low levels of unemployment benefits, pensions, and a low minimum wage. Public sector employment has decreased drastically. The largest share of private sector employees are involved in the service sector. There is a substantial regional and occupational mismatch of vacancies and unemployed people. Participation rates have dropped for all age groups, with the largest decline among older people. The labor demand for younger members of the labor force has increased dramatically. Since most unemployment is structural, the only possible conclusion is that vocational secondary education and job training have not been flexible enough to satisfy labor market needs. Studying at vocational education and training institutions is the second-best choice for young people; school leavers prefer academic higher education. No formal training system exists for adults who face changes in job functions or dismissal. Labor policy is very restrictive and passive. (Appendixes include: data tables; labor force surveys; ethnic composition of population; legal regulation of the labor market; and education system. Contains 22 references.) (YLB)

Background study on employment and labour market in Estonia

Raul Eamets
School of Economics and Business Administration
University of Tartu

Kaia Philips
School of Economics and Business Administration
University of Tartu

Tiina Annus
National Observatory

Tartu
August 1999

Foreword

This study is part of the preparation process for the accession of Estonia to the European Union. The readiness of the country to join the EU is described in terms of a factual description and analysis of the labour market. The study provides a background for the employment reviews prepared by Directorate General V of the European Commission and has been written under the supervision of DG V and the European Training Foundation.

The study was conducted during the period when initial evidence of the recession caused by the financial crises in Russia was becoming obvious. However, time was too short to draw any serious conclusions as yet, and most of the data analysed in the text are from the period 1989-1997, which was a period of success for the Estonian economy and labour market. Hopefully the Estonian economy will recover from recession soon, but a small and open economy is and will remain very vulnerable to international market forces in the future as well. Therefore the EU umbrella providing economic and social guarantees in the future will definitely increase the economic and social security of the whole of Estonian society. In general we share rather optimistic views about the current labour market situation and its future development.

It is very difficult to give a good analytical overview with such limited space and such vast statistical information, and even after careful checks it is likely that some errors will remain uncorrected. All of them are our sole responsibility. Finally, to facilitate orientation in the tables in the main text, they are numbered following the guidelines of the project. We also provide additional and/or more detailed tables in the appendix and number these consecutively in the order of appearance within chapters.

The study was written according to the Terms of Reference of DG V and the European Traininng Foundation, and an outline and guidelines provided by the EU advisers: Susanne Oxenstierna, Stockholm University, and, especially for Chapter 6, Japp de Koning, Netherlands Economic Institute. The drafts of the report were discussed at three workshops during spring 1999 in which the national experts from the Central and East European Countries writing the corresponding background studies for their countries participated. Final editing was done by Ms Oxenstierna and by Mr Timothy Chamberlain of Chamberlain Language Services, Stockholm.

We would like to thank all the various experts, researchers, and administrators who provided useful comments and corrections and who helped us in collecting both data and ideas. Special thanks go to Ülle Pettai of the Statistical Office, Ludmilla Smirnova of the National Labour Bureau and Reelika Arro of the Ministry of Social Affairs. Last, but by no means least, we wish to thank the two EU advisers and the project's co-ordinators from DG V and the European Traininng Foundation, Hjordis D'Agostino and Peter Greenwood, for their invaluable guidance, feedback, and encouragement. The comments of Daniel Munich and Henrik Huitfeldt were also very helpful.

Raul Eamets
National Expert
Team Leader

Contents

Executive summary

This study analyses the Estonian labour market and labour market policies during the transition period. Estonia was invited to the first round of EU enlargement negotiations in 1998, and it also makes a particularly interesting case in that it has opted for far more liberal free market policies than other newly independent states from the former Soviet Union. From the viewpoint of general economic policies, we can state that Estonia has introduced liberal foreign trade, an annually balanced state budget, flat personal and corporate income taxes, subsidy-free agriculture and a currency board system. The above mentioned features are not common in today's economies and thus we can observe Estonian economic development as a unique economic experiment. So far, from 1992-1997, the experiment has been relatively successful compared with other transitional economies. One result was that Estonia achieved 11.4% GDP growth in 1997.

During the transition period (after 1991), total employment decreased, while unemployment and inactivity increased. From the gender point of view, the interesting point is that females have tended to move more to inactivity while males have become unemployed.

An economy in transition is meant to be an economy "on the move". In the case of the Estonian labour market, this means a displacement of workers from "old" industries such as manufacturing and agriculture, and the absorption of these workers (or many of them) in the service sector.

Of the Baltic States, Estonia is the one where changes in the employment structure by industry have been fastest in the last few years, and it is now approaching the average indicators of the European Union. Another positive tendency for Estonia is that employment in manufacturing has decreased less than in the other countries. Also, the sharp increase in employment in the financial sector is a sign of the rapid development of that particular sector.

A negative point is that the sharp fall in employment in agriculture may give rise to additional social problems in rural areas.

Wage differentiation and social welfare

According to research done in Estonia, the wage patterns are very flat relative to those in market economies. The transition lowered relative earnings for those with over 30 years of experience and raised relative earnings for those with less than 20 years of experience. The main driving force behind these changes has been the shift of relative demand towards younger workers. We can also observe a dramatic evolution of the wage-education profile over the course of the Estonian transition. In 1989, the profile was very flat. Relative earnings for university-educated workers rose dramatically during the transition, while relative wages for the least educated groups fell.

Estonia has opted for very low levels of unemployment benefits, pensions and minimum wages. The minimum wage is so low that it fails to serve as a barrier to new hires: prevailing wages are higher than the minimum. Wages are predominantly set by the employers, with few wage controls put into effect by the government in the public sector. There is almost no effective trade union movement raising wages, either, nor is there any policy to keep firms open to avoid layoffs and bankruptcy.

Due to the shortage of money in the state budget and the necessity of keeping it balanced, the contributions to social welfare and benefits are relatively small. At the same time, the growth rate of social benefits lags far behind inflation. A good example is unemployment benefits, where the gross replacement ratio (unemployment benefits divided by average wages) fell from 32% in 1992 to 7% in 1998.

Structural change

In terms of general changes in employment, the biggest change has been the above-mentioned employment shift by sectors. Employment changes by ownership are also very important. Public sector employment has decreased drastically during the transition. The fastest decreases have been in manufacturing, but also in the service sector. Today we face the fact that due to rapid privatisation, most profit-oriented enterprises are in private ownership. Similarly to the position for general employment, we may note that the largest share of persons employed in the private sector are involved in the service sector.

Despite the rapid restructuring of employment, structural imbalances are still increasing. There is a substantial regional and occupational mismatch of vacancies and unemployed people. Regional disparities are growing in Estonia. Unemployment is a serious problem, for example, in the mainly agricultural counties of southern Estonia and in north-eastern Estonia, with its large concentration of heavy industry; unemployment here is mostly connected with the recession of the former all-Soviet enterprises in Narva, Sillamäe and Kohtla-Järve. The bankruptcy of major employers in small towns with only one or two sources of jobs has caused job losses for some people. Moreover, unemployment continues to be a major problem in rural areas. The poorly developed infrastructure there contributes to the lack of further economic investment.

Participation rates have dropped for all age groups during the transition period. The largest decline of participation rates has been for older people, who had relatively high participation rates in the command economy. This fits well with our previous statement that the labour demand for younger members of the labour force has increased drastically. During very dynamic economic development, employers in Estonia have preferred younger employees with greater flexibility for acquiring training and a better knowledge of languages and IT. With the stabilisation of the general economic development, this attitude will probably change.

Employment rates and unemployment

In terms of the educational dimension of the labour market, it can be stated that educated people are more in employment and uneducated people in inactivity. The employment and unemployment rates also depend on educational level. Unemployment rates are higher in groups with lower education, both males and females. In spite of the very large share of employed persons with vocational education, it must be conceded that in a society where changes in the economy are swift, changes in the educational system are unable to keep up with the needs of the economy. Structural unemployment is characterised by the mismatch between people's skills and the actual needs of the economy. Since most of the unemployment in Estonia is structural, the only possible conclusion is that vocational secondary education and job training have not been flexible enough to satisfy the needs of the labour market.

Unemployment in Estonia is the result of transformation from one economic system to another. For transition economies, the underlying reasons for unemployment are of an economic, social and

psychological nature. The impact of macroeconomic shock is reinforced by a passive attitude towards re-training, the low mobility of workers and psychological non-adaptability to the market economy environment.

As in most countries, in Estonia unemployment is measured by labour force survey (LFS) data and by registration data. Both measures have their advantages and disadvantages, but LFS data make it possible for us to compare Estonian data with other countries.

The rapid restructuring of the economy, the low level of unemployment benefits, the decrease in the labour supply, the increase of long-term unemployment and an enlarged shadow economy have been the most important factors influencing unemployment. The unemployment rate has risen from almost zero to 10% between 1991 and 1998. According to LFS data, the female unemployment rate is lower than the male unemployment rate. This is an interesting phenomenon, which is characteristic for Estonia, not for other European countries. One possible explanation is the fact that a large share of the female labour force has moved into inactivity

Large-scale structural changes in the Estonian economy have been accompanied by a significant reallocation of production factors between economic sectors and different geographical regions. These changes can be viewed as a potential source of structural unemployment. By structural unemployment we mean, firstly, that the skills and knowledge people have do not match the needs of the market, i.e., better qualifications are needed. Secondly, labour force needs differ by region. There may be surplus labour in one area, but a shortage in another.

Vocational education and training

The network of vocational education and training institutions in Estonia today has developed out of the network that existed in the Soviet period. The changes of the last ten years, since the proclamation of independence, have had a significant impact on the operations of vocational education and training institutions, especially in terms of the specialities taught. In spite of this, studying at vocational education and training institutions is still the second-best choice for young people. School-leavers' choices after gymnasium reflect a preference for academic higher education. Approximately 25% of the gymnasium graduates continue their studies at vocational education and training institutions. The decision to apply for vocational education and training does not arise from a firm desire to study a certain speciality, but rather simply from a wish to continue studying. This may be one explanation for the relatively high rate of drop-outs from vocational education and training institutions and for the poor job placement rate of graduates.

At present, there is no formal training system in place for adults who are facing changes in their job functions or dismissal. The Ministry of Social Affairs, with its National Labour Market Board, is in charge of developing labour market training schemes including schemes for unemployed people. There are no coherent national training policies covering both initial and adult training.

Labour market policy

Estonian labour policy is very restrictive compared with policies in Central and East European countries and in the EU. This situation will seriously hinder Estonian integration into the EU. Estonia needs a more generous unemployment benefits system. Estonian labour policy has been mostly passive so far, but since unemployment benefits are very low, the share of passive labour policy expenditures in total expenditure is comparatively small, 49.9% in 1998.

The most widespread active labour market policy is labour market training. The number of people participating in training programmes has, however, decreased. This is mostly because the 1995 social security law concerning the unemployed stipulates that training can be provided only to those who are officially registered as unemployed. A further reason for the decline has been the increase in the price of training courses. Employment offices have been assigned the tasks of organising temporary public works for job-seekers and providing retraining allowances to job-seekers and labour market subsidies (wage subsidies) to firms. Active labour market policies in Estonia do not include any special measures to support young people when they are first entering the labour market, or in the case of long-term unemployment.

The process of reorganisation for the Estonian trade unions began already in the last years of Soviet power when the trade unions gave up their role as an executive body and supporter of state power, the state system of social insurance, and the distribution of advantages. The main emphasis was laid upon influencing the employees' working and payment conditions through bilateral and tripartite agreements. Today about 30% of employees in Estonia are trade union members. At present there are two central trade union organisations in Estonia, which together have approximately 160 000 members, and only one confederation representing the employers' organisations in Estonia, covering 6 000 enterprises (with approximately 200 000 employees).

The governing labour market institutions in Estonia are the Ministry of Social Affairs and the Estonian National Labour Market Board, which is under the jurisdiction of the ministry. The National Labour Market Board has had difficulty in making strategic plans for the future, because for several years this institution has faced the threat of reorganisation and reform. Such uncertainty has definitely had a negative impact on labour market policy options. In future, Estonia needs a clearer vision on issues of labour market administration and general policy options. This will definitely be one very important precondition for Estonia in joining the European Union.

1. Introduction

1.1 The objectives of the study

The aim of this study is to provide a background analysis of the current situation in the Estonian labour market, in terms of employment status, the employment policy institutions, employment policy delivery mechanisms and the connection between vocational education and the labour market.

The analysis of the employment situation in Estonia will focus, in particular, on the following topics mentioned in the Terms of Reference. These issues will be analysed in greater detail in the study:

- How did employment change during the transition, how did employment develop in different sectors?
- What is the level of unemployment, how is unemployment measured in Estonia? Why is the share of hidden unemployment relatively high?
- How have wages changed during the transition?
- What is the labour market situation of national minorities?
- What are the regional differences in employment and unemployment?
- What is the situation in vocational education?
- How have institutional changes in the labour market affected employment and unemployment?
- Is Estonian legislation sufficient to create a framework for labour market activities?
- How has social partnership developed in Estonia?

The study is to present factual and descriptive material based on existing data sources, and at the same time provide a summary of key issues that emerge from the analysis.

1.2 Methodology

In the study we have analysed the official statistics on employment-related issues and education published by the Statistical Office of Estonia, the Labour Market Board and other institutions. When possible, we have supplemented the official data with the results of academic studies. In some cases extra data processing was performed in order to analyse some aspects of the labour market. To ensure a reliable description of labour policies we also met people from the labour services and the Ministry of Social Affairs. Some other sources have been used in the analysis, such as earlier reports of national experts to the ILO and UNDP Human Development Reports.

The expert team for the report was as follows: Raul Eamets, who prepared most of the text and accomplished final editing, and Kaia Philips, who prepared sections 2.2, 3.3, 5.3, 7.3, 11 and did draft

editing, of the School of Economics and Business Administration at the University of Tartu. Both authors have participated in several projects on the analysis of the Estonian labour market for different Estonian and international institutions. Tiina Annus of the the European Traininng Foundation's National Observatory prepared sections 6.1, 6.2, and 6.3 in Chapter 6.

1.3 *Limitations*

The analysis of the labour market in Estonia encountered a number of limitations in terms of the availability and reliability of statistics and their lack of comparability with European standards. For example, Labour Force Survey data are presented mainly by age groups 15-69 or 16 until pension age; to analyse ethnical aspects of the labour market we had to use language criteria[1] not ethnicity; the training of adults, the reintegration of the unemployed after completion of training courses, etc.

There are no reliable data on the shadow economy or on hidden employment.

Some of the labour market indicators are not monitored in detailed breakdowns - labour force participation and employment by educational groups is not available.

In the main, variables presented in money terms are reliable only since 1993, after the currency reform in Estonia in June 1992. The Statistical Office of Estonia publishes adjusted data beginning with 1993 and does not publish earlier data as they are very unreliable (influenced by hyperinflation in 1991 and the multiplicity of exchange rates used in the Soviet Union) and are not comparable with previous data. Therefore, we also give some qualitative estimates to compare wages and incomes at present with those before the economic reforms.

The data limitations will be discussed in more detail in direct connection with the text, when data are used.

We provide a concise description of the main sources of information on labour market indicators in the summary table (see Annex Table A1). The table contains an overview of important characteristics of data sources on population, employment, unemployment, wages and salaries, incomes and expenditures, and labour market policies.

1 From the point of view of the labour market, language is more important than the ethnicity of the employees. When employing a person, the employer does not usually ask the person's ethnicity, but is first and foremost interested in finding out which languages the person speaks, and we assume that knowledge of the official language plays an important role in Estonia.

2. General Labour Market Situation in Estonia

2.1 General trends

The Estonian economy in 1989 was part of the economy of the Soviet Union and was closely bound up with the raw material and product markets of the former Soviet Union. Thus at the beginning of the transition period the employment structure in Estonia was not a result of natural (market-oriented) development but rather an artificially shaped structure proceeding from the economic needs of the former Soviet Union. The years since 1989 have been of decisive importance to the Estonian economy. This period covers the years when Estonia constituted a part of the Soviet Union economy (1989-1991), the year Estonia regained its political independence (1991), the year when economic reforms were launched in Estonia (1992) and the initial post-reform years (1993-1997). Drastic changes in the Estonian economy took place in 1992. In June Estonia introduced its own currency, the Estonian kroon, which is pegged to the German mark (1 DEM = 8 EEK). This created a completely new environment for business activities and is considered to be the start of serious economic reforms in Estonia. In general we can conclude with the following statements characterising recent macroeconomic developments in the period 1992-1998 (see Table 2.1):

- The Estonian economy recovered from economic recession in 1995, when GDP showed a positive trend for the first time. The trend has continued since, achieving the highest GDP growth rate in 1997.
- Inflation in Estonia remains continuously high (around 10% per year). High inflation is explained by several external and internal causes (e.g. the purchasing power parity principle, high capital inflow, the fact that the prices of non-tradable goods have not been completely liberalised, etc.).
- A balanced budget has been one of the foundations of the economic policy of newly independent Estonia. However, current Estonian conventions are different from international practice and we do not use terms such as overall deficit or financial deficit. Estonia uses the term balanced budget figuratively, such that revenues and expenditures are always equal. The overall deficit was projected to be about EEK 120 million (0.2% of GDP) in 1997.
- The Currency Board-type monetary system gives credibility to the Estonian economy and helps to prevent speculation against the Estonian currency.
- The trade deficit constitutes 13% of GDP in 1997. This ratio is enormously high even for a developing country.
- The largest share of imports consists of different capital goods (machinery and equipment). This allows us to view the future with some optimism, because the increase in imports of capital goods will transfer in the long run into an increase in the productivity of the Estonian export sector.

Table 2.1: General macroeconomic indicators in Estonia

	1992	1993	1994	1995	1996	1997	1998
Nominal GDP (million EEK)	13,0	21,6	29,6	41,3	52,4	65,1	73,2
Real GDP (yearly change , %)	-14,2	-9,0	-2,0	4,3	4,0	11,4	4,0
Productivity of labour (yearly change in %)	-9,6	-2,0	0,1	9,4	5,9	11,4	na
Real wage growth (yearly change in %)	na	na	na	6,2	2,1	7,6	6,3
Yearly change in employment (%)	-5.09	-7.15	-2.06	-4.70	-1.85	0.03	na
Industrial output (yearly change in %)	na	-19	-3,0	2,0	3,4	13,4	na
CPI (annual average %)	1076	90	48	29,0	23,1	11,2	8,2
Current account deficit (% of GDP)	na	1,3	-7,3	-4,7	-9,2	-12,9	-9,0
Export (% of GDP)	60,5	69,3	78,7	71,3	67,2	77,2	78,3
Import (% of GDP)	54,6	72,6	89,7	79,3	78,7	88,6	87,1
Foreign direct investments (millions USD)	na	157	215	199	111	128	565

Note: na - not available
Source: Transition reports, Statistical Office of Estonia

In the labour market, the emergence and growth of unemployment and decrease in employment fall within the observed period. While in 1989–1990 unemployment practically did not exist, in 1991 it became a reality. A proof of this fact is the statistics of registered unemployment, since the first receivers of unemployment benefits were registered in the summer of 1991. In 1991 the unemployment rate was 1.5%, and it increased to 9.6% by 1998. However, unemployment in Estonia has increased gradually; there has been no explosion of unemployment, involving social disturbances, massive unemployment, etc.

The share of inactive people has increased as well — from 21.1% to 27.5%, mainly due to the growing inactivity of women. In 1989, the share of inactivity among women was 25.6%; in 1997 it was already 33.4%. The increase in both inactivity and unemployment brought a rapid fall in employment. If we observe the changes in the labour market, we notice that there has been a steady decrease in employment during the whole period under observation. In total, employment has decreased by 173 000 people, which constitutes 22% of today's labour force. The employment rate decreased from 78.5% in 1989 to 65.4% in 1997, which still remains higher than the EU average employment rate of 60.5% in 1997.

Table 2.2: Population aged 15–64 by economic status, 1989–1997 (annual average, thousands and %)

	1989	1990	1991	1992	1993	1994	1995	1996	1997
Total population	1038	1039.6	1037.8	1032.3	1008.7	996.4	987.7	979	971.9
Labour force participation rate (%)	78.9	77.9	76.9	75.1	73.6	73.8	72.6	72.1	72.5
Employment rate (%)	78.5	77.4	75.8	72.3	68.7	68.1	65.5	64.9	65.4
Unemployed (% of total)	(0.4)	0.5	1.1	2.8	4.9	5.7	7.1	7.3	7.1
Inactive (% of total)	21.1	22.1	23.1	24.9	26.4	26.2	27.4	27.9	27.5
Unemployment rate (%)	(0.5)	0.6	1.5	3.7	6.7	7.7	9.8	10.1	9.8

Notes: ( ) data are based on 20-39 persons of the sample
Sources: Estonian Labour Force Surveys

Analysing the changes in the trends for GDP, employment and productivity, we find that during the period 1993-1997 the GDP growth has been 18.4% (in constant 1995 prices), employment has declined 8.4%, and consequently the productivity of labour has increased 29.3%. The highest increases in productivity were in 1995 and in 1997. In the first case the productivity increase is connected with a steep decrease in employment (-5.3%) and in the second case with a rapid increase of GDP (more than 11%). Changes of productivity by sectors are presented in Table 2.3. (See further Annex B2).

Table 2.3: Structural changes in the economy in 1995-1997 (yearly changes in %)

	1996	1997
PRIMARY SECTOR		
Production	-2.2	4.4
Labour productivity	4.3	11.6
Employment	-6.4	-6.5
SECONDARY SECTOR		
Production	4.7	13.9
Labour productivity	8.0	14.1
Employment	-3.1	-0.2
TERTIARY SECTOR		
Production	5.0	9.8
Labour productivity	4.7	9.0
Employment	0.2	0.8

Note: In calculation of GDP, the Statistical Office of Estonia has started to use a new base year. Constant prices are based on 1995 average prices; previously they were based on 1993 average prices. The Statistical Office has not recalculated the previous years of GDP by economic activity.
Sources: Estonian Labour Force Surveys, Statistical Office of Estonia

2.2 Wage structure, social security and taxes

The potential of transition economies at the beginning of the reforms lay in the low cost of labour, which attracted foreign capital. Since the currency reform in June 1992, wages in Estonia have undergone major changes. The transition led to the loss of the institutional unification of wage rates by state agencies and modified the hierarchy of wages by industries. Wage differentials and income inequality have increased rapidly during the reform years. Rapid corrections in the structure of wages took place in 1993-1994. Subsequently the speed of structural corrections has slowed down.

Real wage growth

In view of the increase in the CPI, the growth in the real value of wages lags behind the growth in their nominal value. During the period from 1992 to 1997, gross wages increased more than 6.5 times, while real wages increased only 1.3 times. When comparing the CPI with the index of wages and salaries, it can be noted that after prices were set free in the 4th quarter of 1991, wages and salaries have fallen steadily behind prices throughout the entire period of observation. According to the data of the Statistical Office of Estonia, the index of wages and salaries has grown slower than the CPI. The CPI increased by a factor of 44 from the 4th quarter of 1991 to the 3rd quarter of 1998, while the wages and salaries index increased by a factor of 35.

Wage growth has been faster mostly in the service sector, while at the same time the wages in agriculture, which are low compared with the country's average gross wages, have been continually diminishing. Throughout the observed period the average gross wages were highest, compared with the national average, in the financial sector (2.0-2.3 times) while wages were exceptionally low, compared with the average, in agriculture (0.6-0.7 times). The same tendencies emerge when we observe labour costs. In the financial sector the labour costs per hour actually worked have been approximately 2 times higher than the country's average. At the same time, the labour costs per hour of actual work were lowest in agriculture and hunting.

The computation of the aggregate average wage in Estonia is therefore complicated, since it has increased mainly due to high and rapidly rising wages in a few industries in the economy or for a few persons hired in high-wage positions (see Tables in annexes). For a majority of the population wage increases have not been as large.

Table 2.4: Average earnings in 1992-1998, EEK and %

	1992	1993	1994	1995	1996	1997	1998
Average gross earnings per month per household member, EEK	374	735	1089	1338	1547	3571	4178
Indices of average gross earnings*		197	291	358	414	955	1117
Average net earnings per month, EEK	320	628	929	1260	1539	1933	na
Indices of average net earnings *		196	290	394	481	604	na
Minimum wage	300	300	300	450	680	845	1100

*Note: 1 EUR = 15.6 EEK. *Indices: 1992=100.*
Sources: Statistical Office of Estonia, EMOR

Gender wage gap

According to the survey "Wages and Salaries", conducted by the Statistical Office of Estonia, when the average hourly wages of males and females by occupational categories (see Table A11) and by economic activity (see Table 2.5) are compared, the average wages of females turn out to be lower than males' average hourly wages. For example, in October 1995, October 1996 and October 1997 the biggest difference between the average wages of males and females was in the category of service workers and shop and market sales workers. The share of females' average wages in males' average hourly wages was then 62%, 63% and 63% respectively. In October 1995 and October 1996, the smallest difference between the average wages of males and females was in the category of plant and machine operators and assemblers. The share of females' average wages in males' average hourly wages was then 89% and 85% respectively. In October 1997 the smallest difference was in the category of clerks, where the share of females' average wages was 90%.

Table 2.5: Average hourly gross wages in 1992-1997 by occupations, female/male wage gap (male wage=100)

	1992	1993	1994	1995	1996	1997
TOTAL	79.8	72.1	71.1	72.1	72.6	72.0
Legislators. senior officials and managers	78.8	70.9	75.7	74.4	74.4	74.1
Professionals	88.1	80.5	80.4	76.2	79.6	72.9
Technicians and associate professionals	78.6	60.4	60.8	72.1	69.1	70.0
Clerks	89.2	87.4	86.8	75.8	79.6	90.2
Service workers and shop and market sales workers	84.5	69.9	64.1		62.9	63.2
Skilled agricultural and fishery workers	83.3	78.5	65.9	61.9	80.2	80.4
Craft and related trades workers	80.5	74.4	73.5	80.8	73.6	74.3
Plant and machine operators and assemblers	94.5	85.6	84.2	77.0	84.6	85.5
Elementary occupations	77.2	75.7	74.0	88.5	70.0	75.6

Sources: Statistical Office of Estonia

Wage development with regard to experience

According to the research done in Estonia in general, the wage-experience patterns are very flat relative to market economies, the main feature being a sharp reduction after 40 years of experience. In 1989, the percentage difference in average wages from the peak at 40 years to the bottom at 50 years was only 16%. The transition lowered relative earnings for those with over 30 years of experience and raised relative earnings for those with less than 20 years of experience. By 1994, the apparent peak earnings were at 10 years of experience, and the percentage difference between peak wages and the lowest average wage was 45%. Relative wages rose for experience groups that also

gained in relative employment. This suggests that shifts in relative demand towards younger workers were the driving force behind these changes in wage-experience profiles. We can also observe dramatic evolution of the wage-education profile over the course of the Estonian transition. In 1989, the profile was very flat, with university educated workers earning only 8% above the economy-wide average and primary educated workers earning just 3% below average. Relative earnings for university educated workers rose dramatically during transition, while relative wages for the least educated groups fell. Within five years, the wage premium for university educated over primary educated workers rose from 11% to 69%, an impressive demonstration of relative wage adjustment in an economy moving out of a forty-year experience with centrally-dictated wages. Consistent with the employment data, the pattern of relative wage adjustments suggests shifts in relative demand towards better educated workers (Noorkõiv et al,1997).

Income inequality

The first step for Estonian social policy towards helping people in poverty was the establishment of a poverty line of 280 kroons (1 EUR =15.6 EEK) per individual per month, in September 1993[2]. In order to receive the supplement, income had to be below the poverty line of 280 kroons per single adult per month. When the poverty line was established, approximately 10% of Estonian families had an average income of less than 280 kroons per family member per month[3]. The percentage had dropped to approximately 8-9% by April 1994. In September 1994, the level of the poverty line was increased to 320 kroons per single adult per month. In 1996 the level of the poverty line was increased to 390 kroons and in 1997 to 460 kroons.

Table 2.6: Household income distribution (% of total)

Year	Income deciles										
	I	II	III	IV	V	VI	VII	VIII	IX	X	Total
1992	2.3	3.9	4.8	5.7	6.7	8.0	9.4	11.5	14.9	32.7	100
1993	2.3	3.9	4.8	5.8	7.0	8.3	10.0	12.0	15.4	30.5	100
1994	2.2	3.8	4.7	5.7	6.8	8.3	9.8	12.1	15.8	31.0	100
1995	2.1	4.0	5.0	5.7	6.7	8.0	9.6	11.9	15.5	31.6	100
1996	2.1	4.2	5.4	6.1	6.8	8.0	9.7	12.0	15.5	30.1	100

Source: Statistical Office of Estonia

Another component of general social policy that provides aid to the poor is the housing subsidy benefit (implemented in March-April 1994). The housing subsidy benefit can be granted when a family's payments for rent and communal services exceed 30% of the family's total income. According to household surveys, approximately 14% of all families received the housing subsidy in 1994.

2 The establishment of the poverty line itself did not result in the introduction of a system of benefits. An extra supplement was not introduced until April 1994.

3 An application for extra income supplement requires certificates documenting the size of the family and the income of all adult family members during the previous three months. Obtaining these certificates may cause further expenses (e.g. travel costs to the local community government office).

While the above components of social policy were meant to help the poorest segment of the population, pension payments, child allowances and unemployment benefits are directed at specific high-risk groups.

Pensions

Pensions are paid in Estonia according to the temporary Law on State Allowances that was adopted in 1993. The law provides four types of pensions: old age pension, invalid pension, loss of provider pension and national pension[4]. Most of the pensioners (nearly 80%) are entitled to the old age pension. All pensions are paid out of social taxes through the state social insurance budget. Despite having an old population relative to other transition economies (pensioners made up 25.3% of the total population of Estonia in 1997), Estonia has a relatively low fraction of GDP allocated to pensions. At the beginning of the 1990s the average pension in Estonia was very low, both in absolute terms and in comparison with average wages. In the first quarter of 1993 the average pension was 229 kroons and made up 25.5% of the average gross wage. In the fourth quarter of 1997 it was 1052 kroons or 26% of the average wage.

On June 1998, the new Law on State Pension Insurance was adopted by the Estonian Parliament (Riigikogu) and comes into effect on 1 January 2000. According to the law, a three-pillar pension insurance system will be implemented in Estonia. The pillars are:

- state pension insurance, which will be implemented in the form of compulsory state pension insurance,
- compulsory individual savings insurance, which is based on private financing,
- voluntary savings insurance.

