

## EMERGENCE OF UNEMPLOYMENT: EVIDENCE FROM ESTONIA 1989–1995

Allan Puur

*Estonian Interuniversity Population Research Centre*

**Abstract.** The paper examines the recent labour market developments which have occurred in Estonia during the period of economic transition, with specific focus on unemployment. Data for the analysis are drawn from the 1995 labour force survey, which applying the retrospective design, provided detailed work histories for 9,608 individuals. Separate consideration is given to the trends in registered unemployment and internationally comparable estimates, duration of unemployment and labour market flows, differentials among subpopulations, development of policy schemes and welfare implications. In addition to standard measures of unemployment, the paper provides complementary estimates of labour market slack, discouragement and visible underemployment. According to the data, Estonia seems to have passed the period of initial labour market adjustment and the emphasis is now gradually shifting to more developmental tasks.

The reforms started in the early 1990s have led to an extensive change of political, economic and social realities across Central and Eastern Europe. Regarding population, the transition period has been accompanied with dramatic decline in fertility and registered marriage; mortality experience appears less homogeneous, ranging from extensive decrease in life-expectancy to moderate progress. However, even more visible has been the change in the patterns of population's economic activity, related directly to the ongoing structural transformation. Among many features not known under central planning, labour markets of today's transition economies have witnessed the emergence and expansion of unemployment.

Although large-scale displacements in response to macro-economic adjustment were expected, the excess manpower in declining industries was assumed to be absorbed by the expanding service and private business sectors, moderating the unemployment. Since the major reason for the initial upsurge of unemployment had been the transitional recession, stabilisation of macro-economic indicators

might in principle have been assumed to at least alleviate the problem. In reality, however, joblessness in most Central European economies is high, despite continued recovery in output. In medium and longer term, unemployment has become increasingly structural, reflecting sectorial imbalances due to modifications in relative prices and exposure to world trade. The economic forces, which are fundamental to the transition process as a whole, make it necessary to further restructure the economy and shift labour from one sector to another.

From the population perspective, persistent unemployment brings substantial hardship on individuals and households involved. Given the extraordinary degree of job security provided by the former regime, not surprisingly its emergence has been associated with a considerable amount of social stress and adaptation pressure. The evidence from several countries has, moreover, indicated the disproportionate concentration of these pressures among specific subgroups of population. For that reason, monitoring, understanding and alleviating unemployment has become an issue of great importance for governments. Whether the reforms can proceed smoothly, are delayed or even fail, depends on how well each country copes with its unemployment problem. A large number of jobseekers with limited reintegration into work and more generally the spread of poverty might erode the social consensus gathered around the reforms.

Since the onset of reforms, considerable amount of research has been accumulated on the development and patterns of unemployment in transition economies. An earlier adaptation of data collection systems to the conditions of market economy and the larger stock of potential researchers, have resulted in most of this information being produced on Central European economies. To refer to just a few, country analyses are available for Bulgaria (Jones and Kato 1993), Czech and Slovak Republics (Ham et al. 1994), former GDR (Krueger and Pischke 1995), Poland (Lehmann 1993, Witkowski 1995), Slovenia (Vodopivec and Hribar-Milic 1993). As for the former Soviet republics, information has been more limited. The majority of analyses have tackled the developments in Russian Federation (Commander and Yemtsov 1994, Standing 1994); besides several smaller surveys undertaken in cooperation with international organisations, Russia was also among the first to introduce a nationwide labour force survey.

Regarding Estonia, the ways to address unemployment have been mostly limited to registration statistics provided by labour exchanges or small-scale surveys (Eamets 1994, Venesaar 1995, UNDP 1995, 1996). Leaving a large part of the phenomenon uncovered, the observed levels of registered unemployment have confused not only public opinion in the country but attracted attention by international agencies. Thus, presenting a more truthful account of the process is a requirement in itself. Additionally, documenting Estonia's unemployment experience can for several reasons contribute to some general questions faced by transition economies. Belonging to the former Soviet Union, the country's starting conditions were less favourable than in Central European economies. Due to the former close integration, the collapse of old markets has caused an even greater

shock, particularly as Baltic states stayed outside the CIS. Therefore, the scale of labour reallocation and displacement was expected to be larger and more protracted. On the other hand, Estonia has opted for rather radical free market policies, placing few obstacles in the way of international trade, foreign investment and private ownership. In addition, Estonia also opted for very low levels of unemployment benefits, pensions and minimum wages. The levels and trends of unemployment can serve as a testground of the performance of such liberal policies.

Based on the first round of national labour force survey, the present paper attempts to outline the development and features of unemployment in Estonia since the beginning of reforms. After introducing data sources, the paper provides an overview of relevant institutional framework, dynamics of registered and unregistered unemployment, duration and resolution of labour market spells, differential experience among sub-populations, welfare implications of joblessness and alternative forms of labour market slack. Mostly, the contribution of the paper lies with the presenting of analytical results from the newly-available survey, allowing for the first time the systematic application of internationally recommended definitions to a comprehensive nationally representative sample. Apart from registration data, it allows Estonia's labour