Child allowances

As of 1 October 1990, benefits to children, students and mothers on maternity leave were introduced as partial compensation for the rapid rise in prices due to inflation. This was the first step towards the system of child allowances in Estonia (see Table 2.7 for a more detailed account). The monthly child allowance rate depends on the number of children in the family. In recent years the differentiation of child allowances in favour of large families has grown[5]. When the system of child allowances was introduced, all children were entitled to flat-rate support. Since 1994, benefits paid to the third and each subsequent child have grown faster. At present, in 1999, the child allowance for the first child is 150 kroons, for the second child 225 kroons, and for each subsequent child 300 kroons a month.

4 The rate of the old age pension is calculated as the sum of two components, one of which is the flat rate of basic pension while the other depends on the number of years worked. Other pensions depend on the rate of the basic pension only and are equal to all recipients.

5 Household budget research done by the Statistical Office shows that a considerable proportion of large families belong to the lowest income group (first income decile). In such families, social insurance benefits yielded slightly less than half of the total income of the family while child allowances formed 50% of these benefits. Thus, child allowances,

Table 2.7: Pensions and social benefits 1993-1998

	1993	1994	1995	1996	1997	1998
Average level of pension, EEK[6]	250	359	586	879	1037	1152
Old age pension	254	373	612	930	1100	1247
% of average wage	23.4	20.7	24.7	29.4	29.0	29.8
Benefits on social insurance basis(a)						
Birth benefit (average)	894	947	1313	1545	1783	2625
Maintenance benefit for child up to 1.5 years old (average)(b)	145	175	212	241	287	600
Maintenance benefit for child 1.5 to 3 years old (average)(c)	88	92	107	125	143	300
Child benefit for child up to 15 years old and older pupils of general schools	89	na	na	na	na	na
Child benefit for the 1st child		93	110	130	150	150
Child benefit for the 2nd child		121	144	165	184	225
Child benefit for the 3rd and subsequent children		150	194	214	234	300
Child benefit for single parents	60	61	65	75	87	150
Single parent child benefit for a handicapped person raising the child alone		143	166	193	223	225
Maintenance benefit for non-working parent raising a handicapped child 1.5 to 18 years old	90	165	219	256	296	300
School benefit		90	115	130	299	300
Guardianship benefit	60	169	222	256	299	300
The independent life benefit for orphanage children	2966	2979	3423	3922	3985	5000
Minimum subsistence level	280	280	320	390	460	500

Note: *(a) Child allowances are divided into lump-sum and monthly benefits. Lump-sum benefits are: birth grant, allowance at the beginning of the school year, and start in life support for young people leaving orphanages. All children up to 16 (students up to 19 years) are paid monthly allowances. The single parent benefit, serviceman support and child guardianship support are also paid on monthly basis.*

(b) Since 1998 child up to two years old

(c) Since 1998 for child 2-3 years old

Notice: 1 EUR = 15.6 EEK

Sources: Ministry of Social Affairs, Statistical Office of Estonia

6 Monthly average is the estimated average according to the Pension Act. The average pension that was actually paid was lower until September 1996, as working pensioners received a partial pension.

2.3 *Labour market key issues*

What are the main problems and key issues in the Estonian labour market? From this background study we can derive the following key issues for the Estonian labour market:

- Structural unemployment.
- High inactivity of females.
- Increasing wage and income dispersion.
- Lack of labour policy concepts.
- Insufficient institutional development of labour market.
- Insufficient development of social partnership.
- Low labour mobility and substantial regional labour market differences.
- Low profile of vocational education.
- Inadequate state training system.

3. Employment

3.1 General changes in employment

Adjustments in the employment structure by economic sectors have been dramatic since the beginning of the transition. Observing the changes that have occurred, one can assert that overall employment has decreased during the period of 1989-1997. Owing to the growth of economic activity, a slight increase in employment was observed in 1997 and at the beginning of 1998, but as a result of the Russian crisis employment has fallen drastically since.

Table 3.1: Employment rates by gender and age group (%)

	1989	1990	1991	1992	1993	1994	1995	1996	1997
Total									
15-24	49.6	48	47.9	46.7	44.4	46.1	41	38.6	38.9
25-49	93.5	92.1	90.8	88.2	85	83.6	81.2	80.4	80.4
50-69	65.9	64.8	61.3	55.1	49.5	47.8	44.7	45.2	45.7
16 until pension age	84.4	82.8	81.6	78.8	76	75	72	71.1	70.8
15-64	78.5	77.4	75.8	72.3	68.7	68.1	65.5	64.9	65.4
Males									
15-24	51.3	52.3	54.3	55.9	52.1	53.2	48.4	44.9	43.8
25-49	97.5	96.8	95.6	92.5	89.0	88.0	83.6	83.2	84.5
50-69	77.5	76.1	72.9	66.7	60.9	59.1	54.3	54.0	54.8
16 until pension age	87.0	86.5	86.0	83.2	80.1	79.2	75.0	74.1	73.8
15-64	83.4	83.2	82.3	79.3	75.2	74.7	70.9	69.8	70.7
Females									
15-24	47.8	43.3	41.1	36.8	36.1	38.6	33.2	32.1	33.9
25-49	89.6	87.5	86.1	84.1	81.1	79.4	78.8	77.7	76.5
50-69	57.6	56.5	52.8	46.5	41.1	39.4	37.6	38.7	39.0
16 until pension age	81.6	78.9	76.9	74.1	71.6	70.6	68.8	68.0	67.5
15-64	73.9	71.9	69.7	65.8	62.6	62.0	60.5	60.2	60.4

Sources: Estonian Labour Force Surveys

The employment of males declined over the observed period from 83.4% to 70.7% (see Table 3.1). In the EU the corresponding employment rate for males was very close to that in Estonia (70.5%) in 1997. At the same time the female employment rate was considerably higher in Estonia than the EU average: 60.4% for Estonia and 50.5% for the EU. Analysing employment from the gender perspective, one has to admit that in the planned economy conditions the employment of women was comparatively high.

Female employment

Employment of women accounted for 48.8% of total employment in 1989 (Table 3.2). By 1997 the rate had decreased, but still came to 47.9% of total employment. Despite this, the decline in employment was more significant, more profound and faster among women. During the observed period the employment of women fell 23.4%. The corresponding indicator among men was 20.5%.[7] Generally speaking the male population has been more successful in maintaining its former level of employment, while females have become more inactive during the transition period.

Table 3.2: Female population aged 15-64 by economic status in 1989-1997 (annual average, thousands and%).

	1989	1990	1991	1992	1993	1994	1995	1996	1997
Total population (15-64)	538.2	537.9	536.3	533.0	521.6	515.4	511.1	507.0	503.5
Labour force	400.1	389.7	379.9	363.3	350.3	347.3	339	336.8	335.5
Employed	397.9	386.9	373.9	350.5	326.7	319.6	309.2	305.5	304
% of total employment	48.8	48.1	47.5	46.9	47.1	47.1	47.8	48.1	47.9
Yearly change in employment, %		-2.8	-3.4	-6.3	-6.8	-2.2	-3.3	-1.2	-0.5
Unemployed	...	(2.8)	6.0	12.8	23.6	27.7	29.8	31.3	31.5
Inactive	138.1	148.3	156.4	169.7	171.3	168.1	172.1	170.2	168.0
Labour force participation rate, %	74.3	72.4	70.8	68.2	67.2	67.4	66.3	66.4	66.6
Employment rate, %	73.9	71.9	69.7	65.8	62.6	62.0	60.5	60.2	60.4
Unemployment rate, %	...	(0.7)	1.6	3.5	6.7	8.0	8.8	9.3	9.4

Sources: Estonian Labour Force Surveys

Employment rates for young people (15-24 years old) declined from 49.6% to 38.9%. This is a welcome development, in that young people stay longer in initial education and training. In the EU, the average employment rate for young people was 36% in 1997.

7 Authors' calculations from Table 3.1.

Structural changes

In 1997, 9.3% of people were employed in agriculture, 33.5% in industry and 57.2% in the service sector in Estonia, while the corresponding figures for the EU were 5%, 29.5% and 65.6% respectively. Future increases in the overall employment rate will depend on an expansion of the service sector (see also section 3.2).

From the point of view of gender, females are employed more in the service sector and males in the primary sector. At the same time the employment of males in services has increased faster during the observed period.

On the basis of changes in employment by industries, we can point out the following trends (Eamets et al, 1997). Over the entire period of observation, we can observe a constant and progressive decrease in employment in agriculture and fishing. Both sectors saw the greatest decrease in 1993, and by 1997 absolute employment in agriculture compared to 1989 had decreased 64.7% and in fishing 72.8%. Real estate and business activities, public administration, education and other personal services belong to the group of industries where a decrease of employment could be observed up to 1991-1992, followed by a rise in employment in the following years. A predictable and continuous increase of employment has occurred in financial intermediation, trade and electricity production. The employment shifts in the other industries do not appear to have such clear systematic trends (see the Annex for a more detailed description of changes in employment by industries).

Table 3.3: Sectoral employment of total population (15-69) by gender (%)

	1989	1990	1991	1992	1993	1994	1995	1996	1997
Total									
Primary	21.2	21.1	20.4	19.1	16.6	14.6	10.5	9.5	9.3
Secondary	37.1	36.9	36.4	35.6	33.1	32.4	34.3	34.2	33.5
Tertiary	41.7	42.1	43.1	45.3	50.3	52.9	55.2	56.3	57.2
Males									
Primary	27.3	26.5	25.5	23.8	20.8	18.2	13.0	11.5	12.0
Secondary	42.2	42.0	41.6	41.0	38.6	38.3	41.4	42.6	41.9
Tertiary	30.5	31.5	32.9	35.2	40.6	43.4	45.6	45.9	46.1
Females									
Primary	14.9	15.3	14.9	13.9	12.0	10.6	7.8	7.4	6.3
Secondary	31.8	31.4	30.8	29.5	26.9	25.8	26.6	25.3	24.1
Tertiary	53.3	53.3	54.3	56.7	61.1	63.5	65.7	67.3	69.6

Sources: Estonian Labour Force Surveys

Table 3.4: The share of female and male labour force (15-69 years old) compared with total employment (%)

	1989		1998 II quarter	
Sector of economy	Males	Females	Males	Females
Total	48.7	51.3	50.4	49.6
Agriculture	63.8	36.2	64.2	35.8
Fishing	74.6	25.4	85.2	14.8
Mining	72.8	27.2	86.3	13.7
Manufacturing	46.6	53.4	53.9	46.1
Electricity production	65.9	34.1	74.0	26.0
Construction	80.5	19.5	88.4	11.6
Trade	24.4	75.6	42.6	57.4
Hotels. Restaurants	24.5	75.5	14.0	86.0
Transport. Communication	69.0	31.0	69.6	30.4
Financial intermediation	12.6	87.4	27.1	72.9
Real estate. Business activities	44.3	55.7	54.0	46.0
Public administration	45.0	55.0	51.6	48.4
Education	23.8	76.2	20.7	79.3
Health care	11.0	89.0	13.7	86.3
Other personal services	35.2	64.8	29.9	70.1

Sources: Estonian Labour Force Surveys

If we take a look at the employment structure, there are no major changes in the structure of the general employment of men as far as major industries are concerned. In 1989, the economic activity with the highest employment was manufacturing. This was followed by agriculture, construction, transport and communications, and, with a remarkable share also, fishing. In 1994, the four largest industries were the same, but their share of total employment had dropped; the fifth position was occupied by public administration. In comparison, the industries with the largest shares in total employment of women in 1989 were health care, finances, education, and trade and hotels. We can even say that these are "female" industries. In most industries we can observe a decline in the female share. The only exceptions are hotels and restaurants, and education and other personal services.

3.2 *Employment in private sector*

Great changes took place in the structure of types of ownership in most countries during the transition period. The forms of privatisation vary in different countries, but most of the economic institutions in transition countries are privately owned by 1998. In Estonia, for instance, 87.8% of registered enterprises are private, which means that joint stock companies, joint ventures and other

forms of businesses (i.e. practically all profit-oriented economic activities) are private. However, the share of the public sector as an employer is relatively large, since the state is the main employer in such fields as electricity, gas and water supply, education, health care, public administration, etc.

Table 3.5: Employment by sectors in 1994-98
(thousands, %)

	1994	1995	1996	1997	1998	Change 94-98 (%)
Total all						
TOTAL	**433543**	**442725**	**431163**	**433608**	**427323**	**-1.4**
Primary (%)	12.6	10.0	103.2	11.2	9.8	-23.4
Secondary (%)	45.0	43.5	40.6	39.6	40.7	-10.9
Tertiary (%)	42.4	46.5	49.0	49.2	49.5	+15.2
Public sector						
TOTAL	134875	93021	58901	51844	58174	-56.9
Primary (%)	7.8	4.3	1.9	14.5	13.4	-25.8
Secondary (%)	49.5	43.6	44.2	36.5	32.3	-71.9
Tertiary (%)	42.7	52.0	53.9	49.1	54.3	-45.2
Private sector						
TOTAL	298668	349704	372262	381764	374246	+25.3
Primary (%)	14.8	11.5	11.7	10.8	9.2	-21.5
Secondary (%)	43.0	43.5	40.0	40.0	42.0	+22.3
Tertiary (%)	42.2	45.1	48.2	49.2	48.8	+44.8

Sources: Estonian Enterprises Register, Estonian Register of Social Security

Table 3.5 shows how these profit-earning firms are distributed. The numbers are based on the Estonian Enterprises Register and the Estonian Register of Social Security databases. These numbers are therefore not completely comparable with LFS data.

As we can see, employment in the public sector has decreased drastically during the transition. The fastest decreases have come in manufacturing, but also in the service sector. From the point of view of general economic competitiveness, the relatively large share of the private sector in the economy is positive[8]. As a result of quick privatisation, most profit-oriented enterprises are in private ownership. As in the case of general employment, we can state that the largest share of persons employed in the private sector are involved in the service sector.

The share of the private sector in employment will probably increase in the near future due to the decision to privatise several major infrastructure firms, such as power stations and railway transport.

8 It is assumed to be more efficient.

If we take a closer look at industries, in 1996 the share of the private sector in employment in Estonia was largest in the following fields:

- trade 96.8%;
- hotels, restaurants 95.7%;
- agriculture 91.4%;
- financial sector 89.3%;
- manufacturing 88.5%.

The share of the public sector was largest in:

- public administration 96.3%;
- education 96.4%;
- health care 90.6%;
- mining and quarrying 89.0%.

Private firms increase jobs in small enterprises. According to Estonian Enterprises Register data, employment in small firms (less than 5 people) increased almost 40% during 1994-1998. The general increase of employment in the private sector was 25.3%.

Table 3.6: Estonia - private sector employment by size of firm, 1994-98

No. of employees as share of total (%)	1994	1995	1996	1997	1998	Change 94-98 (%)
Totals	100	100	100	100	100	+25.3
Less than 5	9.0	10.0	9.8	10.2	10.1	+39.8
6-10	9.2	9.8	9.3	9.6	9.4	+27.9
11-25	16.4	16.9	16.4	16.9	17.6	+34.0
26-100	29.3	28.3	27.4	28.7	29.2	+24.9
101+	36.0	35.0	37.1	34.6	33.8	+17.4

Sources: Estonian Enterprises Register, Estonian Register of Social Security

3.3 *Employment by region and ethnical groups*

Throughout the transition period we can see an increase in regional differences. The result is that the potential of less advantaged areas deteriorates further due to emigration, leading to the disappearance of independent development potential in wide areas, social degradation and an increase in welfare expenses (see also section 4.4). We can note that a remarkably better socio-economic situation obtains in the cities, and that the hinterlands of large cities are also clearly doing very well, while at the same time, rural areas are in very bad shape. It can be stated that regional development in Estonia is primarily taking place in Tallinn (Harju county), followed by the other cities. These are the centres that have a sufficient critical mass of residents, significant service resources or successfully operating export enterprises. Strong centres also have strong hinterlands.

In the larger cities (Tallinn, Tartu, and Pärnu), the demographic, income and even labour situation of the hinterland municipalities is better than average. This is primarily due to the suburban family-home settlements.

The population and entrepreneurship concentrated in south-eastern (Valga, Võru and Põlva counties), central (Järva, Jõgeva, Rapla counties) and western towns (Lääne, Saare counties) is insufficient to exert an integrated, positive influence on the hinterlands. The problem is primarily the failure to achieve a critical mass of entrepreneurs and intellectuals, due to a lack of opportunities and services (training, information, counseling, etc.) of a sufficiently high quality to attract them. The centres of these areas (primarily county or central towns) need institutions that can take advantage of the existing, local intellectual potential and also meet the local deficit of services.

The potential of the population of north-eastern cities (in Ida-Viru county) is large enough. However, due to restructuring difficulties, a bad reputation and ethno-cultural problems, they are incapable of exerting a positive influence on the hinterlands. Rather, a negative influence is exerted. Thus, consideration should be given to using a variety of development strategies for the north-eastern agglomerations and the communities alongside Lake Peipsi, aimed at various market niches (e.g. industry and tourism).

Table. 3.7: Employment rates by counties in 1989-1997 (%)

Region	County	1989	1990	1991	1992	1993	1994	1995	1996	1997
	AVERAGE	76.4	75.0	73.2	69.5	65.6	64.8	61.8	61.3	61.5
Capital	Tallinn	78.3	77.8	76.8	72.5	69.2	67.8	65.7	66.5	66.4
Central Estonia	Jõgeva	75.0	72.9	71.8	67.7	61.3	57.1	56.0	55.1	54.4
	Järva	76.4	75.6	73.0	71.6	66.2	65.5	66.6	66.1	59.8
	Rapla	76.3	74.5	71.9	68.4	69.4	65.8	58.9	57.2	61.0
	Viljandi	75.2	75.6	71.4	67.9	65.7	65.5	59.7	55.9	58.3
Northeastern Estonia	Ida-Viru	78.1	75.3	73.4	69.1	64.0	62.4	59.3	57.6	58.7
	Lääne-Viru	76.4	76.0	74.5	70.6	67.6	65.2	61.0	59.6	60.4
Western Estonia	Hiiu	84.8	79.3	78.7	78.1	73.8	72.7	(69.2)	(64.2)	66.3
	Lääne	73.2	73.3	71.1	69.2	64.3	61.1	60.5	61.6	61.7
	Pärnu	75.0	73.3	70.2	67.2	62.9	64.5	59.8	58.9	65.6
	Saare	76.6	73.5	69.2	68.4	64.4	64.4	62.1	60.8	57.7
Southern Estonia	Põlva	73.9	70.8	68.5	59.4	52.8	51.6	51.9	50.9	53.3
	Tartu	70.8	69.6	69.6	67.6	63.2	64.7	62.0	62.4	57.4
	Valga	71.4	69.3	67.8	62.6	56.8	53.6	52.9	52.3	58.7
	Võru	74.8	71.9	66.1	61.3	54.7	53.9	54.7	50.8	52.5

Notes: ( ) data are based on 20-39 persons of the sample
Sources: Estonian Labour Force Surveys

Changes in employment by language criterion[9]

In the statistics of the Estonian Labour Market Board, job-seekers are distinguished on the basis of their first language, not their ethnicity. Thus, distinctions based on the language criterion enable us to compare data from different sources as well in the future.

Table 3.8. Employment shares of Estonians and Non-Estonians by major sectors (%)

Year	Estonians				Non-Estonians			
	Agriculture	Industry	Services	Total	Agriculture	Industry	Services	Total
1989	28.2	30.0	41.8	100.0	7.9	50.4	41.7	100.0
1990	28.0	29.9	42.1	100.0	8.0	49.8	42.2	100.0
1991	27.0	29.6	43.4	100.0	8.0	49.1	42.9	100.0
1992	24.9	29.0	46.2	100.0	7.8	48.0	44.1	100.0
1993	21.4	27.0	51.6	100.0	7.1	44.8	48.1	100.0
1994	18.5	26.9	54.7	100.0	6.6	43.4	49.9	100.0
1995	13.6	28.0	58.5	100.0	4.5	46.0	49.5	100.0
1996	13.0	27.6	59.4	100.0	(4.1)	45.2	50.7	100.0
1997	12.0	28.5	59.5	100.0	4.0	44.0	52.0	100.0

Notes: ( ) data are based on 20-39 persons of the sample. Source: Estonian Statistical Office

Analysing the shares of employed persons on the basis of the language criterion, we can see that in 1989, 65.6% of the people were Estonian-speaking[10].

As to the employment dynamics of the Estonian-speaking persons, in 1989 almost one fourth of them were employed in agriculture. The share was also rather large in manufacturing. The share of other economic activities was less than 10%. Employment had increased in eight industries by 1996, compared with 1989. The increase had been fastest in banking, trade and public administration.

Among non-Estonian-speaking persons, the share of employment was largest in manufacturing. Substantially less persons were employed in transport and communications, construction and trade The share of other economic activities in employment was less than five %. By 1996, manufacturing was still in the leading position among economic activities, but its share had decreased. During the period under observation, the employment of non-Estonian-speaking persons had increased in two fields of activity - in trade and in education.

9 See also further comments in section 1.3 and Tables in Annexes. The home language of the respondent serves as the basis for the language criterion; if several languages were spoken at home, the criterion is the language used most (marked as the first language in the questionnaire).

10 Here we must note that as the labour force survey was carried out in the spring of 1995, many people who had returned to the territory of the former Soviet Union and who spoke Russian as their first language were left out of the sample. The fact that in 1994 the employment of Estonian-speaking people had increased by only 1.5% serves as evidence of this. Thus, the comparison between 1989 and 1994 does not show the full extent of changes in the ratio of Estonians and non-Estonians.

3.4 Hidden employment

There is very little evidence about the scale of hidden economy in Estonia. According to the estimations of the Estonian Statistical Office, the share of shadow economy in GDP was 12% in 1994. This 12% was "produced" mainly by three sectors: trade, agriculture and construction. After 1994 the estimated share of the hidden economy in GDP has been fluctuating around 13-15%.

The structure of shadow employment has been changing during the transition. Hidden employment is typical for small firms. It is in most cases seasonal, because employment in industries like agriculture, fishing, trade and construction has seasonal variations. Typical forms of hidden employment are "envelope salaries" - i.e. cash payments to the employees, not-reported income tax and VAT, not-registered work during weekends, second and third jobs, and unreported income from abroad. According to the Estonian Labour Force Survey (ELFS) in 1998 only 3% (18 000) of the employees reported that they have informal "oral" labour contracts, which according Estonian labour legislation is usually illegal (there are very few exceptions when it is legal).

According a survey launched in 1996 by the Estonian Institute of Social Analysis the tax authorities reported 499 490 employed persons, while according to the ELFS the beginning of 1995, there were 617 764 employed persons in the country. This is a significant difference, more than 100 000 people. If we compare wage statistics and labour survey data, the social analysis survey found that in Ida-Virumaa number of employees (according ELFS) exceeded the number of reported wage earners (who paid social taxes) by 45%. In the Tartu county the same number was 49% and in Tallinn 25%. These percentages are indirect evidence of that in areas with relatively high unemployment the share of hidden employment and tax evasion is also high.

3.5 Vacancies and structural imbalances

A relatively complete picture of the situation in the labour market could be presented by the statistics on vacancies. Unfortunately, this particular field of information has its shortcomings, mainly because enterprises do not report this type of data. This is evident from Table 5.1, which shows more that 74 000 unemployed and 1130 vacancies reported to the labour services in 1997. What is the main reason for firms not reporting vacancies?

Table 3.9: Registered vacancies by occupations (%)

	Jan.1996	Jan.1997	Jan.1998	Jan.1999
Total	100	100	100	100
Legislators, senior officials and managers	0.6	0.3	0.3	1.1
Professionals	9.1	7.5	5.2	5.3
Technicians and associate professionals	15.4	10.8	13.3	9.3
Clerks	3.7	3.9	3.7	3.8
Service workers and shop and market sales workers	23.2	11.4	19.5	22.3
Skilled agricultural and fishery workers	2.2	3.2	1.4	1.0

	Jan.1996	Jan.1997	Jan.1998	Jan.1999
Craft and related trade workers	27.0	40.8	38.5	39.7
Plant and machine operators and assemblers	9.6	5.8	10.3	8.6
Elementary occupations	9.2	9.0	7.5	8.9
Armed forces	0.0	7.3	0.2	0.0

Note: Data are estimated on January 1, each year.
Source: Estonian Labour Market Board

Table 3.10: Registered first time as job seekers and new vacancies registered during a year by counties in 1998

County	Registered first time as job seekers	New vacancies registered during a year	Share of the no. of job seekers to the vacancies (U/V ratio)	Registered unemployment % of LFS
Total	53451	14553	3.7	47.0
Harju	17560	7314	2.4	36.3
Hiiu	524	71	7.4	...
Ida-Viru	18633	1931	9.6	54.5
Jõgeva	1508	231	6.5	41.1
Järva	1110	486	2.3	45.0
Lääne	1529	220	7.0	(100)
Lääne-Viru	1641	319	5.1	39.8
Põlva	2158	345	6.3	53.4
Pärnu	2395	558	4.3	(41.0)
Rapla	1306	237	5.5	59.3
Saare	2123	473	4.5	(76.9)
Tartu	4905	1122	4.4	34.5
Valga	1341	366	3.7	81.3
Viljandi	2213	495	4.5	62.4
Võru	1583	385	4.1	74.0

**Note: II quarter. ... LFS data are based on less than 20 persons of the sample. ( ) LFS data are based on 20-39 people of the sample*
Source: Estonian Labour Market Board and Labour Force Surveys

The main reason is that the firms assume that persons with high qualifications do not use labour force services in order to find jobs. This is true; most such workers seek jobs through newspaper advertisements, relatives and friends. According to the labour force survey data, around 50% of unemployed people seek jobs through labour services.

At the same time, people with high qualifications[11] know that jobs offered to labour services mostly demand low qualifications, because they are usually poorly paid. The result is that jobs requiring high qualifications are not mediated by labour services. From Table 3.9 we can observe that in January 1999, less than 20% of all reported vacancies are for white-collar workers.

Regional differences

Inequalities in regional and sectoral employment in terms of the supply and demand of labour have proved a source of aggravation. We may observe that unemployment has shown deep regional differentiation due to the uneven location of new jobs (evidence of structural unemployment). Unemployment is a serious problem in the mainly agricultural counties in southern Estonia and in north-eastern Estonia, with its large concentration of heavy industry; unemployment here is mostly linked to the recession suffered by former all-Soviet enterprises in Narva, Sillamäe and Kohtla-Järve. The bankruptcy of major employers in small towns with only one or two sources of jobs has caused job losses for some people. Moreover, unemployment continues to be a major problem in rural areas. The poorly developed infrastructure there contributes to the lack of further economic investment in rural areas.

Reported job creation[12] declined steadily during 1996-1999. The unemployment-vacancies rate increased from 19.8 to 30.3. The largest increase was among skilled agricultural and fishery workers, from 42.4 to 91.0 (see Table A19 in annexes). Most vacancies were created for craft and related trade workers and for service workers. If we analyse the unemployment-vacancies ratio by sectors, we can see that in many sectors it has declined, for example in manufacturing, fishing and the public sector.

In January 1999, the majority of vacancies reported were in manufacturing and the public sector.

Table 3.11: Structural unemployment, U/V ratio by industries 1996-1998.

	01.01.96	01.01.98	% share of vacancies on 1.01.1998
Total	19.8	16.9	100
Agriculture	56.0	70.2	2.1
Fishing	12.5	8.6	0.9
Mining	25.8	17.9	1.3
Manufacturing	11.3	8.5	31.3
Electricity production	34.1	27.4	1.0
Construction	8.9	19.8	5.1
Trade	31.5	32.9	7.8
Hotels / Restaurants	8.1	39.1	1.3
Transport. Communications	7.6	43.3	3.0

11 In this context high qualification in most cases also means white-collar workers.

12 Job creation is measured by reported vacancies.

	01.01.96	01.01.98	% share of vacancies on 1.01.1998
Financial intermediation	na	41.0	0.5
Real estate / Business activities	9.2	43.5	1.5
Public administration	44.5	2.6	15.9
Education	24.4	24.6	3.0
Health care	7.2	31.3	1.5
Other personal services	11.1	9.3	8.2
Other	19.8	16.9	0.7
Not classified	-	-	15.2

Source: Estonian Labour Market Board

4. Labour Force Participation

4.1 *Demographic trends*

In the period 1989-1998, the dynamics of vital events have changed. The continuous population growth of the previous years culminated at the beginning of the nineties. Starting in 1990, the resident population of Estonia decreased steadily and by 1998 reached the same level as at the end of the seventies - below one and a half million. The reason was the negative value of both components of population change: net migration has been negative since 1990 and the natural birth rate has been decreasing since 1991.

The main reason for population change has been the decreasing number of arrivals simultaneously with the large number of departures from Estonia. The Immigration Law, which came into force in 1990, and the Law on Foreigners (1993) play an important role in the decrease in arrivals. By these laws, immigration may not exceed 0.1% of the resident population at the beginning of the year.

The difference between the number of deaths and births has increased; since 1991 the number of deaths has exceeded the number of live births. From the end of the eighties onwards, when live births numbered over 25 000 per year, the number of births has decreased very quickly and in 1998 came to only 50% of the number in 1987, which was the year with the largest number of births. To some extent the decrease in the number of births can be linked to the large out-migration.

Table 4.1. Estonia - population trends 1991-98 (thousands)

	1989	1990	1991	1993	1995	1997	1998	Change 91-98	
Numbers								No.	%
Male	731.4	735.1	734.9	713.3	695.9	680.7	676.6	-54.8	-7.5%
Female	834.3	836.6	835.5	813.2	795.7	781.4	777.2	-57.1	-6.8%
TOTALS	1565.7	1571.7	1570.4	1526.5	1491.6	1462.8	1453.8	-111.9	-7.1%
Percentage split									
Male	46.7%	46.8%	46.8	46.7	46.7	46.6	46.5	-	-
Female	53.3%	53.2%	53.2	53.3	53.3	53.4	53.5	-	-

Source: Statistical Office of Estonia (in 1989 population census data).

As economic conditions have changed, many young families have postponed the birth of the first child. They prefer to establish an adequate economic environment for family life first. Adjustment problems and economic instability have also resulted in unstable family relations, with an increasing number of divorces and a falling birth rate. Health care statistics reveal that the number of unnatural deaths (alcohol poisoning, suicides, homicides, traffic accidents) increased nearly twofold in the 1990s as compared to the 1980s. This has primarily reduced the numbers of people of working age, especially the younger male age groups.

Table 4.2: Estonia - male population by age 1991-98 (thousands)

	1991	1993	1995	1997	1998	Change 91-98	
						No	%
TOTAL	734.8	713.3	695.9	680.7	676.6	-58.3	-7.9
15-19 years	55.5	54.1	53.6	53.2	53.2	-2.3	-4.2
20-25 years	56.2	57.4	54.3	52.4	52.2	-4.0	-7.1
26-44 years	225.6	215.2	211.2	208.6	208.1	-17.6	-7.8
45-65 years	164.4	160.3	157.6	154.2	153.9	-10.5	-6.4
65 +	55.3	58.7	61.6	64.9	66.6	-11.3	+20.5

Source: Statistical Office of Estonia

Table 4.3: Estonia - female population by age 1991-98 (thousands)

	1991	1993	1995	1997	1998	Change 91-98	
						No	%
TOTAL	835.6	813.3	795.7	781.4	777.2	-58.3	-7.0
15-19 years	53.2	52.2	51.6	51.4	51.7	-1.5	-2.8
20-25 years	51.1	52.0	51.9	51.1	50.7	-0.3	-0.7
26-44 years	231.5	221.4	214.2	210.2	209.2	-22.3	-9.6
45-65 years	200.8	196.0	193.4	190.8	190.2	-10.6	-20.2
65 +	128.1	130.6	133.2	136.5	138.8	+10.7	+8.3

Source: Statistical Office of Estonia

4.2 *Labour force participation of the population*

The market economy reforms of the 1990s in Estonia led to nearly half of those employed having to change their jobs.

Table 4.4: Estonian labour force participation rates (%)

	1989	1990	1991	1992	1993	1994	1995	1996	1997
Total									
15-24	50.4	48.8	49.6	50.4	49.9	52.2	47.7	45.9	45.4
25-49	93.9	92.5	91.9	91.4	90.8	90.4	90.0	89.1	89.4
50-69	66.2	65.1	61.9	56.3	51.7	50.3	48.0	48.8	48.7
16 until pension age	84.9	83.4	82.9	82.0	81.6	81.5	80.1	79.4	78.8
15-64	78.9	77.9	76.9	75.1	73.6	73.8	72.6	72.1	72.5

	1989	1990	1991	1992	1993	1994	1995	1996	1997
Males									
15-24	52.3	53.3	56.1	60.1	57.7	60.1	55.6	53.1	52.0
25-49	97.8	97.2	96.8	96.1	95.1	94.6	94.0	92.9	93.5
50-69	77.8	76.5	73.6	68.3	63.9	62.2	58.8	58.9	59.4
16 until pension age	87.4	87.0	87.3	86.7	85.9	85.8	84.0	83.1	82.4
15-64	83.8	83.7	83.5	82.5	80.5	80.7	79.3	78.3	78.8
Females									
15-24	48.3	44.0	42.7	40.0	41.5	43.8	39.5	38.5	38.6
25-49	90.1	88.0	87.3	86.9	86.7	86.4	86.1	85.4	85.4
50-69	57.8	56.8	53.3	47.5	42.7	41.5	40.0	41.2	40.7
16 until pension age	82.1	79.5	78.2	76.9	77.1	76.9	75.9	75.5	75.0
15-64	74.3	72.4	70.8	68.2	67.2	67.4	66.3	66.4	66.6

Sources: Estonian Labour Force Surveys

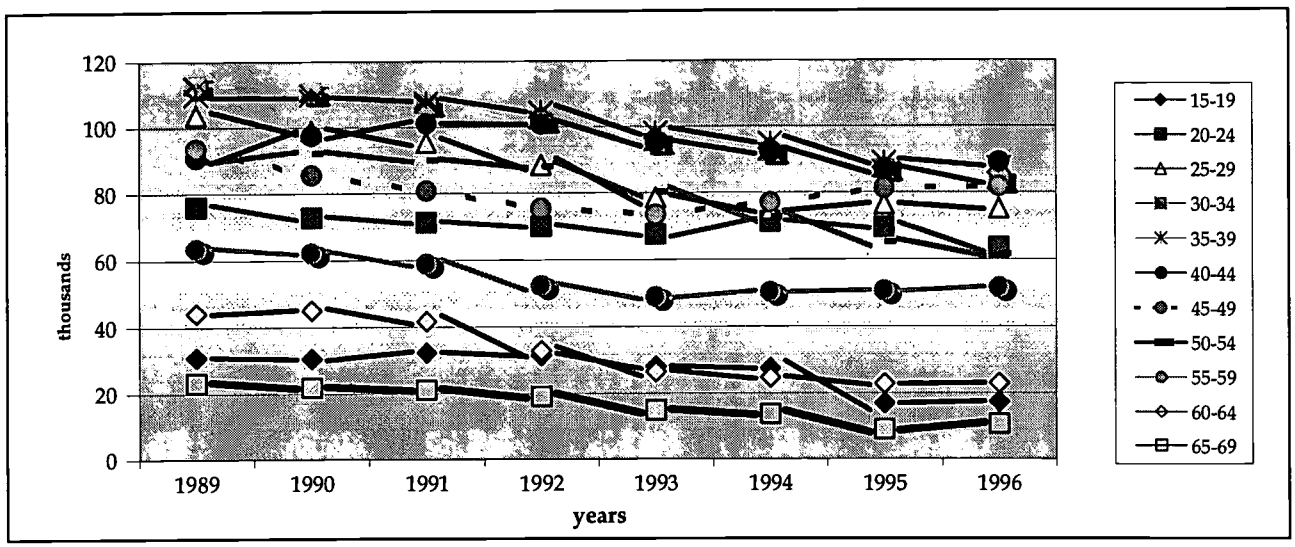
This did not always happen voluntarily, but was frequently a result of being made redundant or of the employing enterprise being reorganised or closed down. It was a tremendous shock for people of working age when the guaranteed employment of the Soviet era was suddenly replaced by competition for the rapidly dwindling number of jobs, for which the applicants were required to have good skills and knowledge.

Participation rates dropped for all age groups during the transition. As we can see from Table 4.4, the lowest participation rate was for young females (only 38.6% in 1997) and the highest for males in the age group 25-49 (93.5%). Old people left the labour market during the transition; in both gender groups it was their participation rates that declined most. The biggest gender difference between age groups is among older people as well. While for males the participation rate was 59.4% in the 50-69 age group, for females the corresponding rate was 40.7%. If we look at the dynamics of participation rates we can observe that the increased difference between male and female participation rates is caused by the widening gap between the participation rates of young females and males. In 1989 the participation rate of young males was around 52% and it remained almost the same after 8 years of transition. The female participation rate declined from 48% to 38%.

As we can see from the tables in the annexes and also from Figure 4.1, different age groups suffered differently from the decline in employment.

If we analyse total employment changes by age group we can observe some interesting patterns. We observe changes in employment over seven years. We can see that for many age groups 1993 was the year when the general trend changed (e.g. for people aged 45-49 and 55-59). Employment declines constantly for persons 50-54 years of age; while in 1989, 90 000 people in this age group were employed, in 1996 the corresponding number was 61 600. The same tendency occurs surprisingly in age groups between 25 and 39. The last fact is a little surprising, since the impression given by the mass media suggests that it should be the 25–35-year-olds who have the best chances of a decent job and career.

Figure 4.1: Number of employed people by age groups



4.3 *Educational dimension of the labour market*

In Estonia, the share of employed persons with higher education was relatively high in 1995. Between 1989 and 1995, the share increased from 15.7% to 18.0% (see Table 4.5). In the future, the share of employed persons with higher education will continue to increase in Estonia, mainly due to the increasing number of institutions of higher education and to the various educational opportunities. The share of people with vocational education is also relatively high at 40.5%. Regardless of the very large share of employed persons with vocational education, it must be conceded that in a society where changes in the economy are swift, changes in the educational system cannot keep up with the needs of the economy. Structural unemployment is characterised by the mismatch of people's skills and the actual needs of the economy. Since most unemployment in Estonia is structural, the only conclusion possible is that vocational secondary education and job training have not been flexible enough to satisfy the needs of the labour market (see also section 5.4).

Table 4.5: Population aged 15–69 by economic status and education (%)

Education category	Unemployed		Employed		Inactive	
	1989	1995	1989	1995	1989	1995
Total	100	100	100	100	100	100
Basic education	10.1	25.1	18.9	13.2	44.6	39.3
Upper secondary general ISCED level cat.3	37.7	33.1	27.8	27.8	25.9	29.5
Upper vocational education ISCED level cat.3	29.0	16.0	13.2	15.4	10.6	10.8
Post secondary technical ISCED level cat.5	20.3	21.6	23.9	25.1	12.8	14.5
Higher education ISCED level cat.6	2.9	4.2	15.7	18.0	6.1	5.8

Note: 1976 ISCED classification is used
Sources: Estonian Labour Force Surveys

Industrial data show that Estonian firms acting as sub-contractors account for a relatively large part of employment in manufacturing, which is an indication of the relatively high qualifications of the Estonian labour force, since the production is intended for the EU market. Another important factor is the low cost of labour compared with Scandinavian countries.

Unfortunately data from 1998 represent a different classification system (ISCED 97). These two tables (Table 4.5 and 4.6) are therefore not fully comparable; however, we can see that educated people tend more to be in employment and uneducated people in inactivity. Also the employment rates and unemployment rates depend on education level. Unemployment rates are higher in lower education groups, both for males and females. One interesting fact is that for females with tertiary education, the unemployment rate is above average. This is a result of the relatively high unemployment rate (7.0%) of females with post-secondary technical education (see annexes).

Table 4.6: Population aged 15–74 by economic status, sex and education, 2nd quarter 1998(%)

ISCED 97 educational	Labour force			Inactive persons	Total	Labour force participation rate, %	Employment rate %	Unemployment rate %
Level (code)*	Total	Employed	Unemployed					
Males and females								
TOTAL 15–74	100.0	100.0	100.0	100.0	100.0	64.5	58.3	9.6
Below upper secondary education	12.9	12.0	21.8	51.7	26.7	31.2	26.2	16.1
Upper secondary education	57.1	56.5	62.6	36.3	49.7	74.1	66.3	10.5
Tertiary education	30.0	31.5	15.6	12.0	23.6	81.9	77.8	5.0
Males								
TOTAL 15–74	100.0	100.0	100.0	100.0	100.0	69.6	64.6	10.4
Below upper secondary education	15.5	14.3	25.3	57.2	27.1	41.1	34.1	17.0
Upper secondary education	61.4	61.0	64.9	35.3	54.1	81.8	72.8	11.0
Tertiary education	23.2	24.7	(9.8)	7.5	18.8	88.9	84.9	(4.5)
Females								
TOTAL 15–74	100.0	100.0	100.0	100.0	100.0	57.7	52.8	8.6
Below upper secondary education	10.1	9.5	17.1	48.4	26.3	22.2	19.0	14.5
Upper secondary education	52.4	51.7	59.6	36.9	45.9	66.0	59.5	9.8
Tertiary education	37.4	38.8	22.9	14.7	27.8	77.7	73.6	5.3

ISCED 97 educational level: below upper secondary – primary and basic education; upper secondary – secondary education, vocational education, post-secondary technical after basic education; tertiary – post-secondary technical after secondary education, university-level education, master's and doctor's degree.
Sources: Estonian Labour Force Surveys

4.4 *Regional and ethnic characteristics*

The number of residents has decreased most in the counties of Harju and Ida-Viru. The Harju county share in the 1990-1996 population decrease (-95 600 people) was nearly 60% and that of Ida-Viru county approximately 20%. The number of working age residents has also decreased most in these two counties.

Regional differences in the age structure of the Estonian population have mainly been preserved. In Harju county, for example, at the beginning of 1997, there were 68 non-working-age residents per 100 working-age residents, and in Võru county 89. The employment burden on the residents in industrial north and north-east Estonia is lower than on the agricultural periphery, which has a mainly retirement-age population. (See further annex B3.)

From Figure 4.2. we can see that Ida Virumaa and the capital area (Harjumaa) have the lowest share of Estonians. In all other counties the share of Estonians is around 80% or more.

The reforms of the 1990s have to some extent even aggravated the regional differences in the population's age structure, since a large share of the new jobs are created in Tallinn. The decline of agricultural activities - after the liquidation of the collective and state farms, the entry of subsidised imported food into the Estonian market, and the high customs barriers on the Russian market - has also had an impact. The hardest hit areas have been those where the majority of the population formerly earned their income from agriculture (Estonian Human Development Report 1997).

It is primarily the regions with an economy concentrated in a single sector that face problems with restructuring. For this reason, it is extremely important that the economy of a region be many-faceted. If a crisis should develop in one branch of the economy, the workforce can learn new skills and find employment in other sectors. Unfortunately, there are a number of towns with a single enterprise (mono-functional towns) where the entire population is directly or indirectly dependent on the same employer. The workforce in these towns is in the most critical position. The largest number of mono-functional towns are in Ida-Viru county, where the decline of the secondary sector (primarily industry) has left many people unemployed. Industrial employment has also significantly declined in Harju county, but this has been compensated by the creation of new jobs in the tertiary sector.

The participation rates have declined most in the agricultural areas, such as Põlva, Jõgeva, Viljandi, Hiiu and Võru counties. The smallest decrease is observed in the capital Tallinn and in Pärnu county.

Figure 4.2: Share of Estonians by countries in 1998

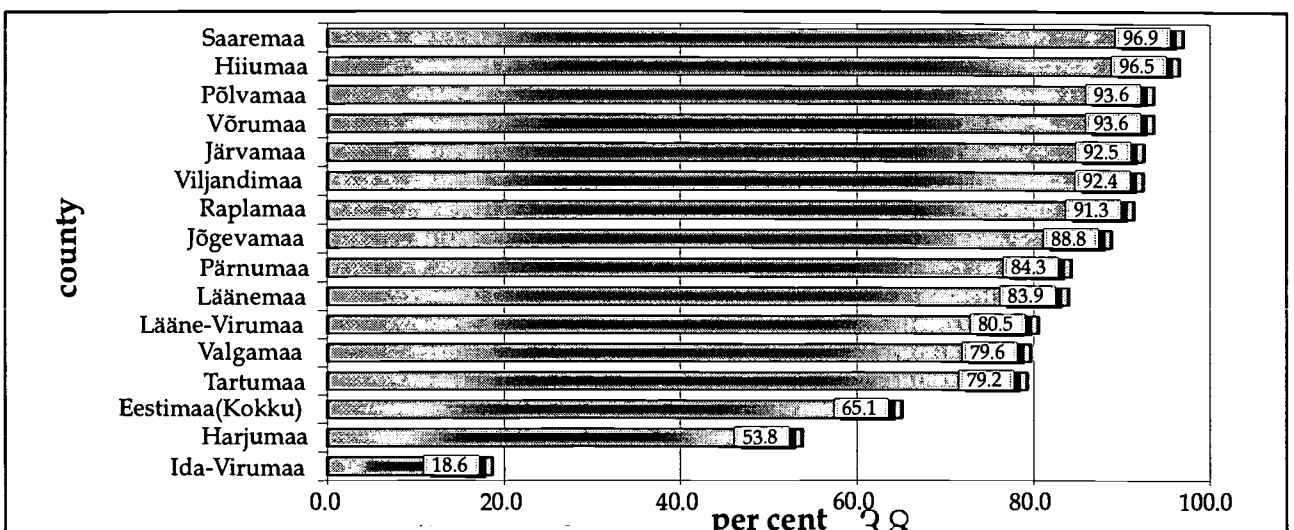
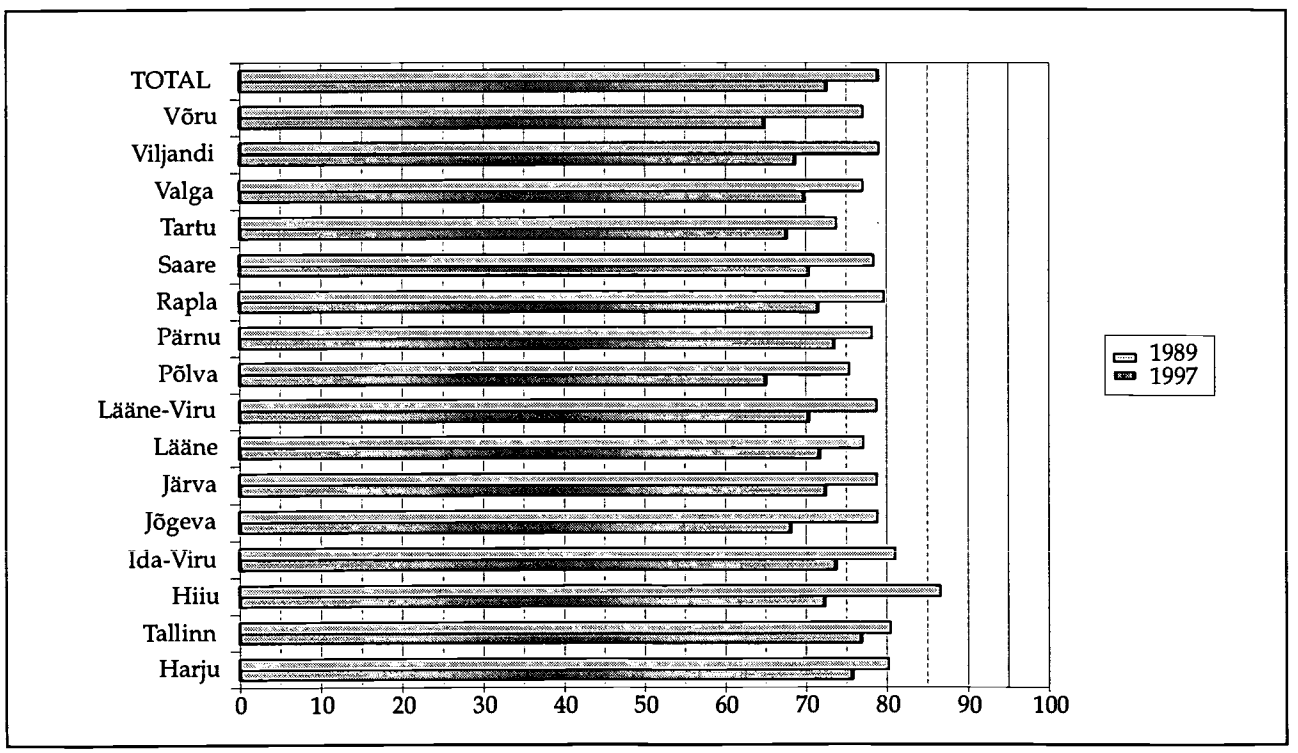


Table 4.7: Participation rates by county

Region	County	1989	1990	1991	1992	1993	1994	1995	1996	1997
	TOTAL	78.9	77.9	76.9	75.1	73.6	73.8	72.6	72.1	72.5
Capital	Harju	80.1	79.6	79.2	77.2	75.7	76.3	74.8	75.6	75.7
	Tallinn	80.3	80.1	79.9	77.7	76.1	76.3	74.9	75.8	76.8
Central Estonia	Jõgeva	78.7	77.6	77.0	75.5	73.2	69.5	68.8	66.0	68.1
	Järva	78.6	79.1	77.4	78.1	75.3	76.1	78.4	79.9	72.4
	Rapla	79.5	78.5	76.1	73.9	75.0	73.6	69.7	68.1	71.5
	Viljandi	78.9	79.6	75.9	73.6	74.3	75.5	72.5	69.0	68.6
North-eastern Estonia	Ida-Viru	80.9	78.3	77.1	75.4	74.6	72.9	74.4	72.8	73.7
	Lääne-Viru	78.6	78.3	77.6	74.7	74.4	73.2	69.3	68.3	70.3
Western Estonia	Hiiu	86.4	80.3	79.6	80.3	77.4	77.5	(74.5)	(70.0)	72.3
	Lääne	77.0	77.7	76.9	75.1	74.3	72.9	69.5	71.2	71.7
	Pärnu	78.0	76.6	75.5	74.1	71.0	72.9	69.1	68.6	73.5
	Saare	78.2	76.1	72.1	72.5	71.3	71.0	71.8	71.9	70.3
Southern Estonia	Põlva	75.2	73.8	72.7	65.7	61.9	63.6	67.3	66.3	65.0
	Tartu	73.6	72.5	73.2	72.7	71.0	72.7	70.8	70.7	67.6
	Valga	76.8	74.6	71.9	68.6	66.2	65.4	68.9	66.0	69.7
	Võru	77.0	77.0	74.0	70.4	67.7	68.5	68.3	64.5	64.8

Sources: Estonian Labour Force Surveys

Figure 4.3: Participation rates by countries in 1989 and 1997



Low mobility

One reason for relatively large geographical differences is the low mobility of the population. According to the longitudinal study "The life paths of a generation", 43% of the respondents in Harjumaa were ready to move if they stayed unemployed. On the other hand, in the regions with high unemployment levels (Võrumaa, Põlvamaa, Valgamaa), only 10% of the respondents felt the same. In general, people with higher levels of education indicated a greater willingness to migrate. About 17% of respondents with a high school education were ready to move if unemployed and about 33% of those with a university degree were prepared to do the same. Present migration patterns improve the chances of finding work mostly for people living in regions that already offer a relatively better chance of finding employment, due to the regions' lower unemployment rates as well as the proximity of larger towns. At the same time, people living in the borderlands with high unemployment rates find themselves trapped: the chances of finding a job locally are much slimmer than in other regions, and the long distances from the major centres make it difficult to migrate when it is highly unlikely that employment can be found. The main obstacle to working force mobility is undoubtedly the problem of finding a new place to live. People living in the borderlands find themselves dependent on their present homes as practically no housing market exists in these regions. Also, the prices of housing differ widely by region, being up to ten times higher in big towns and their neighbouring regions – precisely those places where the chances of finding a job are better (Estonian Human Development Report 1996).

4.5 *Supply of hours*

According to the Estonian LFS in 1998 the share of part-time jobs (less than 35 hours work per week) was relatively low, only 7.8% of the total labour force. There is a significant difference between males and females. For males the share is 5.6% while for females it is 10.2%. This is explained by the fact that in Estonia females are more involved than men in taking care of children.

Table 4.7: Part-time and full-time work and multiple job holding, 2nd quarter of 1998

Proportion of labour force working part-time (%)	
Males	5.6
Females	10.2
Total	7.8
Average weekly hours of full-time workers	
Males	43.7
Females	40.7
Total	42.3
Average weekly hours of part-time workers	
Males	21.5
Females	20.6
Total	21.0

Proportion of labour force working at more than one job (%)	
Males	7.9
Females	7.0
Total	7.5
Sector of second job (% of total)	
Primary	14.0
Secondary	15.4
Tertiary	70.6

Sources: Estonian Labour Force Surveys

Table 4.7 describes not only the share of the labour force working part-time, but also the average weekly hours in part-time jobs and the incidence of the multiple job holding. The average weekly hours for the group working part-time were 21 hours in 1998, while the average hours in full-time employment were 42.3. More than 50 000 workers held two or more jobs. Gender differences here are not as substantial as in part-time work. Most multiple jobs are located in the service sector (70.6%). If we analyse second jobs according to occupation, we can see that second jobs are mostly held by professionals (28.3%), but also by technicians and associate professionals (see Table 4.8).

Table 4.8: Employed persons with more than one job by occupation of second job, 2nd quarter of 1998

Occupation	%
TOTAL	100
Legislators, senior officials and managers	7.5
Professionals	28.3
Technicians and associate professionals	18.2
Clerks	...
Service workers and shop and market sales workers	(5.0)
Skilled agricultural and fishery workers	9.8
Craft and related trade workers	12.9
Plant and machine operators and assemblers	(5.7)
Elementary occupations	10.5

Source: Estonian Labour Force Survey

5. Unemployment

5.1 Unemployment data

At any given moment, the most comprehensive overview of the current situation of unemployment comes from the statistics of the State Employment Board (see section 11 and Table A1 in Annexes). Labour Force Surveys enable us to present an unemployment rate (the share in the labour force of all the unemployed seeking work) that is in accordance with international standards.

5.2 General trends in total unemployment

From Table 5.1. it is apparent that the labour force survey (ILO unemployment) figures for the number of unemployed job-seekers are about twice as high as those indicated by registered unemployment statistics during the same period. This kind of difference is due to several factors, the most influential of which are the inadequacy of the legislation and social guarantees for unemployment (a strict set of rules for the certification of job-seekers as unemployed and for the payment of unemployment benefits), the poor reputation of state employment offices, the very limited willingness on the part of employers to cooperate with the state job-mediation system, but also different job-seeking scenarios.

Table 5.1: Registered unemployed, registered unemployed job-seekers and unemployed persons according to the LFS, (thousands, %)

Year	Number of ILO unemployed (thousands)	Number of registered unemployed (thousands)	Unemployment rate (ILO) (%)	Unemployment rate (registered) (%)
1993	49.6	33.4	6.5	4.5
1994	56.7	37.3	7.6	5.1
1995	70.9	34.9	9.8	5.1
1996	71.9	37.9	10	5.5
1997	74.1	34	10.5	5.1
1998*	68.0	32	9.6	4.7

Note: II quarter*
Sources: Statistical Office of Estonia, Estonian Labour Market Board

Unemployment doubled in 1991 and 1992, at a time of very rapid economic reforms in Estonia. This fact sheds some light on the nature of Estonian unemployment.

Large-scale structural changes in the Estonian economy were accompanied by a significant reallocation of production factors between economic sectors and different geographical regions. These changes can be viewed as a potential source of a subtype of unemployment known as structural unemployment. By structural unemployment we mean regional and skills' mismatches between the labour force and vacancies.

Long term unemployment

Long-term unemployment is increasing in Estonia. In 1995 the share of those who had been seeking work for more than 12 months was around 30%, while in 1998 their share had increased to 50%. This is a serious tendency: already now we can observe in many small communities (mostly in rural areas) that people who have been long-term unemployed have lost their human capital and ability to work. It is extremely difficult to bring these people back into the labour market.

The growth of long-time unemployment will become a serious problem in regions where unemployment has been persistently high in the last few years, primarily in the north-east and the south of the country and in other regions farther away from county centres.

Table 5.2: Unemployed persons by duration of unemployment in survey weeks (%)

Duration	1995 I quarter	1997 II quarter	1998 II quarter
Up to 6 months	51.8	46.4	40.9
More than 12 months	30.0	36.4	45.0
7–12 months	18.3	17.2	14.1
Total	100	100	100

Sources: Estonian Labour Force Surveys

In Estonia, unemployment emerged in the period of transition from one economic system to another. This kind of emergence of unemployment is similar to most Eastern European countries. The reasons for transition unemployment have an economic, social, and psychological background. In addition to the macroeconomic shock[13] we can adduce other factors: people's passive attitude towards retraining, low mobility, and difficulties in adapting psychologically to market economy conditions.

The following factors have helped to prevent the explosion of unemployment in Estonia.

- A rapid restructuring of the economy. Employment in the tertiary sector has increased much faster than it has decreased in the primary and secondary sectors. Thus, some people have found employment in the service sector. However, since people do not always have the necessary qualifications or there may be no suitable jobs in the area, many people have remained unemployed.
- A decrease in the labour supply. According to the ELFS 95 and ELFS 97, the number of employed persons decreased from 838 000 in 1989 to 645 000 in 1996. This means a decrease of 200 000 people. Over 100 000 persons have left the labour market in recent years. Of these, more than 75 000 - 80 000[14] have left Estonia, 40 000 - 45 000 have retired or left the labour market for other reasons. The remaining 70 000 - 75 000 people are unemployed.

13 Here we mean the hyperinflation of 1991, the reorientation of foreign trade from the eastern to the western market, monetary reform, and the banking crisis.

14 According to Estonian migration data, during the period 1990–1994 alone, 67 293 more people left Estonia than came into Estonia.

- The fast development of the hidden economy. A considerable amount of the labour force is employed in the hidden labour market. A hidden labour force is used mainly in construction, agriculture, trade, and service activities.
- One possible explanation for the relatively slow increase in unemployment in Estonia compared to other Eastern European countries is the large share of the inactive population in the total working-age population. According to the ELFS, 31.9% of respondents were outside the labour force in 1997, i.e. they were not employed and did not wish to work.

Despite the reasons given above, the unemployment rate has increased from almost zero to 10%.

5.3 *Unemployment by age groups and gender*

According to the Labour Force Survey data, there have been more unemployed men than women in recent years. This is an interesting phenomenon, characteristic of Estonia, not of other European countries. However, the data also show that the number of women who are inactive has increased dramatically during the period of observation. The main policy objective should thus be to encourage women to enter the labour force, making them active in the labour market. A further interesting fact about Estonia is that the share of women is considerably higher than the share of men in registered unemployment. This difference is primarily due to Estonian legislation: men lose the right to register as unemployed after a certain set period of time, but women can register themselves as unemployed repeatedly under certain circumstances that do not apply to men (e.g., having children aged under 7, etc.).

In 1992-1994, the female unemployment rate was higher than the previous male unemployment rate. This is due to different sampling procedures in different labour force surveys, but in addition, the first waves of dismissals affected women more than men.

Table 5.3: Unemployment rate by age group and gender 1992-1998, selected years

Age	1992			1994			1996			1997			1998		
	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F
15-64	3.7	3.9	3.5	7.7	7.4	8.0	10.1	10.8	9.3	9.8	10.3	9.4	9.7	10.6	8.7
15-24	7.4	(6.9)	(8.0)	11.6	11.5	11.8	16.0	(15.5)	(16.6)	14.4	15.8	12.4	14.5	16.6	11.7
25-49	3.4	3.7	3.2	7.5	7.0	8.1	9.7	10.4	9.0	10.0	9.6	10.4	10.0	10.3	9.7
50-69	(2.2)	...	...	5.1	(5.0)	(5.1)	7.2	(8.4)	(6.0)	6.1	7.8	(4.2)	5.7	(7.2)	(4.7)
16-pens	3.8	4.0	3.6	7.9	7.6	8.3	10.4	10.9	9.9	10.2	10.4	10.0	10.1	10.8	9.2

Notes: data are based on less than 20 persons of the sample ; ( ) data are based on 20-39 persons of the sample, second quarter for 1998. Pension age was as follows: 1992 for females (F) 55 and for males (M) 60; in 1994 for F 55.5 and for M 60.5; in 1996 for F 56.5 and for M 61.5, in 1997 for F 57 and for M 62; 1998 for F 57.5 and for M 62.5
Sources: Estonian Labour Force Surveys

Duration

If we look at unemployment according to duration and age group, we can draw conclusions only about the general age group (people aged from 16 to pension age). The largest share of the unemployed are long-term unemployed (45.6%). Persons unemployed short-term (up to 6 months) account for 33%. Among young people, short-term unemployment flows prevail (see tables in annexes).

Table 5.4: Unemployed persons by duration of unemployment, 1994-1998 (annual average)

	0-6 months	7-12 months	12+ months	Totals
1994	38.8	21.6	39.6	100.0
1995	40.2	28.1	31.8	100.0
1996	29.6	15.1	55.3	100.0
1997	46.4	17.2	36.5	100.0
1998	40.9	14.2	45.0	100.0

Sources: Estonian Labour Force Surveys

5.4 Unemployment by educational attainment

In 1989 the share of unemployed people with upper vocational education (ISCED 1976 level category 3) and post-secondary technical education (ISCED 1976 level category 5) was 49.3%. Despite the fact that the share of these people had declined to 37.6% by 1998, it still remained relatively high. The share of unemployed people with basic education increased drastically from 10.1% to 25.1% (see also section 4.3 and Tables 4.5 and 4.6).

As seen in Table 5.5, the incidence of unemployment declines steeply with higher educational attainment. The unemployment rate is much higher among individuals with basic education. This group with ISCED 2 education represents about 13% of employment, but its unemployment rate was 16.1% in 1998. The unemployment rate of workers with general secondary education is higher than the unemployment rate of workers with a technical background. The unemployment rate of males with vocational education after basic education is relatively high. This illustrates the weaknesses in our education system.

Table 5.5: Unemployment rates by gender and education, 2nd quarter of 1998

Education	Males	Females	Total
Below upper secondary education	17.0	14.5	16.1
Upper secondary education	11.0	9.8	10.5
Vocational education after basic education (3C)	15.1	(10.7)	13.9
Secondary education (3A)	11.5	11.6	11.6
Vocational education with secondary education (3A)	8.7	(9.6)	9.0
Vocational education after secondary education (4B)	(15.7)	(8.0)	11.3
Post-secondary technical after basic education (3A)	(7.1)	(6.7)	6.9
Tertiary education	(4.5)	5.3	5.0
TOTAL 15–74	10.4	8.6	9.6

Note: ISCED 97 educational level: below upper secondary – primary and basic education; upper secondary – secondary education, vocational education, post-secondary technical after basic education; tertiary – post-secondary technical after secondary education, university-level education, master´s and doctor´s degree. ... data are based on less than 20 persons of the sample
( ) data are based on 20-39 persons of the sample
Sources: Estonian Labour Force Surveys

The largest differences between male and female unemployment rates appear in vocational education, whether after primary school or after secondary school.

5.5 *Unemployment by region and ethnical groups*

For various reasons, the labour force is not sufficiently mobile to move to vacant jobs in other regions. Labour force mobility is hindered by purely economic factors (the insufficient development of the real estate market in the periphery, the great costs of moving), but also by social-psychological factors (family and relationship ties, the effect of a new environment, etc.). We can assert that low mobility is an inhibiting factor for economic development.

In order to obtain a picture of the regional differentials of unemployment, we must analyse the Estonian Labour Market Board data on registered unemployed job-seekers. The regional distribution of unemployment is quite varied. The following regions have relatively high registered unemployment:

- Southern Estonia (Valga, Võru, Põlva county),
- Ida-Viru county,
- Western Estonia (Saare county).

Table 5.6: Registered unemployed job-seekers in counties of Estonia in 1994-1998 (% of population between 16 and retirement age, annual average) compared with ILO unemployment data

	County	1994	1995	1996	1997	1998	ILO unemployment 1998*
	Average	4.1	4.1	4.4	4.0	4.5	9.6
Capital	Harju	1.9	2.4	2.9	3.0	3.6	9.1
Central Estonia	Jõgeva	4.0	4.3	4.2	4.4	4.8	13.9
	Järva	3.6	5.0	4.7	4.5	4.4	10.5
	Rapla	4.0	4.9	5.4	4.9	5.3	10.0
	Viljandi	6.1	6.1	6.9	5.0	4.9	8.0
North-eastern Estonia	Ida-Viru	8.7	8.2	7.9	6.7	7.9	14.3
	Lääne-Viru	2.3	2.4	2.6	2.2	2.6	6.6
Western Estonia	Hiiu	5.2	5.2	5.5	5.0	5.0	...
	Lääne	8.6	7.7	7.0	5.8	5.9	(6.0)
	Pärnu	1.8	1.7	2.1	2.2	2.4	(5.6)
	Saare	4.4	3.8	5.1	4.7	6.8	7.1
Southern Estonia	Põlva	7.2	5.6	5.7	5.5	6.3	12.7
	Tartu	2.8	2.5	2.7	2.5	2.7	8.5
	Valga	5.5	6.2	6.6	7.9	6.9	11.0
	Võru	12.6	11.5	12.4	6.9	6.4	11.2

** 1998 II quarter*
Sources: Estonian Labour Market Board, Statistical Office of Estonia

The geographical differentiation of unemployment has deepened. In addition to the crisis regions of southern and north-eastern Estonia, unemployment has increased rapidly in western Estonia, especially on the largest island, Saaremaa (Saare county). Unemployment remains high in the north-east. In Võru county, 6.4% of the working age population were unemployed and looking for work in 1998. A positive sign is that there was a sharp decline of registered unemployment in Võru county in 1997. But the real reason for this decline lies in local self-government regulations. In Võru county, social protection (subsidies for housing, child allowances, etc.) was connected with the requirement that people must be registered as unemployed. People who were categorised as inactive had no right to social protection administered by the local government. These regulations were changed in 1997. Valga county is a region where unemployment is increasing and this applies also to the capital of Estonia, Tallinn, and Harju county. Unemployment levels are traditionally high in Ida-Viru (north-eastern Estonia), with a 7.9% unemployment rate.

It is characteristic of Estonia that in many counties there is a very substantial difference between registered unemployment and ILO unemployment. We can see this, for example, in Jõgeva, Lääne-Viru, Tartu and Harju counties. This reflects the different labour market situations in different regions. First, in Tartu and Harju (which also includes Tallinn), there is a good chance of finding a job without registering. At the same time, in small counties like Jõgeva, but also in Rapla and Põlva

counties, the chances of finding work through the labour services are very limited and people therefore seek jobs by means of newspaper advertisements, the assistance of family members and relatives, etc. (see also Table 3.10).

Unemployment in larger urban areas (e.g. Tallinn and Tartu) is not such a major social problem. On the contrary, it can be said that the small size of the Estonian labour force and the concentration of investment near the capital may result in problems in finding highly qualified specialists in this area.

Unemployment of national minorities

According to Estonian Labour Force Survey data, the total unemployment (according to ILO definitions) of non-Estonians was 14% in 1996 (see Table 5.6.). This figure is almost twice as high as the unemployment rate of Estonians. What might be the conceivable explanations of this fact?

1) Language abilities. The language law of 1989 made Estonian the sole official language in Estonia[15]. According to the legislation, most officials working in the public sector are required to speak Estonian. That meant that most people already working for the state were required to pass tests showing specified levels of proficiency within stipulated deadlines in order to keep their jobs. Also, in the service sector most employers demand a knowledge of written and oral Estonian from employees. In many cases, knowledge of the English, Russian and Finnish languages (especially in Tallinn where the number of Finnish tourists is large) is desirable in the service sector.

2) Russian speakers are employed more in such industries as the manufacturing of chemicals, machinery and metal production, water and railway transport, the manufacturing of construction materials, etc. These are so-called old industries, where most technology was old and the industries were oriented towards the former Soviet market. During economic restructuring, the Estonian economy was reoriented from eastern to western markets. These industries have therefore suffered from a lack of resources and declining former markets and are now declining industries; as a rule, both output and employment has declined. Many employees have become unemployed. Because these industries were more or less concentrated in north-eastern Estonia, where the largest Russian speaking minority in Estonia is located, unemployment in this region is obviously higher than average.

3) Russians are more mobile in the labour market. Some analyses have shown that movement between different labour market states is much higher among Russian speakers than among Estonians (Eamets 1998).

15 During Soviet times, both Estonian and Russian were official languages.

Table 5.7: Unemployment rate by language criteria, selected years (age 15-69; %)

	1991			1992			1996			1997			1998		
Group	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F
Estonians	1.3	-1.1	-1.6	3	3.4	2.5	7.8	8.5	7.1	7.9	8.6	7	7.8	8.3	7.2
Non-Estonians	-1.7	-2	...	5	4.9	5.1	14	14.9	13.1	13.3	13.2	13.4	14.4	15.8	12.9

Notes: ... data are based on less than 20 persons of the sample; ( ) data are based on 20-39 persons of the sample, for 1998 second quarter data only
Sources: Estonian Labour Force Surveys

Table 5.8: Unemployment by duration and nationality in 1995

Duration	Estonians		Non-Estonians	
	1995	1998	1995	1998
Up to 6 months	38.4	44.6	42.1	36.9
7-12 months	25.3	16.8	31.0	11.4
More than 12 months	36.3	45.0	26.9	51.8

Sources: Estonian Labour Force Surveys

If we look at the data presented in Table 5.8, we can see that among non-Estonians (mostly Russian speakers) the share of long-term unemployment is almost 10% less than among Estonians in 1995. This is indirect evidence that non-Estonians were more active in the labour market and that their average unemployment duration is shorter than that of Estonians. The situation has changed in 1998, when long-term unemployment has increased drastically among both language groups. We can see that the share of short-term unemployment spells has increased among Estonian speakers and declined among Russian speakers. (See also annex B6 on Integration policy.)

5.6 *Hidden unemployment*

In defining hidden unemployment different authors stress different aspects of unemployment. The most important is that a person without work is considered to belong in the hidden unemployment category if he or she is able and wishes to work. The job-seeking criterion that is used in the standard definition of unemployment is mostly relaxed. Following from this very general concept, the following categories are considered to constitute hidden unemployment:

- Persons who are able to work and are currently available for work but who for certain reasons are not seeking work: they do not believe that they could find work because of their age or other reasons or they have given up the search for lack of results (discouraged workers).
- Persons who are considered underemployed, if:
  1. they are working on a part-time basis, but are willing and available to work more hours,
  2. persons whose employment is inadequate in relation to specified norms or alternative employment (taking into account the person's occupational skills).

Table 5.9: Unemployment, underemployment and discouraged workers in Estonia (thousands)

Category	1991	1992	1993	1994	1995	1996
Unemployed	12	29.1	49.6	56.7	70.9	71.9
Underemployed	14.5	16.8	18.8	20.7	30.8	34.5
Discouraged	4.1	7.3	10.7	13	14.7	18

Sources: Estonian Labour Force Surveys

According to ELFS data, both underemployment and discouraged workers have increased in Estonia (see Table 5.9).

Under-employment is divided into visible and invisible parts - the first category above is regarded as visible underemployment and the second as invisible. Because of the difficulty in estimation, the second is not generally measured statistically.

Hidden unemployment in Estonia has been analysed in empirical work based on ELFS data. Three logit models were created (for unemployed, underemployed and discouraged). The dependent variables of these models obtained values 1 or 0 with regard to the person's belonging to the category or not. In the models the factors that influence the probabilities of belonging to a given category were analysed (Eamets and Ukrainski, 1998). In order to compare the factors that influence open and hidden unemployment in Estonia, the points below should be noted.

- The probability of becoming unemployed or discouraged is higher among men. The reason is that during the reforms, the fall in employment has been larger in sectors with traditionally more male employees. This decline has continued for several years already, which also influences discouragement (people do not believe they could find work suitable to their occupational skills). This problem is similar to other countries in transition as well.
- Employment dismissal is a crucial factor increasing the probability of belonging to the categories of unemployed and discouraged. This phenomenon has increased during the transition and influences the discouragement probability not only by the lack of future work opportunities but also because of the psychological factors that are associated with dismissal.
- The regional unemployment level is also a critical factor in increasing the probability of becoming unemployed or underemployed.
- Belonging to the category of employees increases the probability of becoming unemployed and discouraged. This is caused by dismissals of employees during reforms, at the same time as other worker categories (self-employed, for example) have emerged.
- The level of education influences open and hidden unemployment - the higher the educational level, the smaller the probability of being in the observed categories.
- Age is a factor that influences a person's status in the labour market - younger persons have a higher probability of becoming unemployed. This is a common problem in other countries in transition. Also, the situation of non-Estonians is more difficult in the labour market; they have a higher probability of belonging to the category of unemployed.
- Because of investment concentration in the cities, unemployment is a greater problem in rural areas (discouragement and unemployment probabilities are higher).

- If different sectors are compared, then the critical sectors of the economy from the given point of view are hotels and restaurants and education.

No factors have been found that would influence all observed categories of hidden unemployment. It seems that underemployment is influenced more by economic factors and discouragement more by psychological factors.

6. Vocational Education and Training Systems

6.1 General status of the education and training system

The current system of education in Estonia covers pre-school education in kindergartens; general education in primary and basic schools and gymnasiums (upper secondary general schools); vocational education; and higher education at universities and institutions of applied higher education. Special basic schools, upper secondary schools and one vocational school exist for handicapped students. The choices and decisions that students make about continuing their studies after graduation from basic or secondary school, are in most cases based on their personal outlook, which is strongly influenced by our society's decades-long preference for university education. During the first years of independence, the Soviet-era professional counselling system was quickly liquidated and not replaced, and it is now difficult for students to obtain help in planning their careers (National Report on vocational education and training system, 1999). (See also annex B5.)

The common requirements for the national vocational education and training programmes state that there are several different national programmes in vocational education and training. Each national programme must ensure that through the learning process, students develop initiative, responsibility and general skills like teamwork, problem solving, decision making, critical thinking and communication. The choice and scope of subjects in the 50 weeks of general education must be decided on the basis of their relevance to the vocation, speciality or occupation in question.

Special services are available in larger centres for infants with moderate and severe physical and/or intellectual disabilities. For handicapped children there are special basic schools, upper secondary schools and one vocational school. Additionally, integration of the handicapped students into the general education and vocational education and training institutions has begun, involving increased teacher assistance.

In 1996, there were seven universities, six state and one private. The number of private institutions is increasing. At the beginning of the 1991/92 academic year, tertiary education was divided into two branches: universities and institutions of applied higher education. Institutions of applied higher education developed mainly from the former state Technicums (post-secondary technical education institutions). In 1995/96 the number of students in universities, applied higher education institutions, masters' and doctorate studies was about 29 400. In 1997/98, the number was already 34 542.

6.2 Initial vocational education

Under the current school-based vocational education and training system, different ministries, municipalities and private organisations administer institutions that offer vocational education and training programmes in the 1998/99 academic year: the Ministry of Education (56 schools), the

National Police Board (1), the Ministry of Agriculture (13), the Ministry of Social Affairs (1), the Ministry of Transport and Communications (1), municipalities (4) and private organisations (13). A total of 89 educational institutions provide vocational education and training (vocational education and training) courses in Estonia. 60% of the vocational education and training institutions use Estonian as the language of instruction (20% use Russian, 20% use both Estonian and Russian). In recent years there has been an increasing tendency for graduates of basic schools to continue their education in upper secondary general education institutions instead of vocational education and training institutions. According to students' application forms, vocational education and training is considered the least favourable of the study opportunities available. This fact has a significant influence on the quality of the teaching/learning activities in vocational education and training institutions. In the 1996/97 academic year, 31 487 students were studying at national vocational education and training institutions. In 1997/98, the number was 31 316, and in 1998/99 the number is 31 190.[16]

Table 6.1: Educational attainment working age population in 1997 (percentage shares)

	15-24 years	25-39 years	40-64 years	Total
Completion of Primary Education at most (ISCED 0-2)	47.2	7.0	21.9	22.5
Completion of Secondary Education at most (ISCED 3) of which: ■ Vocational education ■ at ISCED 3 ■ General secondary ■ education at ISCED 3	40.4	49.7	37.5	42.0
Tertiary education (ISCED 4 and above)	12.4	43.3	40.6	35.5
Total	100	100	100	100

Source: Ministry of Education

The size and number of study groups in vocational education and training institutions are regulated by the school programme and approved by the Ministry of Education. In vocational education and training institutions, day, evening and distance learning is allowed, but there is no apprenticeship system in vocational education and training in Estonia. One academic year lasts a minimum of 40 study weeks. A minimum of 8 weeks vacation is required.

16 Ministry of Education, Information and Statistics division (Statistical data for an academic year is reported at a specific point in time, October 1, each year).

Table 6.2: Participation in all education and in vocational education in 1993 and 1997 (percentages of population in relevant age groups)

	Vocational education		All education	
	1993	1997	1993	1997
14-19 years old	22.3	17.8	74.3	79.8
20-24 years old	4.1	5.1	15.3	22.4

Source: Ministry of Education

The network of vocational education and training institutions in Estonia today has developed out of the network that used to exist during the Soviet period. The changes of the last ten years, since the proclamation of independence, have significantly influenced the operation of vocational education and training institutions, especially in terms of the specialities taught. The Ministry of Education has started an active reorganisation of the school network, taking into account the schools' development plans, teaching / training outcomes, regional characteristics and the effectiveness of the financing. Each change always causes opposition, and different interest groups have proved unwilling to cooperate. The school network rationalisation process has therefore been time-consuming.

Several bilateral and aid programmes have been implemented in the past few years to support and develop the vocational education and training system in Estonia. One of the most complex programmes was the EU Phare vocational education and training reform program, which was completed at the end of 1998. The programme consisted of 5 components:

- programme/curriculum development;
- teacher and management training; upgrading of equipment;
- partnership linkages with EU schools;
- policy development / dissemination of the programme achievements/results.

Table 6.3: Expenditure per student and drop-out rates by type of education, 1997

	Expenditure per Student				Drop-out rate*	Share of drop-out
	Students	Exp mill. EEK	Exp/stud	(%)		
Completion of Primary Education at most (ISCED 1-2)	186015	1818.0	9773	24.5	0.72	10.7
Completion of Secondary Education at most (ISCED 3) of which:	57416	699.1	12176	30.5	8.62	39.8
■ Vocational education at ISCED 3	19345	279.5	14448	36.2	11.42	17.8
■ General secondary education at ISCED 3	38071	419.5	11019	27.6	7.2	22.0
Tertiary education (ISCED 4 and above)	46513	835.8	17969	45.0	13.23	49.5
Average per student	na	na	11565	na	na	na
Total	289944	3353.5	na	100	-	100

*Note: *Drop-out rate - percentage of drop outs from total number of students at the respective level ISCED. Drop-outs refer to students who left a programme and / or who failed final examinations.*
1 EUR = 15.6 EEK
Sources: Statistical department, Ministry of Education

Achievements

One of the major achievements of the programme has been the success in bringing together the representatives of the social partners and the Ministry of Education. This has ensured that vocational education and training provision is/will in future be geared towards the needs of employers and forms an important building block for the continuation of the process of structural reform (Orro, 1998).

Other achievements include:

- identifying appropriate occupational standards;
- converting these into curricular profiles and programmes and measurable standards (13 course curricula based on a standard modular system);
- delivering programmes at school level;
- assisting in making the learning process more attractive to the students (through the teacher and school management training programmes);
- assisting the Ministry of Education and participants in drafting policy documents (among others the vocational education and training Policy Concept Document, approved by the Government in January 1998).

In spite of these achievements, studying at vocational education and training institutions is still a second-best choice among young people (70% of the graduates from the basic school continue their studies at gymnasiums – to acquire upper secondary general education – and only about 28% at vocational education and training institutions). After gymnasium, the graduates' choices reflect a

preference for academic higher education; only about 25% of graduates of gymnasiums continue their studies at vocational education and training institutions. In many cases, the decision to attend a vocational education and training institution does not arise from a firm desire to study a certain speciality, but rather from the wish to simply continue studies, or because of failure to be admitted to the university. This may be one explanation for the relatively high rate of drop-outs from vocational education and training institutions (in 1997, 10.4%) and for the poor job placement rate of the graduates (an exact overview of graduates' subsequent life is missing).

Links to the labour market

The opinion that the skills and knowledge of graduates of vocational education and training institutions does not meet the needs of employers, is quite widespread. If we examine the unemployment rates of different educational groups, we can see clearly that the weaknesses lie in vocational education after basic education and after secondary education (see Table 5.5). Also, we can see that the unemployment rate is higher for people with basic education. The unemployment rate of people with vocational education is relatively high for males.

Table 6.4: Employed persons by sex and correspondence between level of education and job (2nd quarter of 1998)

	Males	Females	Total
Educational level corresponds to the job	83.8	78.9	81.5
The job requires higher educational level	4.1	3.8	3.9
Employed person's educational level is higher	12.1	17.3	14.6
Total	100	100	100

Source: Estonian Labour Force Survey 1998

According to the Estonian LFS in 1998, in total 81% of respondents declared that their educational level corresponds to their job. Females were more dissatisfied with their educational level; 21.1% declared that their education did not correspond to their job. One interesting fact is that more women than men have jobs that demand a low level of education.

Reforms

Reform is under way in Estonia in the field of vocational training. The problems of over-capacity and obsolete curricula are felt strongly, especially in the field of agricultural schools. Currently, the network of vocational training schools is spread quite evenly over the country, but it is unclear whether closure of schools (most likely in rural areas) can be prevented. The greatest problem in vocational training is the general attitude towards educational issues in Estonia. Today it is common for young primary school leavers to choose secondary education instead of vocational education. Most secondary school students hope to continue their education at universities, but of course the number of places available at universities is limited. In the 2nd quarter of 1998, 30% of unemployed people had secondary education without a concrete specialisation or qualification.

To ensure that the needs of the labour market are met, an elaboration of national vocational standards has been started within the framework of creating a National Employee Qualification System. In order to ensure comparable quality in the labour force, descriptions of the requirements for certain qualifications are being prepared in cooperation with employers, employees and education providers, and these descriptions are being developed into programmes using modular systems. The first 19 vocational standards have been approved and the associated programmes are currently under preparation. Vocational standards define and agree on the necessary knowledge, skills and attitudes for a certain level in a certain vocational field.

In the context of the organisation of the vocational education and training system, the development of programmes (in cooperation with the employers and employees) and changing the content of the vocational education and training teacher/trainer training is the starting point for bringing the graduates' skills and knowledge into line with the requirements of the labour market. The studies and surveys needed in order to gather the necessary information for a reorganisation of the vocational education and training system have been started. For example, the study of the wood processing and furniture production industry has been completed; it analyses the training needed by the labour force in order to ensure the success of the sector in the future.

The vocational education and training institutions have to confirm admissions with the local government before sending them to the Ministry of Education for approval. The relatively poor ability of local governments and vocational education and training institutions to determine the training needs in the region have caused them to rely on past experience in planning admissions. The situation is further complicated in that the national economic development plan does not establish economic sectors with priority for development, although the description of certain sectors emphasises development needs. A more detailed national plan would provide education planners and providers with the necessary basis to plan resources, programme development, specialisations and qualifications, etc.

A national reclassification of occupations is currently underway at the Ministry of Social Affairs and is expected to be published in 1999. Entrepreneurs and representatives of industry are therefore able to quite clearly articulate their skill requirements for today. However, the education sector needs the requirements for tomorrow and the day after, and employers are not yet ready to provide this information. Furthermore, industry lacks the essential methodology to identify training needs on the basis of business plans. As contact with companies has almost ceased, although it is slowly improving, it is difficult for schools to define future qualification needs.

6.3 *Continuous training and adult education*

At present, there is no formal training system for adults who face changes in their job functions or layoffs. The Ministry of Social Affairs, with its National Labour Market Board, is in charge of organising labour market training, including training for unemployed people (see also section 8.2). No coherent national training policies covering both initial and adult training are currently available. The Law on Vocational Education Institutions provides for any vocational education and training institution to offer also flexible short-term upgrading and retraining courses for adults. According to the LFS in 1998, the majority of employees did not participate in training courses during the survey weeks.

Organisation

Adult education takes place at vocational education and training institutions, at training companies or in courses organised by the employer.

The basis for organising adult training in specific vocational, special and professional fields should be the qualifications that are required. The training programmes developed to meet the requirements should be very specifically targeted to the needs of the learners/trainees.

From the perspective of provision, different sources of data indicate that there are currently in excess of 900 providers (state, private and NGOs) in the continuing education and training sector. This figure does not take into account in-service training activities within enterprises or state institutions. The official statistics on continuing vocational education and training currently available are inadequate. Partial information on the training institutions that provide adult training is available in a database on the Internet home page of the Estonian Adult Training Association (ANDRAS).

On the basis of information gathered by the Ministry of Education, the majority of vocational education and training institutions provide some type of continuing and retraining courses. In 1997, only five out of 82 institutions did not organise any training for adults.

Table 6.5: Participation in courses during the last 4 weeks by sex, economic status and type of course, 2nd quarter 1998

Economic status, type of course	Males	Females	Total
Population aged 15-74			
Did not participate in courses	96.8	94.9	95.8
Training courses at work	2.5	2.9	2.7
Conference, seminar at work	...	(0.4)	(0.3)
Unemployment training	...	(0.3)	(0.2)
Hobby courses	(0.4)	1.5	1.0
Other courses	...	...	...
Total participation in courses	3.2	5.1	4.2
TOTAL	100.0	100.0	100.0
Employed persons			
Did not participate in courses	95.7	92.4	94.1
Training courses, conference, seminar at work	3.9	5.8	4.8
Other courses	...	1.8	1.1
Total participation in courses	4.3	7.6	5.9
TOTAL	100.0	100.0	100.0

Notes: ... data are based on less than 20 persons of the sample;
( ) data are based on 20-39 persons of the sample. Source: Estonian Labour Force Survey 1998

Studies undertaken in 1994 (Adult education in 1994) and 1997 (Adult education in 1997) indicate an increasing participation rate of respondents in continuing education and training courses, rising from 15% to 28%. Another study, completed in 1997 among small and medium-sized enterprises, indicated that:

- 31% of all respondents had attended courses organised by private companies;
- 13% had attended courses at entrepreneurship or Business Advice Centres;
- 0.8% had attended courses abroad; and
- 0.2% had been on courses organised by the Labour Market Board.

Funding

Financing of continuing education and training comes from 4 main sources: the national budget, local governments, enterprise funds and private individuals. Funds for complementary / continuing training have been foreseen in the national budget only for civil servants and teachers at state educational institutions. As we can see from the tables in the annexes, professional courses are mostly financed by employers.

Continuing education and training in Estonia is mainly targeted at five categories of clients:

- public administrators;
- educators / teachers;
- managers within the various sectors of the economy;
- industrial workers;
- the unemployed.

The most popular fields are management, languages and computer training, but a precise overview of these courses is not available.

6.4 Training for the unemployed

The most widespread active labour market policy programme is labour market training. The number of people participating in training programmes has, however, decreased. This is mostly because the 1995 social security law concerning the unemployed stipulates that training can be provided only to those officially registered as unemployed. A second reason is the change in the direction of labour market training. During and prior to 1994, the main emphasis was placed on basic skills (languages, use of computers, etc.). Beginning in 1995 the focus shifted to refresher and advanced training courses and re-training programmes, which are more expensive. In 1994, 31% of the course graduates found employment and in 1998 the percentage rose to 69%. The problem is that on average, only 16% of registered job-seekers (7 200) participated in training courses in 1998. This means that around 10% of the total number of (ILO) unemployed people received some kind of labour market training. The number of participants has declined mainly because of the increase in the price of such courses (see Table 8.2). In order to receive training via the labour services, a person must be registered as unemployed. This restricts access to training courses because not everybody is eligible to unemployment benefits (see section 7.2).

Active labour market policies in Estonia do not include any special measures to support young people entering the labour market for the first time.

To tackle long-term unemployment, in the second half of 1998 the Ministry of Social Affairs started the pilot project "Activation centres for making less competitive persons more active in the labour market". In the framework of this project, activation centres for the long-term unemployed were established in eight counties. The tasks of the activation centres are:

- to help less competitive persons in the labour market find a job using the job-club method;
- to create possibilities for practising working at work organised by activation centres. The purpose of practising working is to provide the participants with training and experience of working to rely on in the future when looking for work;
- to cooperate with employers in order to find jobs for both work practice and employment of clients;
- to advise, inform and motivate employers.

In addition to their main tasks, centres may involve themselves in the following activities: organising work with a support person; providing clients with vocational consultation and information, as well as testing them if necessary; introducing possibilities for refresher courses, including employment training; cooperating with employment offices to find jobs for less competitive persons in the labour market and to employ them with the help of an employment subsidy paid to the employer. The target groups of the project are less competitive persons in the labour market, including: applicants for subsistence benefits, job-seekers whose term of unemployment registration has expired, young people aged 16-20, mothers of young children, persons about to reach the official retirement age, and persons released from prison.

Activation centres work in close cooperation with employment offices and local government social workers. Clients may apply to activation centres when sent by these or on their own initiative.

Programmes designed to reduce unemployment, e.g. retraining, identifying the need for new specialities and occupations, job creation policies, etc., do not often meet the needs of society yet. Estonia therefore needs a national description of professions and trades in order to train unemployed job-seekers more effectively.

7. Labour Market Institutions

7.1 *Government bodies*

The governing labour market institution in Estonia is the Ministry of Social Affairs. On 1 February 1993 the Ministry of Health, the Ministry of Social Security and the Ministry of Labour were reorganised into the Ministry of Social Affairs. The main tasks of the Ministry of Social Affairs include planning social policy and solving social problems in the following principal spheres:

- employment of the population and incomes policy;
- protection of people's health and medical care;
- social security and social insurance.

The Estonian Labour Market Board (established in April 1991) works under the jurisdiction of the Ministry of Social Affairs. Its main tasks are:

- to administer labour mediation services, bringing together employees and employers; this means the following activities:
  - collecting information on vacancies;
  - employment mediation;
  - providing information on opportunities for training activities;
  - providing direct employment training, training stipends, subsidies and community placement;
- to organise unemployment registration, regulate the payment of benefits to the unemployed and supervise the entire process.

There are sets of employment services all over the country. Each of the 15 counties and the capital Tallinn has at least one employment office, but in many counties there are more. Altogether there are 46 local offices or their representatives in Estonia. The main tasks of the labour services are the following:

- to implement governmental labour policy;
- to register unemployed persons;
- to provide employment services;
- to pay state unemployment benefits.

Table 7.1: Labour market institution-building. Indicators of the public employment service workload in 1997 and 1999

Year	No. of local offices	Labour force per office	Labour force per staff member	Registered unemployed per staff member	Unemployment benefit recipients per staff member
1997	46	15 600	3028	144	81
1999	50	14 220	3276	200	119

Note: for 1999 first five months average and for labour force authors' estimations
Sources: Estonian Labour Market Board, Estonian Statistical Office.

Table 7.1 provides some basic information on the organisation, work-load and performance of the Public Employment Service networks in Estonia[17]. The number of labour services is relatively high in Estonia, while these offices are clearly understaffed. In other CEE countries, the average labour force per staff is almost three time less than in Estonia (Burda, 1997). This is a definite bottleneck of Estonian labour policy. Estonia has not had enough time to train social workers and prepare local authorities for their new tasks (to cope with the increasing number of unemployed persons) (Eamets, 1998a).

The labour services have to perform many tasks. Moreover, there are considerable differences between the services in terms of staff size, competence and the scope of their authority. Labour market services have concentrated their activities on administering active and passive labour policy measures, and their labour exchange and counselling activities are therefore limited in most cases (see also section 3.5).

7.2 *Labour market regulations*

In Estonia, the social protection of the unemployed was defined by government decrees until the end of 1994. The Law on Social Protection of the Unemployed came into effect on 1 January 1995. The aim of the Law on Social Protection of the Unemployed is to provide legal regulation of labour market services on behalf of the unemployed and to administer the payment of unemployment benefits, with the state employment offices acting as intermediaries. The law and the government decrees concerning the status of the unemployed define the relevant terms and regulate the procedures related to unemployment.

The major changes made by the 1995 laws are that the interval between going to the employment office and registration as unemployed is reduced from 30 days to 10 working days, and that labour market concepts were defined in concrete terms, taking into consideration suggestions by the ILO. The laws define a number of new terms, such as suitable job, job-seeking, labour market service, labour mediation, etc.

The right to labour market services and state unemployment benefits is enjoyed, as a rule, by permanent residents of Estonia under conditions established by law (see section 2.2). According to the Law on Social Protection of the Unemployed, a person is registered as being unemployed within 10 working days after going to the state employment office if he/she satisfies the following conditions:

- he /she is between 16 years old and the retirement age;

17 Burda found that the average number of registered unemployed (if not the number of benefit claimants, given the current low coverage of benefits in these countries) per staff member can be up 4 times higher than in the UK (Burda, 1997).

- he/she has no working occupation or equivalent activity;
- he/she is looking for a job;
- he/she has been occupied in work or an equivalent activity for at least 180 days during the 12 months preceding appearance at the state employment office; no preceding employment is required of those who have been looking after a disabled child or a child under 7 years of age, persons undergoing hospital treatment, persons nursing a sick, disabled or elderly person, persons who are in a disability group, or who have been under arrest or serving a sentence at a penal institution;
- he/she has submitted all documents necessary for registration.

By way of exception, a 60-day waiting period precedes the awarding of unemployment benefits in Estonia to persons who have:

- studied at an educational institution as a full-time student before registering as unemployed
- resigned from their last job of their own free will, and not because of illness or disability, or in order to nurse a sick or disabled person, or to enter the national defence forces;
- been dismissed due to violation of a labour contract, breach of trust or an undignified act.

Persons are considered to be engaged in activities equivalent to employment if they:

- work on the basis of labour, service or civil service contracts, or membership;
- are entrepreneurs;
- study at educational institutions full-time;
- serve in the national defence forces.

A job-seeker in Estonia is one who voluntarily registers at the state employment office and wants a full-time job immediately, is willing to undergo labour market training and appears at the employment office at least once every 10 working days.

7.3 *Industrial relations*

Government

At present the state on the whole plays a major role in industrial relations in Estonia This cannot be considered a great shortcoming; it is also a result of the present weakness of the social partners. The development of Estonian industrial relations is centred very much on the law because, for the reasons given, agreements are not enough to guarantee the effective functioning of the whole system. However, it may be presumed that in future the importance of the state in the system of industrial relations will diminish.

The state plays a very important role in the regulation of working conditions and industrial relations in Estonia. It intervenes at the legislative, administrative and jurisdictional level. In the legislative sphere, the Government:

- establishes the constitutional basis for workers' rights;
- establishes the constitutional basis for trade union freedom and collective autonomy;

- gives shape to and guarantees the legal effectiveness of the collective regulation of working conditions;
- prescribes a legal minimum of protection in the workplace;
- establishes the general nature of the employment contract.

In the administrative sphere, the Government makes a direct contribution to the collective regulation of working conditions. It is also responsible for inspections (Labour Inspection), contributions to the resolution of collective disputes, and a range of administrative duties.

Trade unions

According to Mr. T. Kaadu, general secretary of the Association of Estonian Trade Unions, a number of labour laws adopted in 1992-1994 are outdated and their quality is not high enough due to the lack of experience and knowledge of the elaborators (Kaadu, 1997).

The process of reorganisation of the Estonian trade unions began already in the last years of Soviet power, when the trade unions gave up their role as an executive organ and supporter of state power, the state system of social insurance, and the distribution of advantages. The main emphasis was now laid upon influencing the employees' working and payment conditions through bilateral and tripartite agreements. The first steps taken were separation from the all-Soviet central organisation of trade unions and the creation of a new, independent central organisation. Since the reorganisation, trade unions have been mainly active in three spheres:

- participation in the elaboration of laws;
- tripartite negotiations with the government and employers;
- consulting with members, offering workshops, etc.

In quantitative terms, whereas there was formerly almost 100% membership, today about 30% of employees in Estonia are trade union members. As everywhere, there are many reasons for the decline of union density in Estonia. The most important factor appears to have been privatisation and the shift in the balance of the economy from manufacturing (where unions were relatively strong) to services (where they are relatively weak). There are also difficulties in gaining recognition in small and foreign-owned firms, and in the services and banking sectors. Factors outside the union which have an impact on union membership (employers' attitudes, technological changes, etc.) have mostly had a negative influence.

At present there are two central trade union organisations in Estonia - EAKL (The Association of Estonian Trade Unions) and TALO (The Estonian Professional Employees' Unions Association). The trade unions representing workers in the fields of science, education, culture and health split off from the EAKL and formed an alternative, white-collar trade union organisation in 1992, the TALO. The TALO now has approximately 50 000 members in 10 branch unions. The biggest branch unions are: the Teachers' Union, the Engineers' Union, and the Cultural Workers' Union. The Association of Estonian Trade Unions has 24 branch unions with about 110 000 members.

Employer organisations

There is only one confederation representing the employers in Estonia, the Estonian Confederation of Employers' and Industry (ETTK), founded in November 1997 by the merger of the Estonian Confederation of Employers' Organisations and the Confederation of Estonian Industry and Employers.

The Estonian Confederation of Employers' and Industry is a non-profit association founded on a voluntary alliance of branch associations of employers active in the production and/or service fields, and other employers. The Confederation is a non-political association. Its object is to represent the interests of its members in their relations with the legislative and executive authorities and the representatives of employees, to stand for its members' rights, and to represent the member organisations both in Estonia and abroad.

The ETTK's membership embraces 32 branch associations of employers, 4 associated member associations and 22 commercial undertakings. This means that ETTK brings together approximately 6 000 enterprises with approximately 200 000 employees.

In the administrative sphere, the Government makes a direct contribution to the collective regulation of working conditions. It is also responsible for inspections (Labour Inspection), for contributions to the resolution of collective disputes, and for a range of administrative duties. In the jurisdictional sphere, the Government enforces laws.

In general it must be conceded that industrial relations in Estonia are characterised by a one-channel model of worker representation, by the trade unions. Although the Estonian trade unions have made several attempts to have provisions concerning industrial democracy included in laws, or to work out a special law on cooperation with enterprises, these suggestions have not been acted on. This year the tripartite negotiations are also including discussions on the application of industrial democracy in Estonia.

8. Labour Market Policies

8.1 *Passive labour market measures*

Social protection of the unemployed in Estonia is provided by the state (i.e. financed from the state budget, which constitutes a part of the social protection system). There is no voluntary unemployment insurance, although preparations for this are under way. According to Estonian legislation, people need to seek work in order to be eligible for unemployment benefits.

Rigid preconditions put school leavers who have not worked before and who lack experience, as well as people a few years from retirement and some other groups, in a difficult position. When the term for unemployment benefits expires, unemployed persons may apply for social assistance, but only after an investigation of their material situation. The principal forms of social assistance are subsistence allowances and housing allowances.

Estonian labour policy has been mostly passive so far, but since the unemployment benefit is very low, the share of passive labour policy expenditures in total expenditures is comparatively small: 49.9% in 1997 (see Table 8.1).

Table 8.1: Labour market policy programmes in Estonia, 1994-1997 (share in total labour policy expenditure, %)

	1994	1995	1996	1997	1998
Total expenditures in EEK	71762.4	71353.4	89949.5	105873.6	114563.6
% of GDP	0.24	0.17	0.17	0.16	0.16
Share of total expenditures	100	100	100	100	100
1. Public employment services and administration	14.5	17.9	15.1	14.5	16.5
2. Passive Employment Policy	45.2	38.4	43.7	47.3	49.9
- Unemployment benefits	45.2	38.4	43.7	47.3	49.9
3. Active Employment Policy	40.4	43.7	41.3	38.3	33.5
- Labour market training	29.4	24.6	25.6	26.4	24.2
- Training allowances	4.1	6.6	5.5	5.1	3.6
- Subsidy to employer	0.3	0.5	0.9	0.9	0.9
- Subsidy to start a business	2.5	5.1	4.2	3.7	3.2
- Community placement	2.8	1.5	2.5	2.2	1.6
- Other costs	1.3	5.4	2.6	0.0	0.0

Source: Estonian Labour Market Board

Unemployment benefits

Originally the unemployment benefit was pegged to the minimum wage: in October 1992 the rate was fixed at 180 kroons, which at that time made up 60% of the minimum wage. The rate was not changed until July 1996 when it was raised to 240 kroons. In March 1998 the unemployment benefit became 300 kroons per months and since January 1999 it has been 400 kroons. An unemployment benefit is paid every 15 calendar days for every day of unemployment until the individual is no longer unemployed, but for not more than 180 calendar days in succession. The unemployment benefit is calculated on the basis of a 5-day working week. A decree of the Labour Market Board (from 3 March 1993) extended the payment of benefits (relief) to those who had forfeited the social status of being unemployed, if they had reregistered as a job-seeker and not found a job within 30 days. If the employment office is unable to send a job-seeker to employment training, the job-seeker may apply for unemployment benefits three times during the subsequent 180 calendar days, but for no more than 30 days at a time.

A person who has been declared unemployed must actively seek employment. If the unemployed person fails to appear at the unemployment office at every 15 day interval, he/she may forfeit the right to unemployment benefits for that period. After repeated failures to appear, he/she may be deprived of unemployed status and the right to unemployment benefits. A person who has lost unemployed status is entitled to reregister as a job-seeker.

The regulations for recipients of unemployment benefits are very restrictive. If people have no possibility of receiving unemployment benefits, only around 50% register as unemployed. As a result we face a situation in which it would be rather difficult in the future to implement EU guidelines about employability, where unemployed adults are offered new opportunities mostly in the form of individual vocational guidance.

Table 8.2 shows that unemployment benefits in Estonia are very low compared with other European countries[18]. It is evident that the integration of Estonia into the EU will change the situation. Both the replacement ratio and benefit duration should increase in the future.

18 In many NIS countries, the UB replacement ratio is very low as well (for example 6% of average wage in Azerbaijan, 10% in Belarus, 17% in Ukraine, 23-24% in Moldova and Armenia, in 1995. (Kuddo, 1997)).

Table 8.2: Unemployment benefit and replacement ratios in 1992-1998

Year	Max. Duration*	Benefit minima	Benefit maxima	Gross replacement rates (% of average wage)	Coverage rate** (%)
		(% of minimum wage)		1-6 months	
1992	6	60.0	60.0	32.8	na
1993	6	60.0	60.0	16.9	56.4
1994	6	60.0	60.0	10.4	46.3
1995	6	40.0	40.0	7.6	39.9
1996	6	35.3	35.3	8.0	45.4
1997	6	28.4	28.4	6.7	53.6
1998	6	27.3	27.3	7.2	55.1

*Notes: * In some cases duration can be prolonged by up to 3 months. If the employment office cannot send a job-seeker to employment training, the job-seeker may apply for unemployment benefits 3 times during the subsequent 180 calendar days but not for more than 30 days at a time.*
*** Unemployment benefit recipients as a percentage of registered unemployment*
Sources: Statistical Office of Estonia

Following the exhaustion of unemployment benefits six months into unemployment, workers become eligible for Social Assistance Benefits. These are subject to registration at the labour office but are not subject to expiration, and their level reflects total household income. The provision of unemployment benefits is currently the major task performed by district labour offices.

8.2 *Active labour market measures*

The main current active labour market policy programmes introduced by the Estonian Labour Market Board are the following:

- public employment services and administration (0.026% of GDP in 1998);
- labour market training (training and training allowances) (0.043% of GDP in 1998);
- subsidised employment (subsidies to regular employment, support of unemployed persons starting enterprises, public works) (0.009% of GDP in 1998).

The training for the unemployed provided by labour services is discussed in section 6.4.

Table 8.3: Number of participants in different active labour market programmes

Programme	1995	1996	1997	1998
Total number of participants	16130	14228	13568	11575
Participants in employment training (%)	60.8	66.3	60.7	63.0
Employed with subsidies to employer (%)	0.8	1.8	1.6	1.2
Employed with subsidies to start a business (%)	2.8	3.2	3.3	3.3
Participants in community placement (%)	35.6	28.7	34.4	32.6

Source: Estonian Labour Market Board

Employment offices have been assigned the task (by a regulation dated 26 April 1993) of organising temporary public works (community placement) for job-seekers and the unemployed, which do not require special preparation and where the Employment Contract Law is not valid. A person receiving unemployment benefits who takes part in public works may be paid extra for this. Any person who receives unemployment benefits is obliged to participate in public works for at least ten days or eighty hours during any calendar month. The number of participants in such programmes has fallen drastically in the last four years. The explanation has to do with the wage conditions for public works. The hourly wage level for community placement remained unchanged from 1996 till January 1999. The wage rate was a constant 2.6 EEK per hour, while average hourly wages increased during this period from 4 EEK to 7.35 EEK per hour. This excessively low wage rate was the main reason why the number of participants declined.

Unemployed people can also receive a retraining allowance (stipend). The amount of the allowance is a 1.5-fold unemployment benefit (450 EEK per month in 1998) and is paid at the maximum level for six months.

Wage subsidies have been provided for the following risk groups: disabled persons; pregnant females or women with children under 6 years of age; youngsters 14-20 years old; persons 5 years prior to retirement age; and persons released from prison. The wage subsidy for risk groups provides 100% of the minimum wage during the first 6 months and 50% of the minimum wage during the next 6 months of her/his employment period. Because of legislative shortcomings, the payroll tax on wage subsidies must be paid by the employer. The rate of social (payroll) taxes is 33% in Estonia and this bookkeeping problem has reduced the attractiveness of wage subsidies for employers.

One labour market measure for starting businesses is an entrepreneurship subsidy in the amount of 10 000 EEK (at the beginning of 1998) that can be paid to the unemployed. To apply, the unemployed person has to undergo business training or have some previous experience in business.

Labour policies are connected with state regional policies such as promoting entrepreneurship in regions with high unemployment rates and in other ways stimulating job creation. This is particularly important for Estonia, because the regional differences (including unemployment) have increased drastically during transition.

The situation would be improved if labour market policies were differentiated by regions, with different sets of regulations for unemployment benefits, active labour market policies and various

measures to develop the system of adult training and retraining programmes for people who may face layoffs due to enterprise reorganisation. The main aims are to reduce the mismatch of skills and youth unemployment, to improve the territorial mobility of labour resources, to reduce the duration of unemployment, and to stop the increase of poverty among the unemployed.

In addition, some changes should be introduced in the legislation in order to make training programmes more efficient. One problem is that according to current legislation, labour services can provide training programmes only for people who are registered as unemployed. A person who is still working but already knows that she/he will soon be dismissed has no possibility of participating in training programmes arranged by the labour services. In many regions and industries, such preventive training is inevitable in order to change specialisation or qualification and provide a better match of labour supply and demand (see also section 6.3).

Although we can observe an increase of active policy measures in absolute terms, in relative terms they are declining (see Table A.21 in annexes). We can therefore state that there is sizeable scope for the expansion of active policy programmes. However, further spending on active labour market measures is limited by fiscal considerations. There is also no comprehensive analytical evidence on the effect of the existing programmes.

8.3 *Regional and industrial policies in Estonia*

According to the Guidelines of Regional Policy in Estonia, the main objectives of regional policy are to promote growth potential and self-reliance in the regions. The idea informing the strategies of regional policy is to create a vigorous economy in the regions, which does not rely on constant subsidies. The state supports this trend by helping to create a suitable environment for the process. Thus regional policy has in mind the whole of the country. The annual budget for regional policy in 1997 was 60 million Estonian kroons (EEK). The main regional policy instruments - 17 Business Advisory Centres - are organised as individual companies or foundations, which together form a business support network. The co-ordination and development of this network is the responsibility of the Estonian Regional Development Agency established in May 1997. The centres provide lectures and offer training in business methods, and are staffed by advisors who can provide consultation, strategic analyses and assistance in contacting foreign investors.

Support to small and medium-sized enterprises (SMEs) includes providing assistance in creating business plans, particularly where loans are required, as well as providing general assistance in setting up accounting systems and gaining management skills. Such services are made available on a shared cost basis, where the business client's share depends on the location of its business (in some regions the Government can pay up to 90% of the costs of the service).

At the end of 1995, the Government gave its approval for six regional policy programmes to start, giving development grants to problematic regions:

- A programme for backward regions aims to improve the infrastructure in agricultural regions, improve trade, build up local industries and improve the local economic base. Regions in the southern and central part of the country are likely to be targeted.
- A programme to assist islands aims to improve conditions on islands with small populations in order to prevent islanders from abandoning the islands. The focus has been on infrastructure, communications, and the provision of power supply and primary education.
- A programme to promote rural initiative focuses on "life style", including village development, and covers the entire country.

- A programme to assist border regions focuses mainly on the Russian-Estonian border but also on the southern border with Latvia.
- A programme for mono-functional localities focuses on communities where employment was or still is dominated by one large enterprise. These were frequently related to the food industry, whose produce was exported to markets throughout the former Soviet Union. The programme aims to diversify the economic base and to create new jobs, thus avoiding potential social crises in these communities in the future.
- A special programme for the Ida-Virumaa region in the north-eastern part of Estonia. This region was dominated by large enterprises producing shale-oil, electricity and various goods for the Soviet market. The work force in these enterprises consisted mainly of Russian immigrants. The programme mainly promotes the integration of this immigrant population into Estonian society.
- A special programme for the south-eastern Setumaa region (started in 1997). The aim of the programme is to promote this border region in general and also to help those Estonians presently living on the other side of the new Estonian-Russian border to settle on the Estonian side of the divided Setumaa.

In 1995, the Government created a loan support system for SMEs, making loans available in cases where bank loans would not be granted due to lack of collateral. All measures run at present will be used in the future as well, although not necessarily in the same form or scope. Current measures have established conditions for additional financing of regional development. State priorities in prescribing regional development patterns have been negligible so far, as all the regions have relatively equal opportunities to obtain state support. Nevertheless, the state support that is available has not been applied equally between regions, the probable reason being lack of local initiative in some regions.

8.4 *Wage formation, social security and tax policy*

Estonia has opted for very low levels of unemployment benefits, pensions and minimum wages. The minimum wage is so low that it does not serve as a barrier to new hires: prevailing wages are higher than the minimum. Wages are predominantly set by the employers, with few wage controls put into effect by the government in the public sector. There is no effective trade union movement raising wages either, and there is no policy to keep firms open to avoid layoffs and bankruptcy.

The social security system in Estonia is being reformed step by step. The aim is to change from the anonymous and equalizing social security to a personal, flexible insurance system in order to take into account the wishes and resources of every individual as well as their share in the creation of national wealth. Due to the shortage of money in the state budget and the need to keep the budget balanced, the contributions to social welfare and benefits are relatively small. Social protection expenditures in Estonia made up 16.6% of GDP in 1996. At the same time the growth rate of social benefits lags badly behind inflation.

Social protection in Estonia is financed through the budget system (approximately 80%), the revenues in which consist basically of tax receipts. Estonia has a proportional income tax rate (26%), both for enterprises and individuals. The tax that yields most for the budget system is the so-called social tax (payroll tax). The rate of social tax in Estonia is 33% of gross earnings and is paid by employers. Of the social tax, 20% is directed to the social security budget and 13% to the medical insurance budget. The state budget and local budgets also cover part of the social protection expenses. The role of the latter has been gradually decreasing over the years, since the scope and level of the state's social protection is determined by the rate and receipts of social tax.

9. Conclusions

Regarding the general characteristics of the Estonian labour market, we can cite as an advantage the fact that quick restructuring has taken place in the economy, as far as employment is concerned. Compared to the other Baltic countries, Estonia is the country where changes in employment structure by industries have been fastest in recent years, approaching the average indicators of the European Union. Another positive tendency for Estonia is that employment in industry has decreased less than in other countries and that the sharp increase in employment in the financial sector is a sign of rapid development in that particular sector.

In line with the key issues presented in section 2.3, the following conclusions may be emphasised.

Structural unemployment and major regional labour market differences

Inequalities in regional and sectoral employment in terms of the supply and demand of labour have proved a source of aggravation. We may observe that unemployment has shown deep regional differentiation due to the uneven location of new jobs (evidence of structural unemployment). Unemployment is a serious problem in the mainly agricultural counties in southern Estonia and in north-eastern Estonia with its large concentration of heavy industry; unemployment is mostly linked here to the recession suffered by the former all-Soviet enterprises in Narva, Sillamäe and Kohtla-Järve. The bankruptcy of major employers in small towns with only one or two sources of jobs has caused job losses for some people. Moreover, unemployment continues to be a major problem in rural areas. The poorly developed infrastructure there contributes to the lack of further economic investment in rural areas.

High inactivity of females

One possible way to alter the sex differences in open unemployment and total unemployment rates is to reallocate the social protection functions of labour services to local municipalities. In many cases women with children aged under 7 years register as unemployed only because they want to receive unemployment benefits and other social guarantees that accompany unemployed status (e.g. health insurance, housing subsidies, etc.). They are not interested in finding a real job. Such cases should be treated by local municipalities, which are responsible for the social protection of their residents.

Macroeconomic policy can have only a limited influence on hidden unemployment (unregistered unemployment), but the scope of hidden unemployment should be taken into account when policy measures are considered. Legislation is one way to influence the relation between open and hidden unemployment. This is very important for Estonia in shifting the hidden unemployment into open unemployment. From the labour market perspective, regional policy is also important. Information about the labour market and labour mobility have to be improved.

Active labour market measures can also influence hidden unemployment. In the case of Estonia, it is important to improve the image of labour services, the quality of services and contacts with

companies. The problem of labour office understaffing also has to be solved. It is very important to improve the education system so that its output matches the needs of the economy. Special attention should be paid to groups which are in the worst position in the labour market (mainly the young).

Insufficient institutional development of labour market

Enterprises do not report vacancy data to state labour services because they assume that white-collar workers use alternative sources in seeking work. According to Estonian Labour Force Survey data, only 50% of job-seekers use the state labour services in their job search. In accordance with this, people with high qualifications believe that the jobs offered via the labour services are mostly blue-collar. The result is that jobs requiring high qualifications are not mediated by labour services. The main shortcomings of labour services are the following: the incomplete listing of available vacancies; the lack of knowledge of what qualifications are needed in enterprises; and a corresponding lack of training for unemployed persons.

Insufficient development of social partnership

The main shortcomings in the development of industrial relations in Estonia are as follows:

- Although there has been some development, the social dialogue and the industry-state partnership are clearly unsatisfactory. To a certain degree this is understandable: it takes time to transfer from a totalitarian, state-centred industrial relations policy to one stressing partnership. This is one area where the gap between the current situation in Estonia and the industrial relations policy of the European Union is very wide.
- The entire mechanism of tripartism mainly comes into play in the course of tripartite negotiations or on an ad hoc basis. At present, the prerequisites for the further development of tripartism include adopting an institutional approach and forming special permanent tripartite organs.
- The standards of industrial relations in enterprises, including participatory democracy and industrial democracy, are low. Industrial democracy, particularly concepts of worker participation in enterprise management, has encountered opposition from employers

Low profile of vocational education

Studying at vocational education and training institutions is still the second-best choice for young people. After gymnasium, the graduates' choices reflect a preference for academic higher education. There is a widespread opinion that the skills and knowledge of graduates of the vocational education and training institutions do not meet the needs of employers.

The system of qualification levels has to be based on the requirements and needs of the employers, the main directions and forecasts of the state's economic development, and the associated priorities for vocational education and training. To this end it is necessary to define professions (according to fields), fix employers' descriptions (standards, levels and criteria for evaluation) of vocational skills (vocational qualifications and levels), and create systems of evaluation and professions.

Inadequate state training system

At present, there is no formal training system for adults who face changes in their job functions or layoffs. The Ministry of Social Affairs, with its National Labour Market Board, is in charge of organising labour market training for unemployed people. No coherent national training policies covering both initial and adult training are currently available.

Despite the fact that financing for continuing education and training comes from four main sources – the national budget, local governments, enterprise funds and private individuals – funds for complementary / continuing training are projected in the national budget only for civil servants and teachers at the state educational institutions.

Increasing wage and income dispersion

We can conclude from our research that wage dispersion and income inequality have increased rapidly during the years of reform. The reforms have brought a rise of competition and inequality between different groups of the population and between different regions. Low levels of wages and social benefits, and increasing unemployment, combined with higher costs of food and housing, have caused difficulties for many households in Estonia. Many people are faced with the threat of poverty and there is a noticeable process of social differentiation. At the same time, taking into account the increase in the consumer price index, the growth in the real values of wages and social benefits lags behind the growth in their nominal value.

Lack of labour policy concepts

The relatively poor ability of local governments and vocational education and training institutions to determine regional training needs have caused them to rely on past experience in planning admissions. The situation is further complicated in that the national economic development plan does not identify the economic sectors with priority for development, although the description of certain sectors emphasises the development needs. A more detailed national plan would provide education planners and providers with the necessary basis to plan resources, programme development, specialisations and qualifications, etc.

When defining vocational qualification levels, everything connected to the measurement of results must be considered, including how to control and measure these results (measuring devices). The results should be in accordance with the goal: the goal is set by the employers; the work to achieve the goal, which is related to teaching/learning, should take place at a vocational education and training institution; and the results should be checked again by the employer.

It is obvious that a policy framework for adult education and the other elements that fall within the general scope of continuing education and training is lacking. There is also a need to address the question of structures to ensure the development of a responsive, effective, and cohesive national education and training provision.

The unemployment benefit level is relatively low compared with other Central and Eastern Europe countries, as is the duration of benefits, averaging only six months. Such practices do not correspond to European Union labour policy guidelines, under which Member States are obliged to guarantee a new start to every unemployed adult – in the form of a job, training, retraining, work practice or some other employment measure – during the first twelve months of unemployment. Every

unemployed young person is given such a new start during the first six months of unemployment. In Estonia, most unemployed people disappear from the authority of the labour services after a six month period.

The following conclusions charaterise the institutional development of the labour market:

- There has been inadequate co-ordination and cooperation among different Ministry of Social Affairs units, and between the Ministry and Labour Market Board and other public organisations.
- There has been insufficient co-ordination between the Ministry of Social Affairs and counties and municipalities in order to better understand the needs of the population and to put together efforts to meet these needs.
- A system for analysing the all-Estonian information system both qualitatively and quantitatively does not yet exist, nor does an information distribution system. The information from such a system is urgently needed.

The administration of labour market questions at the national level is a final very important issue that we would like to address. Over the last two years, the National Labour Market Board has had difficulties in making strategic plans for the future because of the threatened reorganisation and reform of this institution. This uncertainty has certainly had a negative impact on labour market policy options and staff quality, since many people have left. The Ministry of Social Affairs addresses issues of health care, social security and the labour market. Developments in recent years have proved that there are too many functions for a single ministry to cover, and our suggestion is therefore to re-establish a Ministry of Labour. Such a decision would create an institution that could take full responsibility for the development and administration of the labour market in Estonia.

10. References

Adult education in 1994, Study conducted in Tallinn by Saar Poll Ltd, completed in 1995.

Adult education in 1997, Study conducted by Statistical Department, Tallinn Pedagogical University and Tartu University, published in 1999.

Annus T.(1999) *National Report on vocational education and training system*, Estonia; March 1999, National Observatory of Estonia.

Boeri, T. (1997), "Labour-market Reforms in Transition Economies", *Oxford Review of Economic Policy*, Vol.13, No.2, Summer 1997, pp. 126-140.

Boeri, T. and Edwards, S (1996), Long-term Unemployment and Short-term Benefits, paper presented at the OECD workshop on 'Long-term unemployment and the transition from unemployment benefits to social assistance.' Vienna, 28-30 November 1996.

Orro, L (1998) Developing Estonian's human resources and vocational education and training system, September 1998, Tallinn.

Eamets, R. (1998) , "Language Minorities in Labour Market of Transition Economies: a Flow Analysis Approach. The Case of Estonia", *Eurofaculty Working Paper Series*, Riga, No 1, Oct. 1998.

Eamets, R., Kulikov, D., Philips, K. (1997), *Eesti tööjõu-uuring* 1995. *Struktuurimuutused Eesti tööturul aastatel 1989-1994*. Estonian Labour Force Survey 1995. Structural Changes in the Estonian Labour Market in 1989-1994, Statistical Office of Estonia, Tallinn.

Eamets, R. Ukrainski K. (1999), "Hidden Unemployment In Estonia Logit analyses of Estonian Labour Force Survey data", Tartu 1999, *mimeo*.

UNDP, (1995), *Estonian Human Development Report*, 1995, Tallinn.

UNDP,1996), *Estonian Human Development Report*, 1996 ,Tallinn.

UNDP, (1997), *Estonian Human Development Report*, 1997, Tallinn.

UNDP, (1998), *Estonian Human Development Report*, 1998, Tallinn.

Statistical Office of Estonia, (1995), *Education 1994/95*, Tallinn.

Statistical Office of Estonia, (1996), *Education 1995/96*, Tallinn.

Statistical Office of Estonia, (1997), *Education 1996/97*, Tallinn.

Statistical Office of Estonia, (1998), *Education 1997/98*, Tallinn.

Kaadu, T. (1997) *Industrial Relations and Tripartism in Estonia*. Association of Estonian Trade Unions. 1997.

Kuddo, A (1997) Social Transition in the Former Soviet Union States, World Bank, *manuscript*.

Noorkõiv, R., Orazem, P.F., Puur, A., Vodopivec (1997) Employment and Wage Dynamics in the Estonia Transition, 1989-1995. Tallinn, *mimeo*.

Sõrg, M, (1995) "Banking Reform" from *Transforming the Estonian Economy*, by Estonian Academy of Sciences, Institute of Economics, Tallinn.

Vana, K. Orro, L. Annus, T.(1998), *Work related education and continuing education options within the Republic of Estonia*, Executive Summary, Tallinn .

11. Sources Consulted

Estonian Statistical Office
Estonian Labour Market Board
Estonian Human Development Reports
Ministry of Education
Ministry of Social Affairs
Estonian Adult Training Association

Comments on data sources

At any given moment, the most comprehensive overview of the current situation of unemployment comes from the statistics of the Estonian Labour Market Board, showing how many unemployed people are registered. The statistics of the Labour Market Board are valuable mainly because of their comprehensiveness (monthly published data). They enable us to analyse regional aspects of unemployment as well.

In addition to official Estonian Labour Market Board statistics, the first Estonian Labour Force Survey (ELFS) was conducted in spring 1995. The survey consisted of two major sections focusing on the retrospective and current situations respectively. The retrospective section of ELFS 95 aims to reconstruct major labour market flows over the years 1989-1995. This is the main reason why we are able to start time series in 1989 (not from 1995 only). Similar surveys were conducted in 1997 (the retrospective part covered 1995-1996, full years) and 1998 (the retrospective part covered 1997, full year). The age limits of the sample are set at 15 and 74 years. The age span for the retrospective data is 15-69, and that for the current data is 15-74 (people who were 74 years old in 1995 were 69 years old in 1989 and 15-year-olds were not asked retrospective questions). **See also annex B1.**

The data for 1989-1994 are data of the ELFS 95, for 1995-1996 data of the ELFS 97 and for 1997 data of the ELFS 98. Therefore, in analysing the time series presented, one should bear in mind that the data originate from two sources and their comparability is reduced by some circumstances that influenced the conducting of the surveys. The circumstances to be considered when analysing the results of the surveys are the following:

1) The sample size was different for different ELFSs.

2) The sample frames for surveys differed. For ELFS 95 the sample frame was the database of the 1989 population census, which in view of the population changes in the meantime was outdated and was thus one source of errors. A lot of persons had left Estonia, for instance, or had died. As the sample frame for ELFS 97 and ELFS 98, the Population Register was used. Although it is more up-to-date than the database of the population census, it still contains some errors and lacks some of the necessary information (persons who have left, incomplete data about place of residence, etc.).

3) The sample designs of the two surveys are different. Stratified simple random sampling was used in the ELFS 95, cluster sample in the ELFS 97 and ELFS 98. With reference to the sample, the results may be affected only by the sample frame errors described in the previous paragraph, since regardless of the difference in sampling procedures, the probability of inclusion was ultimately the same for all persons.

Wage statistics are available from firms' monthly reports to the Statistical Office, but also from ELFS. It is very hard to compare the wages and income of the transition period with the pre-transition level in a quantitative sense, for several reasons:

- the currency reform in 1992;
- hyperinflation in 1991; and
- the Statistical Office publishes adjusted data beginning with 1993 and does not publish earlier data as it is very unreliable and not comparable with previous data.

Therefore, in the tables we present data since 1993 (in some cases since 1992) and also give some qualitative estimates in order to compare wages at present with wages before the economic reforms.

Figure A1 The Education System in Estonia 1998 and the ISCED 97 levels

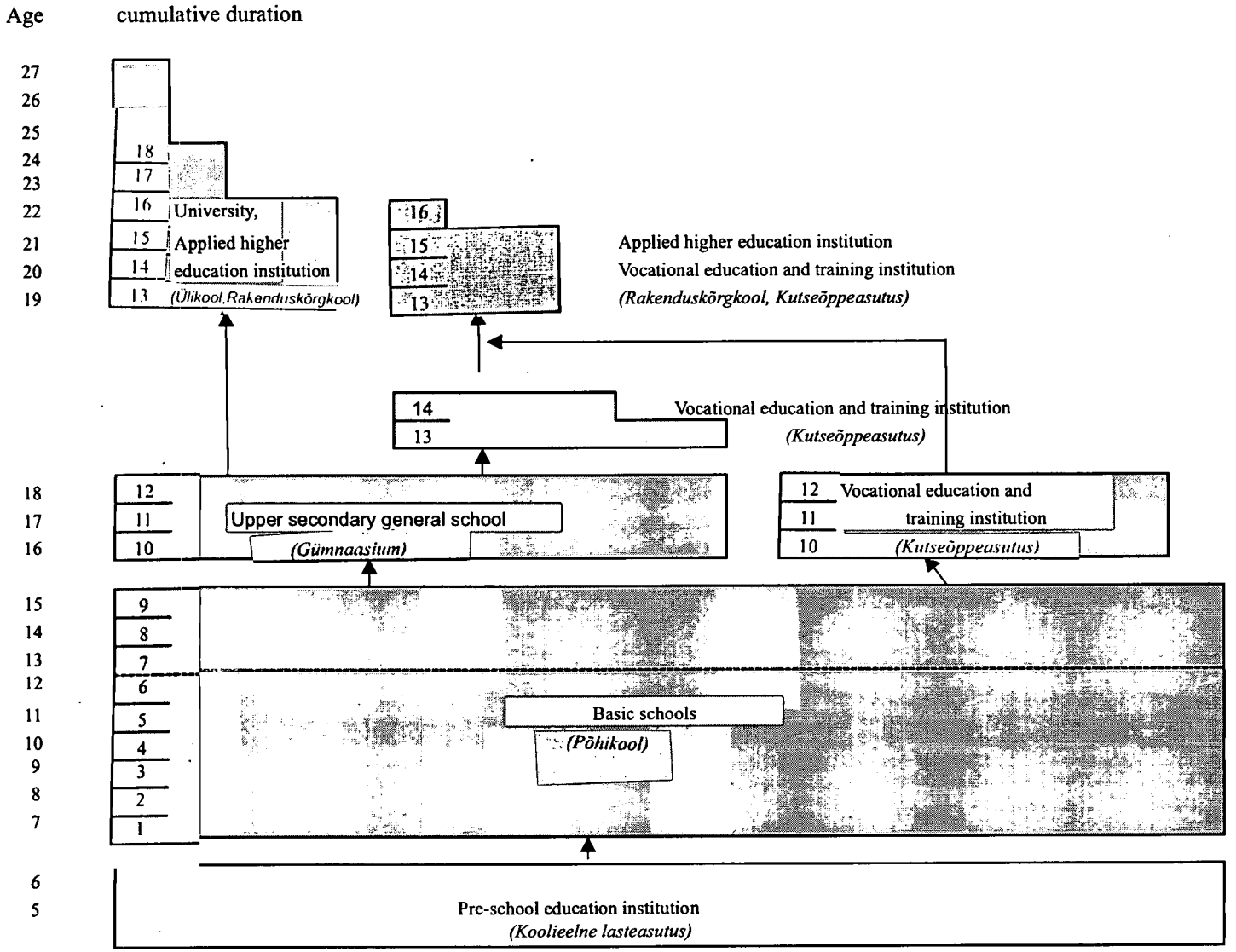


Figure A2. The Education System in Estonia and the ISCED 78 levels

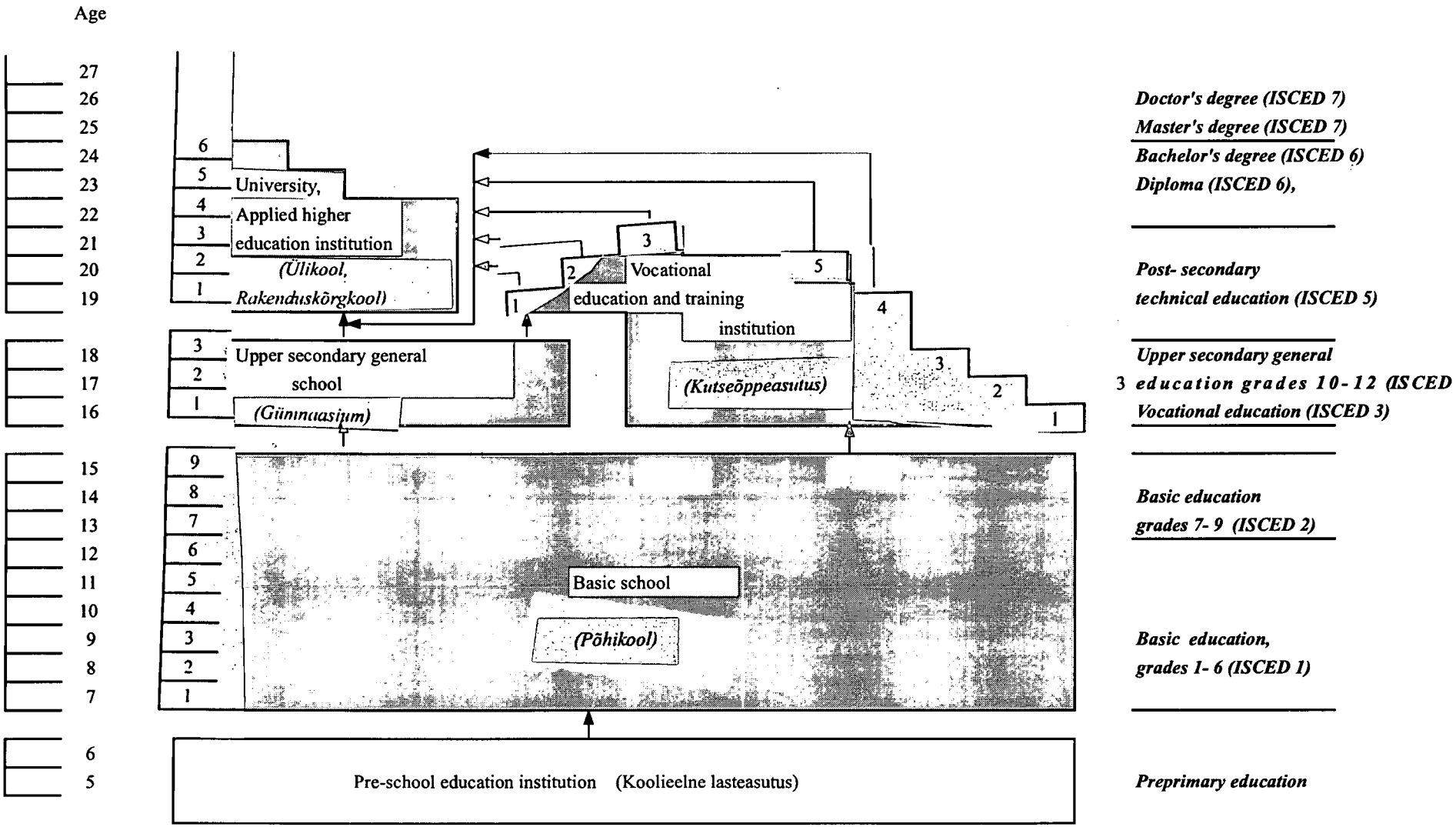


Figure A3. Number of female and Russian language speaking students compared to the total number of students in the VET schools in 1994 - 1998

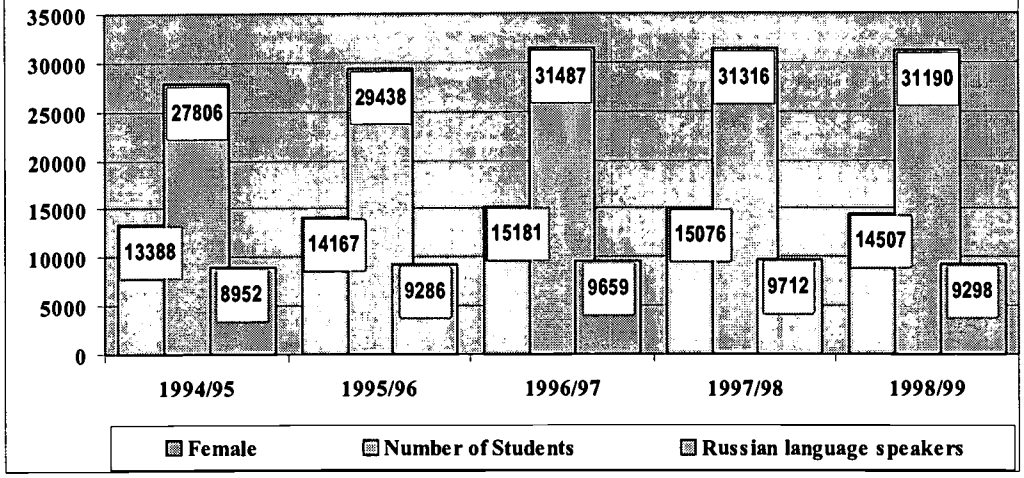


Figure A4. Percentage of female and Russian language speaking students compared to the total number of students in the VET schools in 1994 - 1998

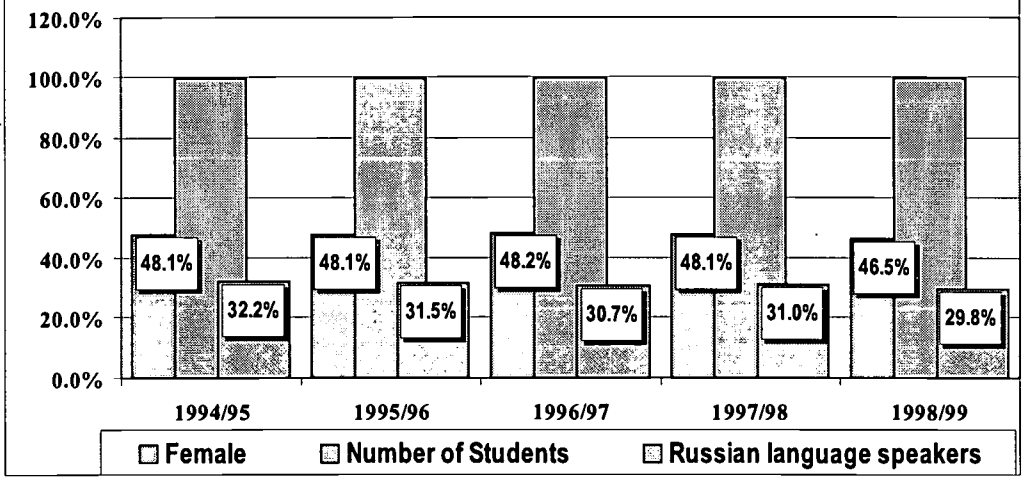
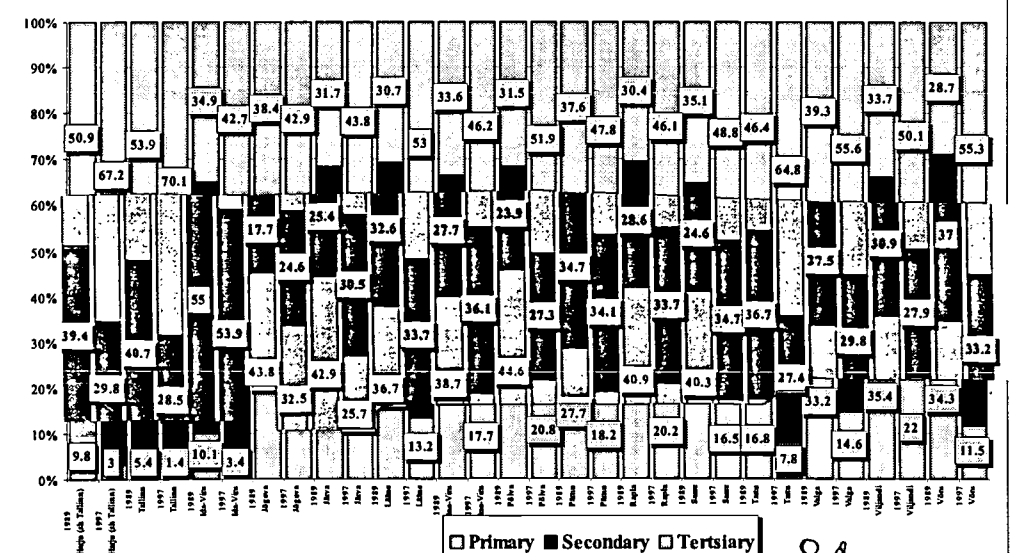


Figure A5 Regional employment structure by main sectors 1989 and 1997



Appendix tables A1-A28

Table A1. Summary table on the main sources of information on labour market indicators in Estonia

Source	Periodicity	Start of series	Nature of data	Sample size	Sampling procedure	Global representativeness	Possible bias in representativeness	Monitored indicators
Labour Force Surveys[a]	Yearly since 1997	1989	Sample survey					E, U, OLF of the entire population and major subgroups; hours worked; wages and salaries
ELFS 95		1989		_ 10 000 individuals	Stratified Simple Random	Yes		
ELFS 97		1995		_ 5 000 individuals	Cluster	Yes	Regionally not representative	
ELFS 98		1997		_ 13 000 individuals	Cluster	Yes		
Register of Estonian Labour Market Board	Continuous	May 1993	Administrative	All registered unemployed job-seekers		Yes	Not ILO definitions	U. PLMP, ALMP, vacancies
Population Register	Continuous		Administrative	All residents		Yes	Short-term residents and illegal residents not covered	
Population Census		Last in 1989, next will be in 2000	Exhaustive survey	All residents		Yes		

Source	Periodicity	Start of series	Nature of data	Sample size	Sampling procedure	Global representativeness	Possible bias in representativeness	Monitored indicators
Survey "Wages and Salaries"	Before 1997 quarterly, since 1997 monthly	III quarter 1992	Sample survey	Before 1997: private enterprises with 19 employees and all state and municipal enterprises Since 1997: Private enterprises with 49 employees and all state and municipal enterprises	Stratified	Yes	Towards large firms	E, wages, labour costs
Hourly Wages	Annually	October 1993	Sample survey Exhaustive survey	Enterprises, institutions and organisations with less than 19 employees (excluding enterprises and institutions in state and municipal ownership) All state and municipal enterprises and enterprises of other ownership form with more than 19 employees	Stratified simple random	Yes		Average number of full- and part-time employees, wages and salaries by industries and occupations.
Household Budget Surveys	Continuous	July 1995	Sample survey	4890 households	Random sample of address persons	Yes		Income and expenditure

Note: (a) Analysing the time series, one should consider that these data originate from three sources and their comparability is reduced by some circumstances, which influenced the way the survey were conducted. The circumstances to be considered when analysing the results of the surveys are the following:

1. *The sample size was different for different ELFS-s.*
2. *The sample frames for surveys were different. For ELFS 95 the sample frame was the database of the 1989 population census, which in view of the population changes in the meantime was outdated and was thus one source of errors. A lot of persons had left Estonia for instance or had died. As the sample frame for ELFS 97 and ELFS 98 the Population Register was used. Although it is more up-to-date than the database of the population census, it still contains some errors and lacks some of the necessary information (persons who have left, incomplete data about place of residence etc.)*
3. *The sample designs of the three surveys are different. With reference to sample, the results could be affected only by the errors of the sample frame described in previous paragraph because the regardless of the difference in sampling procedures the inclusion probability for all persons was eventually the same.*

Abbreviations: E – employment; U – unemployment, OLF – out of labour force, PLMP/ALMP – passive/active labour market policies

Table A2. Estonian import by main trade partners

Country	1991	1992	1993	1994	1995	1996	1997
Finland	2.0	22.6	27.9	29.9	36.9	35.7	33.9
Sweden	0.8	5.9	8.9	8.9	8.9	8.6	10.0
Germany	0.8	8.3	10.8	9.9	8.1	8.9	9.6
Russia	45.9	28.4	17.2	16.8	14.2	10.1	7.5
Holland	0.1	1.8	3.6	3.1	3.3	3.5	3.8
Latvia	5.1	1.7	2.3	1.5	2.9	3.3	3.5
Denmark	0.1	1.7	2.6	2.6	2.7	2.7	2.9
UK	0.1	1.6	1.5	2.1	1.6	2.1	2.2
Lithuania	6.3	3.6	3.3	2.6	2.0	2.1	2.0
Ukraine	7.9	3.2	1.6	1.7	0.9	1.4	0.9
Other	30.9	21.2	20.3	20.9	18.5	21.6	23.7
Total	100	100	100	100	100	100	100

Source: Statistical Office of Estonia

Table A3. Estonian export by main trade partners

Country	1991	1992	1993	1994	1995	1996	1997
Finland	2.3	21.2	20.7	17.8	23.3	20.8	20.5
Sweden	0.5	7.7	9.5	10.8	11.8	13.2	18.2
Russia	56.5	20.8	22.6	23.1	16.3	14.1	9.8
Latvia	7.7	10.6	8.6	8.2	7.5	8.2	9.2
Germany	0.2	3.9	8.0	6.8	7.3	7.3	7.3
Lithuania	3.8	1.5	3.7	5.4	4.5	5.2	5.0
UK	0.1	0.9	1.4	2.8	3.3	3.6	4.3
Denmark	0.1	2.4	2.4	3.4	3.3	4.0	4.2
Ukraine	12.9	6.9	3.6	3.1	3.2	4.0	3.5
Holland	0.3	5.1	4.0	3.2	4.4	3.3	3.5
Other	15.6	19	15.5	15.4	15.1	16.3	14.5
Total	100	100	100	100	100	100	100

Source: Statistical Office of Estonia

Table A4. Labour market, education and training situation of 15 to 24 year olds, 1997

	Percentage of individuals whose main activity is (%)				
	Education/ Training	Employed	Unemployed	Other	Total
Males					
15-19 year olds	74.71	14.12	4.18	6.96	100
20-24 year olds	16.91	44.73	10.64	30.27	100
15-24 year olds	46.04	29.38	7.40	18.50	100
Females					
15-19 year olds	74.73	14.12	4.18	6.96	100
20-24 year olds	14.36	44.73	10.64	30.27	100
15-24 year olds	44.63	29.38	7.40	18.50	100
Total					
15-19 year olds	74.72	13.91	4.76	6.61	100
20-24 year olds	15.65	54.42	12.43	17.50	100
15-24 year olds	45.35	34.05	8.57	12.03	100

Source: Statistical Office of Estonia

Table A5. Enrolment ratio for education institutions, 1997, at the beginning of academic year (%)

Age, years	Total	Male	Female
6	11.65	9.22	14.20
7	94.67	94.11	95.27
8	96.23	95.95	96.53
9	99.24	100.02	98.44
10	96.85	97.19	96.50
11	97.68	97.91	97.45
12	96.40	97.11	95.68
13	98.24	98.18	98.31
14	96.85	96.41	97.30
15	95.50	94.51	96.52
16	94.74	93.20	96.34
17	81.07	78.28	83.95
18	61.73	58.29	65.29
19	48.39	43.00	53.94
20	38.99	32.25	46.01

Age, years	Total	Male	Female
21	31.05	27.65	34.53
22	23.10	21.64	24.60
23	17.79	16.12	19.47
24	13.20	11.81	14.62
25	11.03	10.48	11.60
7-12	96.87	97.07	96.66
13-17	93.40	92.25	94.58
18-22	40.67	36.59	44.88

Source: Ministry of Education

Table A6. Number of vocational education institutions and number of students in 1992/93 - 1998/99

Year		Ministry of Education	Ministry of Agriculture	Other (incl. Private)	Total
1992/93	# of Schools	45	12	30	87
	# of Students	19527	3677	7486	30690
	% of Total	63,6%	12%	24,4%	100%
1993/94	# of Schools	63	12	8	83
	# of Students	24302	3257	649	28208
	% of Total	86,2%	11,5%	2,3%	100%
1994/95	# of Schools	63	13	11	87
	# of Students	22684	2708	2414	27806
	% of Total	81,6%	9,7%	8,7%	100%
1995/96	# of Schools	59	13	13	85
	# of Students	24444	3084	1910	29438
	% of Total	83%	10,5%	6,5%	100%
1996/97	# of Schools	60	13	18	91
	# of Students	24924	3374	3189	31487
	% of Total	79,2%	10,7%	10,1%	100%
1997/98	# of Schools	58	13	18	89
	# of Students	24846	3513	2957	31316
	% of Total	79,3%	11,2%	9,4%	100%
1998/99	# of Schools	56	13	20	89
	# of Students	25012	3483	2695	31190
	% of Total	80,2%	11,2%	8,6%	100%

Source: Ministry of Education, Information and Statistics division

Table A7. Average monthly gross nominal wages[19] and index of wages by economic activity, 1992-1997

Economic activity	Gross wages, kroons						Index of wages, 1992=100				
	1992	1993	1994	1995	1996	1997	1993	1994	1995	1996	1997
Agriculture, hunting	388	641	1010	1405	1811	2131	165.2	260.3	362.1	466.7	549.1
Forestry	473	908	1601	2419	2590	3657	192.0	338.5	511.4	547.6	773.2
Fishing	540	1229	1705	1987	2708	3640	227.6	315.7	368.0	501.4	647.0
Mining and quarrying	737	1487	2362	2968	3944	4412	201.8	320.5	402.7	535.1	598.7
Manufacturing	536	1036	1784	2421	2991	3578	193.3	332.8	451.7	558.1	667.5
Electricity. steam. gas and water supply	835	1467	2432	3262	3872	4835	175.7	291.3	390.7	463.7	579.1
Construction	647	1264	2047	2568	3195	3709	195.4	316.4	396.9	493.9	573.3
Wholesale and retail trade	516	917	1510	2051	2720	3112	177.7	292.6	397.5	527.1	603.2
Hotels and restaurants	403	786	1196	1570	2128	2340	195.0	296.8	389.6	528.1	580.6
Transport. storage and communications	867	1741	2421	3101	3748	4425	200.8	279.2	357.7	432.3	510.3
Financial intermediation	1078	2496	3571	4951	6109	7684	231.5	331.3	459.3	566.7	712.8
Real estate. renting and business activities	488	1031	1748	2562	3213	4078	211.3	358.2	525.0	658.4	835.7
Public administration and defence	533	1103	2030	2825	3546	4226	206.9	380.9	530.0	665.4	792.9
Education	459	850	1259	1900	2326	2794	185.2	274.3	413.9	506.8	608.7
Health and social work	415	818	1402	1975	2689	3089	197.1	337.8	475.9	647.9	744.4
Other community. Social and personal service activities	437	825	1300	1894	2453	2913	188.8	297.5	433.4	561.4	666.5
AVERAGE	549	1066	1734	2375	2985	3573	194.2	315.8	432.6	543.8	650.9

Notice: 15.6EEK=1EUR
Source: Statistical Office of Estonia

19 The table includes private enterprises, institutions and organisations with more than 19 employees and all state and municipal enterprises and institutions.

Table A8. Hourly wages and salaries of full-time and part-time employees, November 1993, October 1994-1997[20]

Economic activity	Sex	Average hourly gross wages				
		1993	1994	1995	1996	1997
Agriculture and hunting	M	4.6	6.8	9.1	11.3	13.0
	F	4.2	6.2	8.3	10.2	11.9
Forestry	M	5.7	9.5	13.3	15.4	21.3
	F	4.8	7.8	11.5	13.9	18.7
Fishing	M	8.5	11.2	15.4	19.8	25.8
	F	8.1	9.3	12.5	11.6	16.9
Mining and quarrying	M	13.1	18.9	23.2	29.9	32.7
	F	7.4	10.6	13.1	15.9	18.4
Manufacturing	M	8.1	13.3	16.4	19.5	23.7
	F	6.5	9.8	12.9	14.9	18.1
Electricity, gas and water supply	M	10.2	16.7	19.7	21.6	27.1
	F	7.9	13.2	15.2	16.9	21.3
Construction	M	9.3	14.8	18.5	21.6	25.6
	F	7.5	11.3	13.7	16.0	19.1
Wholesale and retail trade	M	7.8	11.5	16.7	21.7	26.9
	F	5.9	8.6	11.1	13.5	16.5
Hotels and restaurants	M	6.7	12.1	16.8	18.9	22.9
	F	5.2	9.0	10.7	13.3	15.2
Transport, storage and communication	M	12.6	16.3	20.2	22.2	26.6
	F	8.1	10.2	14.0	15.7	19.6
Financial intermaediation	M	15.6	25.7	34.7	41.2	55.8
	F	12.2	17.6	25.1	24.9	31.4
Real estate, renting and business activities	M	7.4	12.0	16.2	18.8	21.9
	F	5.6	9.4	11.6	13.8	16.6
Public administration and defence, compulsory social security	M	6.3	12.1	15.2	18.6	22.1
	F	5.7	10.5	13.6	15.2	19.1
Education	M	5.7	8.7	12.6	14.6	17.9
	F	5.2	8.1	10.7	13.0	15.3

20 The table includes private enterprises, institutions and organisations with more than 19 employees and all state and municipal enterprises and institutions.

Economic activity	Sex	Average hourly gross wages				
		1993	1994	1995	1996	1997
Health and social work	M	5.9	9.2	13.1	17.4	19.9
	F	5.6	7.6	10.6	13.5	15.0
Other community, social and personal service activities	M	6.1	9.5	12.3	16.2	19.4
	F	4.7	7.5	9.7	12.5	14.5
AVERAGE	M	8.5	13.2	16.8	19.8	23.9
	F	6.1	9.1	12.0	14.2	17.1

Table A9. Wage levels and wage growth by industries in 1995-1997

	January 1995			January 1997			Wage growth
	mean	standard error	median	mean	standard error	median	mean
Agriculture, hunting and forestry	1311.98	171.99	1000	1723.43	85.53	1400	1.31
Manufacturing	1891.94	48.72	1600	2653.74	70.37	2200	1.40
Electricity, gas and water supply	2508.71	174.42	2200	3648.16	221.38	3200	1.45
Construction	2836.11	213.95	2200	3411.96	227.92	2850	1.20
Wholesale and retail trade	1871.88	112.85	1500	2719.88	154.61	2000	1.45
Hotels and restaurants	1659.51	175.04	1446	1974.90	270.17	1300	1.19
Transport, storage and communications	2381.50	121.10	1951	3226.59	138.81	2800	1.35
Financial intermediation	3969.24	605.59	3000	5818.25	1183.14	3500	1.47
Real estate, renting and business activities	2617.99	257.59	1800	4192.36	426.95	3000	1.60
Public administration and defense, compulsory social security	2196.05	99.64	2000	3365.98	166.27	3000	1.53
Education	1733.02	69.75	1500	2493.28	89.75	2300	1.44
Health and social care	1658.03	78.20	1500	2375.00	95.07	2100	1.43
Other community, social and personal service activities	2128.60	231.69	1623	2914.85	233.85	2700	1.37

Note: 1 EUR = 15.6 EEK
Source: Estonian Labour Force Survey 1997, own calculations.

Table A10. Average hourly gross wages in 1993-1997 by industries, female/male wage gap (male wage=100)

	1993	1994	1995	1996	1997
Agriculture and hunting	91.3	91.2	91.2	90.3	91.5
Forestry	84.2	82.1	86.5	90.3	87.8
Fishing	95.3	83.0	81.2	58.6	65.5
Mining and quarrying	56.5	56.1	56.5	53.2	56.3
Manufacturing	80.2	73.7	78.7	76.4	76.4
Electricity, gas and water supply	77.5	79.0	77.2	78.2	78.6
Construction	80.6	76.4	74.1	74.1	74.6
Wholesale and retail trade	75.6	74.8	66.5	62.2	61.3
Hotels and restaurants	77.6	74.4	63.7	70.4	66.4
Transport, storage and communication	64.3	62.6	69.3	70.7	73.7
Financial intermediation	78.2	68.5	72.3	60.4	56.3
Real estate, renting and business activities	75.7	78.3	71.6	73.4	75.8
Public administration and defense, compulsory social security	90.5	86.8	89.5	81.7	86.4
Education	91.2	93.1	84.9	89.0	85.5
Health and social work	94.9	82.6	80.9	77.6	75.4
Other community, social and personal service activities	77.0	78.9	78.9	77.2	74.7
AVERAGE	71.8	68.9	71.4	71.7	71.5

Table A11. Wage level and wage growth by personal and firm characteristics in 1995-1997

	January 1995			January 1997			Wage growth
	mean	standard error	Median	mean	standard error	median	mean
Males	2300.91	60.78	1900	3241.60	76.74	2700	1.41
Females	1710.73	38.61	1500	2380.49	47.52	2000	1.39
Estonians	2073.57	49.21	1600	2976.40	60.76	2500	1.44
Non-Estonians	1917.38	53.76	1500	2549.92	71.37	2200	1.33
Under 25 years old	1599.15	100.65	1500	2334.47	135.93	2000	1.46
25-49 years old	2076.85	50.27	1600	2950.94	62.69	2500	1.42
Over 50 years old	1945.90	52.51	1700	2623.34	68.92	2300	1.35
Preliminary education	1673.89	42.43	1500	2417.50	74.08	2000	1.44
Secondary education	1855.41	41.12	1500	2609.98	54.39	2250	1.41
Post-secondary and higher education	3030.03	133.47	2500	4111.19	139.15	3500	1.36
State enterprise	2078.68	53.13	1800	2993.26	72.61	2600	1.44
Municipality	1739.14	69.47	1500	2578.39	177.96	2297	1.48
Estonian private ownership	1962.99	63.03	1500	2587.98	71.25	2000	1.32
Foreign private ownership	2687.01	254.43	2000	3726.85	327.11	3000	1.39
Legislators, senior officials and managers	3195.36	173.29	2500	4297.66	197.40	3500	1.34
Professionals	2717.55	146.34	2400	3762.53	127.97	3335	1.38
Technicians and associate professionals	1958.42	80.31	1500	2850.00	111.05	2400	1.46
Clerks	1643.02	82.31	1500	2365.40	112.36	2200	1.44
Service workers and shop and market sales workers	1364.62	56.00	1065	1833.64	72.64	1500	1.34
Skilled agricultural and fishery workers	1222.33	77.94	1000	1583.47	99.49	1300	1.30
Craft and related trade workers	2081.13	68.60	1800	2867.44	114.25	2500	1.38
Plant and machine operators and assemblers	1701.18	58.09	1500	2441.37	80.56	2000	1.44
Elementary occupations	1263.06	61.55	1000	1839.06	82.84	1500	1.46

Note: 1 EUR = 15.6 EEK
Source: Estonian Labour Force Survey 1997, own calculations.

Table A12. Occupational wage structure: Average gross wages per hour of full-time and part-time employees by occupational groups, October, EEK

	Average gross wages of females per hour					
	1992	1993	1994	1995	1996	1997
Legislators, senior officials and managers	7.98	13.76	20.43	27.05	31.31	35.47
Professionals	6.15	9.64	15.15	21.36	24.62	33.10
Technicians and associate professionals	5.56	10.86	16.39	18.50	22.72	25.81
Clerks	4.74	7.00	10.16	15.81	17.07	17.78
Service workers and shop and market sales workers	4.19	7.25	9.81	12.96	15.35	16.04
Skilled agricultural and fishery workers	3.77	5.21	8.39	9.54	11.91	13.25
Craft and related trades workers	5.55	8.55	12.45	15.73	18.47	20.80
Plant and machine operators and assemblers	5.05	7.89	11.28	14.34	16.73	19.37
Elementary occupations	3.46	4.61	6.89	8.93	10.60	11.63
TOTAL	5.29	8.46	12.61	16.27	19.26	22.62
	Average gross wages of males per hour					
	1992	1993	1994	1995	1996	1997
Legislators. senior officials and managers	6.29	9.76	15.46	20.13	23.31	26.28
Professionals	5.42	7.76	12.18	16.27	19.60	24.12
Technicians and associate professionals	4.37	6.56	9.97	13.34	15.70	18.06
Clerks	4.23	6.12	8.82	11.99	13.58	16.03
Service workers and shop and market sales workers	3.54	5.07	6.29	8.02	9.66	10.13
Skilled agricultural and fishery workers	3.14	4.09	5.53	7.71	9.55	10.65
Craft and related trades workers	4.47	6.36	9.15	12.11	13.59	15.46
Plant and machine operators and assemblers	4.77	6.75	9.50	12.69	14.15	16.56
Elementary occupations	2.67	3.49	5.10	6.44	7.42	8.79
TOTAL	4.22	6.10	8.97	11.92	13.99	16.28

Source: Statistical Office of Estonia

Table A13. Average wages by region

County/town	1992	1993	1994	1995	1996	1997
Harju		1385	2184	2936	3620	4294
Tallinn		1403	2207	2960	3657	4391
Hiiu		903	1494	2201	2858	3123
Ida-Viru		1017	1670	2247	2791	3144
Jõgeva		809	1221	1812	2313	2724
Järva		925	1371	1992	2490	2909
Lääne		881	1390	2032	2606	2974
Lääne-Viru		993	1579	2202	2664	2994
Põlva		878	1405	2025	2533	2840
Pärnu		902	1439	2094	2659	2928
Rapla		901	1480	2103	2582	3114
Saare		913	1431	2052	2549	2886
Tartu		917	1519	2130	2668	3088
Valga		930	1451	2036	2379	2613
Viljandi		814	1372	1951	2465	2814
Võru		798	1303	1846	2306	2627
AVERAGE		1066	1734	2375	2985	3573

Source: Statistical Office of Estonia

Table A14. Employment by sector in 1989-1997 (in the age of 16-69 year, thousands)

Industry	Year								
	1989	1990	1991	1992	1993	1994	1995	1996	1997
Agriculture	150.8	148.5	140.5	124.7	101.5	87.5	63.0	59.7	53.3
Fishing	26.5	25.3	24.1	21.1	16.1	13.5	(6.0)	(5.0)	7.2
Mining	12.3	12.0	11.8	12.2	11.2	11.2	9.1	(8.9)	7.6
Manufacturing	214.9	207.8	198.4	180.9	151.5	143.2	162.9	154.4	143.6
Electricity production	18.6	18.6	18.3	17.9	18.3	19.5	15.8	16.4	17.6
Construction	64.9	66.0	65.5	60.7	52.4	49.9	35.6	36.8	47.4
Trade	61.6	63.1	65.5	72.1	81.0	88.1	82.7	85.8	90.4
Hotels. Restaurants	18.8	17.5	18.6	17.6	17.0	18.7	18.0	17.8	14.6
Transport. Communication	65.6	67.0	66.9	61.4	58.9	58.2	65.8	64.7	59.1
Financial intermediation	(3.9)	(4.2)	(4.8)	5.9	6.6	7.9	(7.1)	(6.6)	7.5

Industry	Year								
	1989	1990	1991	1992	1993	1994	1995	1996	1997
Real estate. Business activities	33.6	32.7	30.5	28.0	27.7	29.9	32.2	32.3	34.6
Public administration	32.8	31.5	31.2	32.4	34.9	36.4	35.7	35.0	34.0
Education	51.0	49.6	48.5	49.2	49.7	48.2	55.8	56.3	57.9
Health care	50.5	49.5	50.2	48.3	47.3	47.0	36.5	35.9	36.2
Other personal services	30.2	30.1	28.7	27.7	27.3	27.0	29.3	28.8	33.2
Other	...	(3.0)	(4.2)	5.5	6.6	6.5	...	...	-
Total	837.9	826.4	807.8	765.7	708.1	692.6	656.1	645.6	644.1

Notes: ... data are based on less than 20 persons of the sample
( ) data are based on 20-39 persons of the sample
Sources: Estonian Labour Force Surveys

Table A15. Employment by industry in 1989-1997 (in the age of 16-69 year, %)

Industry	Year								
	1989	1990	1991	1992	1993	1994	1995	1996	1997
Total	100	100	100	100	100	100	100	100	100
Change (% from previous year)		-1,4	-2,3	-5,2	-7,5	-2,2	-5,3	-1,6	-0,2
Total change (%; 1989=1)		-1,4	-3,6	-8,6	-15,5	-17,3	-21,7	-23,0	-23,1
By industries:									
Agriculture	18.0	18.0	17.4	16.3	14.3	12.6	9.6	9.2	8.3
Fishing	3.2	3.1	3.0	2.8	2.3	2.0	0.9	0.8	1.1
Mining	1.5	1.5	1.5	1.6	1.6	1.6	1.4	1.4	1.2
Manufacturing	25.7	25.1	24.6	23.6	21.4	20.7	24.8	23.9	22.3
Electricity production	2.2	2.2	2.3	2.3	2.6	2.8	2.4	2.5	2.7
Construction	7.7	8.0	8.1	7.9	7.4	7.2	5.4	5.7	7.4
Trade	7.4	7.6	8.1	9.4	11.4	12.7	12.6	13.3	14.0
Hotels. Restaurants	2.2	2.1	2.3	2.3	2.4	2.7	2.7	2.7	2.3
Transport. Communication	7.8	8.1	8.3	8.0	8.3	8.4	10.0	10.0	9.2
Financial intermediation	0.5	0.5	0.6	0.8	0.9	1.1	1.1	1.0	1.2
Real estate. Business activities	4.0	4.0	3.8	3.7	3.9	4.3	4.9	5.0	5.4
Public administration	3.9	3.8	3.9	4.2	4.9	5.3	5.4	5.4	5.3
Education	6.1	6.0	6.0	6.4	7.0	7.0	8.5	8.7	9.0

Industry	Year								
	1989	1990	1991	1992	1993	1994	1995	1996	1997
Health care	6.0	6.0	6.2	6.3	6.7	6.8	5.6	5.6	5.6
Other personal services	3.6	3.6	3.6	3.6	3.9	3.9	4.5	4.5	5.2
Other	...	0.4	0.5	0.7	0.9	0.9		...	

Notes *... data are based on less than 20 persons of the sample*
( ) data are based on 20-39 persons of the sample
Sources: Estonian Labour Force Surveys

Table A16. Employment by major sectors, %

Year	Males				Females				Total			
	Agri-culture	Industry	Services	Total	Agri-culture	Industry	Services	Total	Agri-culture	Industry	Services	Total
1989	27.2	42.2	30.6	100.0	14.9	31.8	53.3	100.0	21.2	37.1	41.7	100.0
1990	26.5	41.9	31.6	100.0	15.2	31.4	53.4	100.0	21.0	36.8	42.1	100.0
1991	25.4	41.6	33.0	100.0	14.9	30.8	54.3	100.0	20.4	36.4	43.2	100.0
1992	23.7	40.9	35.5	100.0	13.9	29.4	56.7	100.0	19.0	35.5	45.5	100.0
1993	20.7	38.4	40.9	100.0	12.0	26.9	61.1	100.0	16.6	33.0	50.4	100.0
1994	18.1	38.1	43.8	100.0	10.7	25.8	63.5	100.0	14.6	32.3	53.1	100.0
1995	12.8	41.0	46.1	100.0	8.0	26.4	65.6	100.0	10.5	34.0	55.4	100.0
1996	12.4	41.2	46.4	100.0	7.5	25.2	67.3	100.0	10.0	33.5	56.5	100.0
1997	12.0	41.9	46.1	100.0	6.5	24.4	69.1	100.0	9.4	33.6	57.0	100.0

Sources: Estonian Labour Force Surveys

Table A17. Employment rates by county

	1989	1990	1991	1992	1993	1994	1995	1996	1997
Harju	79.8	79.2	78.1	74.5	71.6	71.2	68.5	69.1	69.0
Tallinn	80.1	79.8	78.8	74.9	71.8	70.7	68.7	69.3	70.1
Hiiu	86.4	80.3	79.6	79.1	74.3	74.7	(71.3)	(64.2)	68.9
Ida-Viru	80.5	77.7	76.1	71.5	67.0	65.5	63.3	61.9	63.7
Jõgeva	77.5	76.5	75.7	71.4	65.6	61.3	58.3	57.3	57.9
Järva	77.7	78.1	75.2	75.6	70.6	69.9	72.6	71.9	64.9
Lääne	76.7	77.1	74.7	73.0	68.7	65.2	65.5	64.7	65.1
Lääne-Viru	77.8	77.8	76.8	72.9	71.2	68.8	64.4	64.1	64.6
Põlva	74.4	73.6	72.1	63.3	56.7	57.1	56.2	55.2	56.6
Pärnu	77.7	75.8	73.8	71.2	66.5	68.4	65.6	63.9	69.4
Rapla	79.5	78.1	75.1	71.2	72.4	69.4	65.8	62.3	64.9

	1989	1990	1991	1992	1993	1994	1995	1996	1997
Saare	77.6	75.7	72.0	71.5	68.3	67.6	66.0	64.7	62.5
Tartu	73.2	71.9	72.3	70.7	66.7	68.1	65.6	65.8	60.8
Valga	76.8	74.6	71.3	65.6	60.1	57.0	55.2	55.2	62.1
Viljandi	78.1	79.0	74.2	69.9	68.6	68.8	63.1	59.0	61.5
Võru	76.2	76.5	71.9	66.6	59.3	59.0	58.0	53.7	57.0
TOTAL	78.5	77.4	75.8	72.3	68.7	68.1	65.5	64.9	65.4

Sources: Estonian Labour Force Surveys

Table A18. Reported vacancies by industry (% of total)

	Apr. 1995	July 1995	Oct. 1995	Jan. 1996	Apr. 1996	July 1996	Oct. 1996	Jan. 1997	Jan. 1998	Jan. 1999	Apr. 1999
Agriculture	6.9	9.6	8.4	5.1	3.8	8.1	4.6	3.8	2.1	1.5	2.9
Fishing	0.3	0.1	1.9	1.6	0.1	0.5	0.2	0.0	0.9	0.0	0.1
Mining	0.2	0.0	0.0	0.6	0.3	1.1	0.0	0.7	1.3	0.0	0.0
Manufacturing	21.0	15.8	16.3	25.1	22.6	25.0	34.8	31.0	31.3	23.5	27.1
Electricity production	1.5	3.2	3.2	2.2	1.5	1.6	0.9	2.3	1.0	0.8	0.8
Construction	4.7	14.6	14.7	9.7	8.6	5.5	5.2	8.8	5.1	3.2	2.7
Trade	22.9	29.5	25.2	5.6	11.9	19.4	15.8	10.9	7.8	12.5	13.3
Hotels. Restaurants	3.4	2.8	2.8	8.1	2.2	1.0	1.3	4.3	1.3	5.3	5.1
Transport. Communication	4.9	6.6	10.2	14.2	3.8	2.7	4.1	3.8	3.0	2.6	2.2
Financial intermediation	1.1	1.3	0.1	0.0	0.1	1.2	0.3	0.0	0.5	2.6	2.1
Real estate. Business activities	1.5	5.0	3.6	6.3	2.4	1.8	2.6	2.2	1.5	23.3	20.1
Public administration	5.2	0.8	0.9	0.5	4.2	2.7	4.1	4.6	15.9	7.9	5.6
Education	5.5	2.2	2.7	3.2	5.5	4.9	4.5	1.9	3.0	4.0	2.7
Health care	7.8	3.4	5.3	7.3	4.3	2.8	2.3	1.3	1.5	1.7	8.2
Other	8.1	5.2	4.7	10.5	12.3	11.8	11.0	8.1	8.9	10.4	3.0
Unclassified	4.7	0.0	0.0	0.0	16.3	9.8	8.3	16.3	15.2	0.4	4.0
Total	100	100	100	100	100	100	100	100	100	100	100

Source: Estonian National Labour Market Board

Table A19. Structural unemployment, U/V ratio by occupation.

	01.01.96	01.01.98	01.01.99
Legislators, senior officials and managers	44.6	122.7	53.6
Professionals	6.1	11.1	10.8
Technicians and associate professionals	7.5	10.3	17.8
Clerks	22.8	24.9	28.0
Service workers and shop and market sales workers	10.1	12.2	13.8
Skilled agricultural and fishery workers	42.4	50.8	91.0
Craft and related trade workers	11.2	6.1	10.1
Plant and machine operators and assemblers	19.0	15.6	23.4
Elementary occupations	40.8	43.7	44.8
TOTAL	19.8	21.0	30.3

Source: Estonian Labour Market Board

Table A20. Employed persons aged 15-74 by sex, nationality and economic activity, 1997 (annual average)

	Males		Females		Total	
Economic activity	thousands	%	Thousands	%	thousands	%
Estonians						
Agriculture, and forestry	31.3	13.5	18.0	8.8	49.3	11.3
Fishing	(3.0)	(1.3)	...	...	3.2	0.7
Mining	(2.0)	(0.9)	...	...	(2.2)	(0.5)
Manufacturing	48.5	20.9	32.2	15.7	80.7	18.4
Electricity	6.7	2.9	(1.5)	(0.7)	8.3	1.9
Construction	29.7	12.8	(3.3)	(1.6)	33.0	7.5
Wholesale and retail trade	31.5	13.6	34.0	16.6	65.6	15.0
Hotels and restaurants	(1.7)	(0.7)	7.6	3.7	9.3	2.1
Transport,	23.8	10.2	7.9	3.8	31.6	7.2
Financial intermediation	(1.7)	0.7)	4.6	2.2	6.3	1.4
Real estate,	15.2	6.6	9.8	4.8	25.0	5.7
Public administration	13.9	6.0	13.0	6.3	26.9	6.1

	Males		Females		Total	
Economic activity	thousands	%	Thousands	%	thousands	%
Education	9.5	4.1	33.7	16.4	43.2	9.9
Health and social work	3.9	1.7	22.1	10.8	26.1	6.0
Other	9.6	4.1	17.4	8.5	27.0	6.2
Total	232.0	100.0	205.5	100.0	437.6	100.0
Non-Estonians						
Agriculture, hunting and forestry	3.0	2.8	(1.3)	(1.2)	4.3	2.0
Fishing	(3.3)	(3.1)	...	...	(4.0)	(1.9)
Mining	(4.3)	(4.0)	...	...	5.4	2.5
Manufacturing	31.8	29.8	31.6	30.4	63.4	30.1
Electricity	6.1	5.7	(3.2)	(3.1)	9.3	4.4
Construction	12.7	11.9	...	...	14.4	6.8
Wholesale and retail trade	9.9	9.2	15.1	14.6	25.0	11.9
Hotels and restaurants	...	...	(4.5)	(4.3)	(5.3)	(2.5)
Transport	18.9	17.7	8.9	8.5	27.7	13.2
Financial intermediation	...	...	...	...	...	...
Real estate	(5.3)	(4.9)	(4.8)	(4.6)	10.1	4.8
Public administration	(4.3)	(4.1)	(3.0)	(2.9)	7.4	3.5
Education	(3.6)	(3.3)	12.2	11.7	15.7	7.5
Health and social work	...	...	9.9	9.5	10.9	5.2
Other	...	...	(5.0)	(4.8)	6.8	3.2
Total	106.8	100.0	104.0	100.0	210.8	100.0

Sources: Estonian Labour Force Surveys

Table A21. Labour force participation rate by sex and age group, 1989–1996 (annual average, per cent)

Sex, age group	1989	1990	1991	1992	1993	1994	1995	1996
Males and females								
15-19	28.2	28.5	31.6	32.8	31.5	31.6	22.0	21.9
20-24	74.2	69.9	67.9	67.9	67.7	72.1	73.1	70.1
25-29	87.2	84.9	85.5	85.2	84.1	83.1	86.1	83.7
30-34	93.8	91.7	90.5	89.3	89.2	89.9	89.5	89.3
35-39	95.7	95.4	93.9	93.7	93.5	92.5	89.8	88.7
40-44	97.0	96.6	95.6	94.9	94.0	93.4	92.2	91.7
45-49	97.0	95.3	95.2	94.6	93.5	93.1	92.5	92.0
50-54	91.6	91.5	89.8	87.4	87.2	85.7	84.8	85.6
55-59	68.1	68.3	66.6	60.9	57.9	59.2	58.9	60.5
60-64	52.3	52.3	47.4	37.3	30.8	30.1	29.5	30.3
65-69	40.1	35.3	32.1	28.1	21.2	18.9	13.3	15.2
TOTAL	76.9	75.5	74.3	72.2	70.2	70.1	68.5	68.1
15-24	50.4	48.8	49.6	50.4	49.9	52.2	47.7	45.9
25-49	93.9	92.5	91.9	91.4	90.8	90.4	90.0	89.1
50-69	66.2	65.1	61.9	56.3	51.7	50.3	48.0	48.8
16 until pension age	84.9	83.4	82.9	82.0	81.6	81.5	80.1	79.4
Males								
15-19	24.9	28.5	34.0	37.5	34.9	35.4	23.1	23.5
20-24	82.5	78.7	77.9	81.9	79.2	83.4	87.6	83.0
25-29	97.8	97.4	97.4	96.0	93.9	92.5	96.3	94.9
30-34	98.5	97.7	97.4	96.2	95.5	95.9	95.2	93.5
35-39	98.2	97.5	96.7	96.3	96.0	95.8	91.3	89.9
40-44	97.7	97.7	96.8	96.0	95.7	94.1	95.0	92.8
45-49	96.6	95.1	95.1	95.8	94.0	94.5	92.1	93.2
50-54	93.6	93.6	93.2	91.2	89.8	87.7	86.4	87.3
55-59	85.3	83.9	82.3	77.6	77.4	78.3	77.9	77.9
60-64	62.6	64.5	59.5	49.0	41.1	40.4	38.5	37.2
65-69	50.9	44.0	40.0	36.6	29.7	27.2	(17.4)	(22.1)
TOTAL	82.6	82.1	81.6	80.5	78.0	77.9	75.9	75.0
15-24	52.3	53.3	56.1	60.1	57.7	60.1	55.6	53.1
25-49	97.8	97.2	96.8	96.1	95.1	94.6	94.0	92.9
50-69	77.8	76.5	73.6	68.3	63.9	62.2	58.8	58.9
16 until pension age	87.4	87.0	87.3	86.7	85.9	85.8	84.0	83.1

Sex, age group	1989	1990	1991	1992	1993	1994	1995	1996
Females								
15-19	31.9	28.6	29.2	28.0	28.1	27.7	20.9	20.2
20-24	65.5	60.2	56.9	52.4	55.0	59.8	58.0	56.9
25-29	76.5	72.1	73.3	74.0	74.2	73.3	75.2	71.4
30-34	89.1	85.8	83.6	82.5	83.1	84.0	83.8	85.1
35-39	93.3	93.3	91.2	91.3	91.0	89.5	88.4	87.6
40-44	96.4	95.6	94.5	94.0	92.4	92.7	89.6	90.8
45-49	97.5	95.5	95.4	93.6	93.1	91.9	92.8	90.9
50-54	89.8	89.7	86.9	84.1	84.9	83.9	83.5	84.3
55-59	54.4	55.7	53.9	47.4	42.2	44.0	43.8	46.8
60-64	45.7	43.9	38.8	28.7	23.3	22.6	22.9	25.4
65-69	34.6	30.8	28.1	23.8	16.5	14.1	(10.8)	(10.8)
TOTAL	71.7	69.5	67.6	64.7	63.1	63.0	61.7	61.8
15-24	48.3	44.0	42.7	40.0	41.5	43.8	39.5	38.5
25-49	90.1	88.0	87.3	86.9	86.7	86.4	86.1	85.4
50-69	57.8	56.8	53.3	47.5	42.7	41.5	40.0	41.2
16 until pension age	82.1	79.5	78.2	76.9	77.1	76.9	75.9	75.5

Sources: Estonian Labour Force Surveys

Table A22. Employed persons by sex and age group, 1989–1996 (annual average, thousands)

Sex, age group	1989	1990	1991	1992	1993	1994	1995	1996
Males and females								
15-19	30.9	30.5	32.3	31.4	28.1	27.5	17.0	17.4
20-24	76.1	72.9	71.4	70.1	67.7	71.4	69.7	63.5
25-29	103.7	99.0	95.3	88.5	78.6	74.9	76.5	75.2
30-34	112.8	110.5	107.0	102.0	95.3	92.2	87.1	83.4
35-39	109.1	109.0	108.1	105.2	98.9	95.7	89.8	88.2
40-44	90.8	97.5	101.1	100.8	95.2	92.3	86.9	89.2
45-49	93.6	85.6	80.8	75.5	73.6	77.1	81.3	81.8
50-54	90.0	92.3	90.0	88.0	80.3	72.8	65.3	61.6
55-59	63.5	62.2	58.9	52.3	48.9	50.3	50.7	51.6
60-64	44.2	45.0	41.7	32.8	26.5	24.7	22.8	23.0
65-69	23.2	21.9	21.1	19.1	14.9	13.7	9.1	10.7

Sex, age group	1989	1990	1991	1992	1993	1994	1995	1996
TOTAL	837.9	826.4	807.8	765.7	708.1	692.6	656.1	645.6
15-24	107.0	103.4	103.6	101.5	95.8	98.9	86.6	80.9
25-49	510.0	501.6	492.4	472.0	441.7	432.2	421.5	417.9
50-69	220.9	221.4	211.8	192.1	170.7	161.5	147.9	146.9
16 until pension age	740.2	728.8	716.5	689.6	646.1	632.4	611.4	599.1
Males								
15-19	14.2	15.7	17.9	18.6	16.1	15.8	(8.4)	9.1
20-24	43.2	42.8	42.8	44.3	42.0	42.9	43.8	38.6
25-29	58.7	57.4	55.2	50.9	45.2	43.5	44.9	44.9
30-34	58.6	58.4	57.1	54.2	50.2	49.1	46.1	43.5
35-39	54.9	54.6	54.6	52.9	50.0	48.7	43.4	43.7
40-44	43.9	47.6	49.3	48.9	46.1	44.2	41.6	42.2
45-49	44.4	40.7	38.3	36.0	34.8	37.1	37.5	38.6
50-54	42.6	43.7	43.3	42.5	38.0	34.3	30.6	28.6
55-59	35.4	34.1	32.4	29.7	29.1	29.5	29.2	28.5
60-64	20.8	22.5	21.9	18.3	14.9	14.1	12.3	11.8
65-69	9.9	9.1	8.8	8.3	7.4	7.2	(4.6)	(5.9)
TOTAL	426.7	426.7	421.5	404.4	373.9	366.6	342.3	335.4
15-24	57.4	58.5	60.8	62.8	58.2	58.7	52.2	47.8
25-49	260.5	258.8	254.4	242.8	226.4	222.7	213.4	212.8
50-69	108.7	109.5	106.3	98.7	89.4	85.2	76.7	74.8
16 until pension age	394.6	393.2	389.9	377.0	351.1	344.6	328.2	321.9
Females								
15-19	16.6	14.9	14.3	12.9	12.0	11.7	(8.5)	(8.3)
20-24	32.9	30.1	28.5	25.8	25.6	28.5	25.9	24.8
25-29	45.1	41.6	40.2	37.6	33.4	31.4	31.6	30.4
30-34	54.2	52.2	49.9	47.9	45.1	43.1	41.0	40.0
35-39	54.2	54.3	53.5	52.3	48.9	47.0	46.4	44.5
40-44	46.9	49.9	51.9	51.9	49.0	48.1	45.3	47.0
45-49	49.1	44.9	42.5	39.5	38.8	39.9	43.8	43.2
50-54	47.4	48.6	46.7	45.4	42.3	38.6	34.7	33.0
55-59	28.1	28.1	26.5	22.7	19.9	20.8	21.5	23.1
60-64	23.4	22.5	19.8	14.5	11.6	10.6	10.5	11.2
65-69	13.4	12.8	12.4	10.8	7.5	6.4	(4.5)	(4.8)
TOTAL	411.3	399.7	386.3	361.3	334.2	326.0	313.8	310.2

Sex, age group	1989	1990	1991	1992	1993	1994	1995	1996
15-24	49.6	44.9	42.9	38.7	37.6	40.1	34.4	33.1
25-49	249.4	242.8	238.0	229.2	215.2	209.5	208.1	205.1
50-69	112.3	111.9	105.4	93.4	81.3	76.4	71.3	72.1
16 until pension age	345.6	335.6	326.6	312.5	295.0	287.8	283.1	277.3

Sources: Estonian Labour Force Surveys

Table A23. Employed non-Estonians by economic activity, 1989–1996 (annual average, thousands)

Economic activity	1989	1990	1991	1992	1993	1994	1995	1996
Agriculture, hunting and forestry	12,8	12,7	12,0	10,5	8,2	8,0	6,1	5,5
Fishing	10,3	10,4	10,5	10,0	8,6	7,1	...	...
Mining	9,3	9,0	8,7	8,9	7,9	7,8	7,7	7,8
Manufacturing	106,6	103,6	99,2	88,5	71,2	64,9	75,6	71,0
Electricity, gas and water supply	9,1	8,9	8,4	8,5	8,5	9,1	5,6	5,4
Construction	21,6	21,6	21,6	19,9	18,3	16,8	12,9	14,0
Wholesale and retail trade	18,2	19,0	20,4	22,6	25,2	25,1	24,7	25,5
Hotels and restaurants	7,4	6,8	7,1	5,8	4,4	4,8	5,5	5,4
Transport, storage and communications	32,1	33,2	33,4	30,9	28,8	29,1	31,4	30,6
Financial intermediation	...	...	...	...	...	...	...	...
Real estate, renting and business activities	11,4	10,3	9,9	9,5	9,2	10,0	9,3	9,6
Public administration	13,0	12,4	10,7	9,1	8,4	7,8	5,9	5,5
Education	10,8	10,9	10,5	10,3	10,2	9,5	14,3	14,8
Health and social care	17,8	17,5	17,6	16,6	15,8	15,7	9,4	10,2
Otherl service activities	7,8	8,0	7,6	7,0	6,8	6,6	7,0	6,4
Other	...	...	...	...	...	...	...	...
Total	290,7	287,4	281,0	261,8	236,1	227,2	221,3	217,3

Sources: Estonian Labour Force Surveys

Table A24. Labour force, unemployment and inactivity, population at the age of 15-69 (thousands and %)

	1989	1990	1991	1992	1993	1994	1995	1996	1997
Both genders									
Labour force	842.6	831.7	819.8	794.8	757.8	749.4	726.9	717.6	713.5
Unemployed	(4.7)	5.3	12.0	29.1	49.6	56.7	70.9	71.9	69.4
Inactive population	253.8	270.5	284.2	306.4	322.1	320.1	334.6	336.5	333.6
Unemployment rate (%)	(0.6)	0.6	1.5	3.7	6.5	7.6	9.7	10.0	9.7
Yearly change of unemployment* (%)		12.8	126.4	142.5	70.4	14.3	25.0	1.4	-3.5
Males									
Labour force	429.1	429.3	427.5	420.7	399.9	395.5	382.9	375.8	374.5
Unemployed	...	...	6.1	16.3	26.0	28.9	40.6	40.4	37.9
Inactive population	90.5	93.5	96.1	102.1	112.6	112.2	121.5	125.1	123.1
Unemployment rate (%)	...	...	1.4	3.9	6.5	7.3	10.6	10.7	10.1
Yearly change of unemployment* (%)				167.2	59.5	11.2	40.5	-0.5	-6.2
Females									
Labour force	413.5	402.5	392.2	374.1	357.9	353.8	344.0	341.8	338.8
Unemployed	...	(2.8)	6.0	12.8	23.7	27.8	30.3	31.6	31.5
Inactive population	163.3	177.0	188.1	204.3	209.5	207.8	213.2	211.4	210.4
Unemployment rate (%)	...	(0.7)	1.5	3.4	6.6	7.9	8.8	9.2	9.3
Yearly change of unemployment* (%)			114.3	113.3	85.2	17.3	9.0	4.3	-0.3

Sources: Estonian Labour Force Surveys

Table A25. Unemployed persons by sex, age group and duration of unemployment, 1997 (annual average)

Duration of unemployment	Males		Females		Total	
	Thousands	%	Thousands	%	Thousands	%
Persons aged 50-74						
Up to 6 months	(3.9)	(44.4)	(2.4)	(48.4)	6.2	45.9
7-12 months	(2.3)	(26.9)	...	...	(3.6)	(26.8)
More than 12 months	(2.5)	(28.6)	...	...	(3.7)	(27.3)
...more than 24 months	...	...	...	...	...	...
TOTAL	8.7	100.0	4.9	100.0	13.6	100.0
Persons aged 25-49						
Up to 6 months	7.0	30.8	6.8	28.8	13.8	29.8
7-12 months	5.0	22.0	4.5	19.4	9.6	20.7
More than 12 months	10.8	47.2	12.1	51.8	22.9	49.5
...more than 24 months	6.0	26.3	7.6	32.6	13.7	29.5
TOTAL	22.9	100.0	23.4	100.0	46.3	100.0
Persons aged 50-74						
Up to 6 months	(1.9)	(30.4)	...	...	(2.8)	(29.6)
7-12 months	...	...	...	...	(1.5)	(16.2)
More than 12 months	(3.2)	(50.6)	(1.9)	(61.4)	(5.2)	(54.2)
...more than 24 months	(2.2)	(34.3)	...	...	3.6	38.1
TOTAL	6.4	100.0	3.2	100.0	9.5	100.0
Persons aged 16 until pension age						
Up to 6 months	12.8	33.8	9.9	32.0	22.7	33.0
7-12 months	8.6	22.7	6.2	19.9	14.8	21.4
More than 12 months	16.5	43.5	14.9	48.1	31.4	45.6
...more than 24 months	9.2	24.4	9.1	29.5	18.4	26.7
TOTAL	37.8	100.0	31.0	100.0	68.8	100.0

Notes ... data are based on less than 20 persons of the sample
( ) data are based on 20-39 persons of the sample
in 1997 the pension age for females was 57 and for males 62 years
Sources: Estonian Labour Force Surveys

Table A26. Participation in courses during the last 4 weeks by type and place of course, 2nd quarter 1998

Type and place of a course	Thousands	%
Total courses		
At a school of general education, vocational education or higher education	6.5	13.9
At a place of work	10.9	23.4
In training company, training centre, etc.	26.5	56.9
Other	(3.1)	(6.6)
TOTAL	46.6	100.0
Professional courses		
At a school of general education, vocational education or higher education	4.1	13.6
At a place of work	9.3	31.1
In training company, training centre, etc.	16.2	54.3
Other	...	...
TOTAL	29.9	100.0

Source: Estonian Labour Force Survey 1998

Table A27. Participation in courses during the last 4 weeks by type of course and source of funding, 2nd quarter 1998

Type of a course and source of funding	Thousands	%
Total courses		
Employer	25.8	55.3
State employment office	(2.8)	(5.9)
Respondents	14.3	30.7
Other	4.2	9.0
TOTAL	46.6	100.0
Professional courses		
Employer	22.4	75.0
Respondents	4.7	15.8
Other	(3.0)	(9.9)
TOTAL	29.9	100.0

Source: Estonian Labour Force Survey 1998

Table A28. Labour market policy programmes in Estonia. 1994-1997 (share in GDP. %)

	1994	1995	1996	1997	1998
Public employment services and administration	0.035	0.031	0.026	0.024	0.026
Labour market training	0.081	0.054	0.053	0.051	0.043
a) Training	0.071	0.042	0.044	0.043	0.038
b) Training allowances	0.010	0.011	0.009	0.008	0.006
Subsidized employment	0.013	0.012	0.013	0.011	0.009
a) Subsidy to employer	0.001	0.001	0.002	0.001	0.001
b) Subsidy to start a business	0.006	0.009	0.007	0.006	0.005
c) Community placement	0.007	0.003	0.004	0.004	0.003
Unemployment benefits	0.109	0.066	0.075	0.077	0.078
Other costs	0.003	0.009	0.004	0.000	0.000
TOTAL	0.242	0.173	0.172	0.163	0.157

Source: Estonian National Labour Market Board

Annexes B1-B6

B1. Estonian Labour Force Surveys

B1.1 General description

The first Estonian Labour Force Survey (ELFS) was conducted in spring 1995. The sample unit of the Estonian Labour Force Survey was one person. The planned sample size was 10 000, corresponding to about one percent of the adult population. This sample size ensures that the data can be used to analyse the employment patterns, not only of the entire population, but also of its major subgroups (young persons, women, elderly, Estonians and Non-Estonians, etc.) The age limits of the sample are set between 15 and 74 years. Military personnel as well as the institutionalised population were covered. The Survey consists of two major sections focusing on the retrospective and current situations respectively. The retrospective section targets reconstruction of major labour market flows over the years 1989-1995. The starting point of observations was chosen to be the 1989 census moment that allows for comprehensive background information on the pre-transition labour market. Because of this fact we have unique information about labour market changes during the transition period. The size of the sample and the number of questions (more than 200) allow us to draw conclusions about changes in the economy in general. Similar Surveys were conducted in 1997 (the retrospective part covered 1995-1996, full years) and 1998 (the retrospective part covered 1997, full year). The sample size was 5 000 in 1997 and 13 000 in 1998.

The data for 1989-1994 are data of the Estonian Labour Force Survey 1995 (ELFS 95), for 1995-1996 data of the ELFS 97 and for 1997 data of the ELFS 98. Therefore, in analysing the time series presented, one should consider the fact that these data originate from three sources and their comparability is reduced by some circumstances, which influenced the way the survey were conducted. The circumstances to be considered when analysing the results of the surveys are the following:

1) The sample size was different for different ELFS-s.

2) The sample frames for surveys were different. For ELFS 95 the sample frame was the database of the 1989 population census, which in view of the population changes in the meantime was outdated and was thus one source of errors. A lot of persons had left Estonia for instance or had died. As the sample frame for ELFS 97 and ELFS 98 the Population Register was used. Although it is more up-to-date than the database of the population census, it still contains some errors and lacks some of the necessary information (persons who have left , incomplete data about place of residence etc.)

3) The sample designs of the two surveys are different. Stratified simple random sampling was used in the ELFS 95, cluster sample in the ELFS 97 and ELFS 98. With reference to sample, the results could be affected only by the errors of the sample frame described in previous paragraph because the regardless of the difference in sampling procedures the inclusion probability for all persons was eventually the same.

B1.2 *Main terms and definitions used in ELFS*

The ELFS 95 and ELFS 97 are based on the main terms devised by the International Labour Office that enable us to compare the collected data to other countries.

The part of the population that is used as the basis when examining the economic activity of the population, or in other words, the population of the age that is the object of a labour force survey, is called working age/labour age population. The object of the ELFS is the population between the ages of 16 and 75, i.e. the population at that age is considered working age population. The data from the survey week in the beginning of 1995 and second quarter of 1997 are based on the population between the ages of 16 and 75. The retrospective data concern the same persons who, in the earlier years were at a different age (e.g. between the ages of 10 and 69 in 1989 in the case of ELFS 95 for example).

Generally, working age population falls into three groups. First, those who wish to work, or the economically active population, and those who do not wish or are not able to work, or the inactive population. The economically active population is called the labour force, and it falls into the employed (those who wish to work and have found work) and the unemployed (those who wish to work but have not found any). The economically inactive population includes e.g. homemakers, students, disabled persons, mothers on maternity leave, etc.

A person is considered employed (with work), if - during the reference period - he or she

1) worked and was paid as a wage earner, entrepreneur, or a free-lancer;

2) worked without direct payment in a family enterprise or on his/her own farm;

3) was temporarily absent from work.

The main criterion for being temporarily absent from work is maintaining the formal labour relations with the employer (in the case of an enterprise, preservation of the enterprise). The reason for being temporarily absent from work may be a holiday, illness, advanced training or retraining courses, strike, etc. All persons who have worked at least 1 hour during the reference period, are considered employed, which is due to the necessity to define unemployment as the complete absence of work.

According to hours of work, the employed can be divided into full- and part-time workers. In ELFS part-time workers are those employed persons whose overall working time per week was less than 35 hours. An exception is made for the occupations where a shortened working time is prescribed by the law. A sub-category for the employed is the underemployed. A person is underemployed if he or she works less than full-time and less than wanted, is seeking for additional work, and is currently available for it.

A person is considered unemployed, if he or she simultaneously fulfils the following conditions:

1) he or she is without work (does not work anywhere at the moment and is not temporarily absent from work);

2) he or she is currently (in the course of two weeks) available for work if there should be work;

3) he or she is actively seeking work.

Seeking work includes all steps actually taken in order to find work or start entrepreneurship, such as registration at employment exchanges, placing or answering newspaper advertisements, seeking assistance of friends and relatives, arranging for financial resources, etc.

Another term is the so-called hidden or disguised unemployment. There are two actual treatments of the term.

1) hidden unemployment comprises those unemployed persons who seek work without using the labour services - their seeking work is thus hidden from (state) institutions.

2) disguised unemployment comprises those unemployed persons who wish to work and are currently available for it, but who are not actively seeking work, mainly for the reason that they do not believe they could find any work. The loss of faith can be due to the absence of suitable work in the neighbourhood, age (too young or too old), etc. Thus, the carriers of disguised unemployment are mainly the so-called discouraged workers and underemployed persons.

The difference between these two treatments and the necessity to distinguish one from the other are founded on principles, since the former belong to the labour force as the unemployed, while the latter are excluded from the labour force as inactive. In both labour force surveys, the term disguised unemployment is used in the second sense described above.

In order to assess the economic activity of the population, **labour force participation rate** (activity rate) is used which is the share of the labour force (total number of the employed and unemployed) from the working age population.

■ Labour force participation rate (activity rate)	=	labour force / working age population

Employment rate is the share of the employed from the working age population, is used to describe and analyse changes in employment.

■ Employment rate	=	employed persons / working age population

Unemployment rate is the share of the unemployed from the labour force (total number of the employed and unemployed), is used for the assessment of the extent of unemployment and for analysing the changes in it

■ Unemployment rate	=	the unemployed / labour force

B2. Structural Changes in Employment by Industries

On the basis of industries changes in employment we can point out following groups of industries (Eamets et al, 1997):

(i) The first group includes agriculture, fishing and manufacturing, or, in other words industries which have faced the constant decrease of employment.

Employment in agriculture and fishing has constantly and progressively decreased during the entire period of observation. Both industries saw the greatest decrease in 1993 when employment compared to the preceding year decreased by 20.2% in agriculture, 20.8% in fishing and 13.2% in manufacturing. By 1997 absolute employment in agriculture compared to 1989 had decreased 64.7%, in fishing 72.8% and in manufacturing 33.2%[21]. Decline in agriculture was

caused mainly by collapse of former collective farm system. New farms were as a rule small and unproductive. Agriculture was not subsidised by government during the whole transition period. First subsidies (relatively low) were provided only at the end of 1998.

(ii) The second group involves industries in which a decrease of employment could be observed up to 1991-1992 but which in the following years faced an increase of employment. The group includes real estate and business activities, with some reservations public administration, education and other personal services. The above-mentioned change in employment can be explained by general changes in the whole economic situation. For instance, real estate and business activities lacked practically corresponding institutions before 1992. In the command economy the real estate market was practically missing, thus there was no need for corresponding institutions offering their services (real estate and various advisory companies). There were only certain state institutions like local housing authorities that bore a certain responsibility for that sphere of life.

In the case of business and real estate services the increase of employment was primarily due to economic reasons. In the conditions of market economy the above-mentioned areas saw a rapid growth since they were a lot more open to private entrepreneurship and required less financial assets. In case of public administration changes in the employment were due to political reasons. After Estonia had regained its independence several national structures needed for a politically independent state were to be founded. Estonia lacked its own army, border-guard and customs. Moreover, the police, detention establishments and rescue service were to be reformed. The completion of administrative reform required significant financial and human resources.

(iii) The third group includes industries that have witnessed a constant increase of employment. It includes financial intermediation and trade. The financial sector can be characterised by an intensive growth of employment. In 1989 financial sector made up only 0.5% of the employment structure. By 1997 it had increased to 1.2% dragging still behind as an industry of the lowest employment. By 1997 employment in financial sector compared to 1989 increased 92.3%. During the Soviet period financial intermediation was one of the most centralised industries. The banks did not function as profit-earning organisations but rather as institutions of redistribution of financial resources. The management and documentation within the bank was to be done in Russian. Centralisation and management in Russian were the underlying reasons which determined thorough staff changes in the banks which stemmed from the former Soviet banking system. The increase of employment in financial sector after 1993 was much due to the innovation of the staff, development of the network of branch offices and the development of other financial institutions.

Employment has also rapidly increased in trade. During over the whole observed period employment increased 46.8%. As a result of economic reforms the increase of trade has been most remarkable. Actually changes in the Estonian economy initially appeared in trade since after the collapse of the command economy in the late 1980s trade saw a vast wave of development. In the beginning trade developed by co-operatives which were the first free enterprise types in Estonia. As a result of the command economy there was shortage of most commodities but which, in its turn, favoured the rapid development of trade. Today Estonia has reached a properly working system of retail and wholesale businesses which can be characterised by specialisation accompanied by corresponding retail and wholesale chains.

21 Big "jump" in shares in 1995 was caused by comparability problems of two labour force surveys in 1995 and 1997.

B3. Ethnic Composition of Estonian Population

The ethnic minority problems in Estonia appeared after World War II as a consequence of the Soviet occupation and annexation. Before the war, the ethnic minorities living in Estonia included the nations, whose countries of origin were relatively close to Estonia in territorial and cultural terms (Germans, Swedes, Finns, Latvians) or representatives of ethnic groups with no homeland (Jews, Gypsies).

Table B3.1. Estonia - population by ethnic composition 1991-98 (%)

	1991	1993	1995	1997	1998	Change 91-98 (%)
Estonian	61.6	63.2	64.2	65.0	65.1	-2.1
Russian	30.4	29.4	28.7	28.2	28.1	-14.3
Ukrainian	3.1	2.8	2.6	2.6	2.5	-23.6
Belarussian	1.8	1.6	1.6	1.5	1.5	-22.0
Finnish	1.0	1.0	1.0	0.9	0.9	-18.3
Jewish	0.2	0.2	0.2	0.2	0.2	-39.5
Other	1.9	1.8	1.7	1.6	1.7	-19.9
TOTALS - %	100.0	100.0	100.0	100.0	100.0	-
TOTALS - Number	1.570.5	1.526.5	1.491.6	1.462.1	1.453.8	-7.4

Source: Statistical Office of Estonia

Data from the 1989 census reveals that today's new ethnic minorities come predominantly from among the Eastern Slavs (Russians, Ukrainians and Belarussians).

Table A23 includes a prediction of the Estonians' and foreigners' numbers and percentages combined with the demographic shifts in Estonia's population of the last 50 years. It was impossible to follow a balanced migration policy in Estonia during the occupation period. More than one million persons born outside Estonia immigrated in the years 1944-1989, approximately 241 000 in the years of the greatest immigration 1944-1950 and up to 95 000 from 1961 to 1970.

One of the most significant changes that took place in Estonia from 1945 to 1990 is that by 1989 there were twelve cities and towns in Estonia, including the capital Tallinn, where ethnic Estonians formed a relative minority. There were only two such towns in Estonia in 1934. The ethnic minorities in Estonia were located during the pre-war years of independence as historical minorities in their traditional locations in the towns near Lake Peipsi and at the eastern border; the Estonian Swedes mainly on the coast of north-western Estonia and on the islands. Germans and Jews lived in towns all over Estonia, while Latvians lived primarily in Southern Estonia - in rural areas and in small towns.

Table B3.2. Change of numbers and share of Estonians and non-Estonians in Estonia 1989-1995 and prediction for 2000 (thousands)

Year	Number of inhabitants	Number of Estonians	Share of Estonians (%)	Number of non-natives	Share of non-natives (%)
1934	1126.4	992.5	88.1	133.9	11.9
1945	854	831	97.3	23	2.7
1959	1196.8	892.6	74.6	304.1	25.4
1989	1565.7	963.3	61.5	602.4	38.5
1995	1491	956	64.1	535	35.9
2000	1445	954	66	491	34

Source: Estonian Human Development Report 1995

The Russian, Ukrainian and Belarussian inhabitants, whose massive immigration took place during the Soviet period, live in towns where they form an absolute majority, mainly in the capital Tallinn and the North-eastern Estonian industrial cities of Narva, Kohtla- Järve and Sillamäe. This migration has resulted in a linguistic and cultural Russification of the historically Estonian region of Ida-Virumaa over the course of one or two generations .

The share of Estonians in Estonia's population decreased steadily from 1950 to 1989. Only the regulation of immigration after the approval of the Law on Immigration in 1990 and several other factors, primarily the restoration of Estonia's independence in 1991 and the sharp decrease of illegal immigration to Estonia after the closure of the borders, have resulted in an approximately three percent increase of the share of ethnic Estonians of the population from 1989 to 1994. Approximately 80 500 persons have also left Estonia in these years, including approximately 5000 Jews, Germans, and Ingrian Finns to the West and at least 45500 persons to Russia, including 40000 ethnic Russians. The share of Estonians in Estonia's population may increase to 66 percent by the year 2000, provided the number of non- natives in Estonia will further decrease due to their emigration to both the West and the CIS.

The large share of new ethnic minorities and inhabitants of foreign origin in Estonia brings significant changes in Estonia's social structure. The non-natives prior to 1939 included numerous educated elite; the Germans and Swedes, for example, developed significant cultural activities via the bodies of their cultural autonomies. On the other hand the post-war arrivals were predominantly workers, mid-level engineers and members of the Soviet military.

There are numerous factors obstructing the cultural integration of Estonia's ethnic minorities:

- the large proportion of non-Estonians in society;
- their wide cultural area of origin;
- the weakness of intellectuals and the small size of the intellectual elite among the ethnic minorities.

One of largest challenges facing Estonia in its ethnic policy is the integration of these new ethnic minorities with their varied backgrounds and uneven adaptation to the Estonian cultural milieu into a united, functioning society.

B4. Legal Regulations of Estonian Labour Market

The following are the key acts regulating social protection of the unemployed (effective dates in brackets):

- Social Protection of the Unemployed Act (January 1, 1995)
- List of Documents to be Submitted for Registration as Unemployed (February 9, 1995);
- Procedure for Organising Employment Training and Grant and Payment of Stipends to Unemployed Persons; (February 9, 1995);
- Procedure for Granting Employment Subsidies to Unemployed Persons (February 9, 1995); Procedure for Granting Employment Subsidies to Employers (February 9, 1995);
- Procedure for Organising Community Placements (February 9, 1995);
- Procedure for Payment of Single Benefits to Unemployed Persons. (February 9, 1995).

Legislative acts concerning industrial relations in Estonia:

- Labour Contract Law.
- In 1993 there was adopted the Collective Agreement Law. Besides the ratified ILO C. 98 the Collective Agreement Law is the only legal act in Estonia which regulates collective bargaining.
- Trade Unions law is in force since 1989, establishing the definition and tasks of trade unions and prohibition on dissolving and prohibition on restricting their operations. Estonian laws do not regulate separately the operation of employers' organisations.
- Industrial Safety Law (Factory Act)
- In 1992 Estonia ratified the International Covenant on Economic, Social and Cultural Rights and the International Covenant and Protocol on Civil and Political Rights, and in 1996 ratified the European Convention on Human Rights. In 1993 Estonia ratified the ILO's basic conventions No 87 and 98 which specified the autonomous role of the social partners in industrial relations policy, as well as convention No 144 which deals with tripartite relations.
- The workers' representation in enterprises is touched upon in three laws: 1993 law on Working Contract, 1993 Law on Shop Stewards and 1992 labour Protection Law.
- The Labour Dispute Settlement Law (strike law) , adopted in 1993, was worked out by the Association of Estonian Trade Unions. The law establishes on collective industrial actions that a strike is a work stoppage which is performed on the initiative of employees, a union or association of employees in order to obtain concessions from an employer, employers' union or association in the lawful demands related to work.

Legal regulations of working environment

The Estonian Labour Inspection's 14 Regional Inspectorates inspect the enterprises' working environment, offer guidance and counselling for improving the health and safety conditions at workplace and observe how the relevant law is observed in practise. Based on the data of Labour Inspection the observance of following laws is analysed:

1. Labour Protection Act
2. Wages Act
3. Working and Rest Time Act
4. Employment Contracts Act

In 1998 the working conditions and the rules for product safety were controlled in 4775 enterprises (in 1997 - 3832). As a result 42169 improvement notices were issued (in 1997 - 40 392).

In 1998 the Labour Inspection also started the evaluation of the working environment by test method. The evaluation process was carried out in 2178 enterprises. According to the mentioned process following issues can be pointed out:

The work organisation of working environment

The condition of the working environment depends on the organisation of the work and attention devoted to it. Therefore the main attention in the inspection process was put to the action of employee in guaranteeing the safety and health at workplace. It became evident that

- in 1175 (54%) of the evaluated enterprises the health and safety norms were observed, in 626 (29%) enterprises some minor violations were discovered and 377 (17%) of the enterprises did not follow the rules;
- the rules for training and guidance for workers about safety and health at workplace were violated in 1442 (67%) enterprises;
- the work organisation of the working environment has improved in 1383 (64%) of the controlled enterprises, in 543 (25%) of the enterprises minor shortcomings existed and in 251 (11%) of the enterprises the work organisation was not acceptable.

Due to the wrong work organisation, defective work places and supervision 7 workers got killed and 60 seriously injured. The ignorance of the elementary safety rules due to defective training and guidance caused 13 occupational accidents, which ended with death and 172 serious health injuries.

Safety at work

In 615 (28%) of the inspected enterprises the workplaces were safe (mainly new or reconstructed buildings), in 532 (25%) no violations were discovered but recommendations were made for improving the safety of workers, in 674 (31%) some violations of the workplace safety rules were found and in 356 (16%) of the enterprises many workplaces did not meet the rules. The violation of the safety rules of work places and in the territories of the enterprises 6 workers got killed and 87 seriously injured.

Work relations

Based on the results of the inspection it becomes evident that in 1998 the Wages Act was violated most often - in 31% of the controlled enterprises. Main shortcomings have not changed compared to the previous years:

- no extras are paid for working in the evening, at night, in the red-letter days and overtime work;

- the delayed paying of the wages;
- lower wages than statutory minimum wage;

Working and Rest Time Act was observed by 56% of the employers and the situation was not acceptable among 10% of the employers. Main violations of this law are also the same as during the previous years:

- no calculations about working time, working time schedules do not often express the real situation;
- longer shifts than 12 hours without the permission of the work inspector;
- no fixed working regime.

The number of violations of Rest Time provisions has increased. In 47% of the enterprises no violations were discovered, in 23% some minor shortcomings were found and in 11% the situation is not acceptable. The main problem is that the workers do not receive their statutory annual holiday.

No violations of Employment Contracts Act were discovered in 53% of the enterprises, minor shortcomings became evident in 22% and the situation was unacceptable in 5% of the enterprises. Most typical violations of this law are:

- no written employment contract is concluded;
- the amendments of the employment contract are not fixed;
- the obligatory terms of the employment contract do not follow the law, especially the wage and working time;
- no legal base for concluding the employment contract for fixed term.

Main conclusions are following:

1. Compared to previous years the conditions of working environment have improved considerably although significant shortcomings still exist;
2. High safety and health standards require investments. The lack of capital is often a cause for violations of these norms, especially in agricultural enterprises;
3. The lack of relevant knowledge and very often the low quality of the legal aid often hinder the observance of statutory requirements.

B5. Estonian Education System

Basic education

According to the Law on Education, a child is obliged to attend school if he or she has turned seven by October 1 of the current year. The law requires compulsory education until he or she has graduated from basic school (grade 1-9) or until the age of 17. The basic level covers categories 1 and 2 in the ISCED-classification.

Upper secondary, general and vocational education

After basic school graduation a young person has the opportunity to decide whether to continue studies at a school offering upper-secondary general academic education (grades 10-12), or at vocational education institution to acquire secondary vocational education (ISCED 3) Students at the upper-secondary level of education (vocational or general) are typically between the ages of 15 and 19.

The school programs in upper-secondary education, both general and VET, should be based on national program. The national program for general education is completed, while the national programs in VET are under development. The school programs, which are designed according to the national programs, define the specifics.

Until 1998, there were two distinct programs in the VET system, established by the Law on Vocational Education Institutions (July 1995). The students could enter a VET institution after basic school or after upper secondary general school. Students entering after basic school could acquire secondary level qualification after 2 – 4 years of study (ISCED level 3 /3C) and post-secondary level qualification after 4 years of study (ISCED5 /3A). The 4-year post secondary level programs after basic schools were mostly in the art and music field. Upper secondary general school leavers could also enter the same programs, only complete quicker – secondary level qualification 1 – 2 years (ISCED 3 /4B) and post-secondary level programs 2.5 – 3 or more years (ISCED 5 /5B). In several fields, the students entering VET after the basic school had an opportunity to complete additional classes on upper secondary general education (ISCED3 /3A) and after passing the state exams on upper secondary general education they received state exam certificate as the graduates from upper secondary general education institutions and therefore become eligible for applying for universities and institutes of applied higher education.

After the new Law on Vocational Education Institutions was approved in July 1998, the situation has changed. The new law states that in Estonian VET system there are two levels of VET – vocational secondary education and vocational higher education. The admission to vocational secondary education level is based on basic education or upper secondary general education. The length of studies for basic school graduates is minimum 3 years (ISCED3 /3B). Upper secondary school graduates can complete this level in less time – 1 – 2 years (ISCED3 /4B). In some fields of secondary vocational education, the prerequisite for entry is only general upper secondary education. Only the students who have completed either vocational secondary education or general upper secondary education institution are eligible for applying for vocational higher education (ISCED 5 /5B). The graduates from vocational secondary education, who wish to continue their studies in a university (ISCED6 /5A) must pass the necessary state exams, similar to the upper secondary general education institution's graduates.

The national program for those who have graduated from the basic school, must provide for development of knowledge, skills, experiences and attitudes of students to perform independent skilled work, assuming general education background and ability to apply the knowledge and skills in both large and small enterprise situations after graduation. Its minimum length is 120 study weeks, of which the vocation-, specialty- or occupation-related subjects must account for minimum 50%.

The national program for those who have graduated from upper secondary general school, must provide for development of knowledge, skills experiences and attitudes of students to perform independent complicated skilled work, assuming upper secondary general education background and maturity in age, ability to understand technological processes and analysis after graduation. Its length is 40-100 study weeks, of which the vocation-, specialty- and occupation-related subjects must account for minimum 85%.

Higher education

Two innovations have been introduced into higher education. Firstly, four-year applied higher education institutions have been introduced at tertiary level, as an alternative to the academic stream of universities. Secondly, private educational institutions also now serve as an alternative to existing public schools.

Education policy

According the report "Work related education and continuing education options within the Republic of Estonia", the future development of a cohesive Estonian policy should reflect the following principles (Report 1998):

- maintaining and enhancing standards of general education as a basis for the development of higher skills and competencies;
- promoting the achievement of high skill levels, coupled with the development of an ethos of innovation and adaptability, and personal skills;
- providing due recognition for skills, knowledge or competencies received through different methods of delivery within the framework of a national qualification system;
- defining and improving the role of partners through better co-operation between providers (schools, institutions and teachers) and employers in the identification of the present and future skills and competencies that are required for economic growth and development. This action should build on the pilot initiative presently being implemented in the initial stages of developing a national qualification system;
- promoting life-long learning, continuing retraining and upgrading of skills and ensuring equality of opportunity for all, through access to quality education and training on a continuing basis.

U.S. Department of Education
Office of Educational Research and Improvement (OERI)
National Library of Education (NLE)
Educational Resources Information Center (ERIC)

NOTICE

Reproduction Basis

☑ This document is covered by a signed "Reproduction Release (Blanket)" form (on file within the ERIC system), encompassing all or classes of documents from its source organization and, therefore, does not require a "Specific Document" Release form.

☐ This document is Federally-funded, or carries its own permission to reproduce, or is otherwise in the public domain and, therefore, may be reproduced by ERIC without a signed Reproduction Release form (either "Specific Document" or "Blanket").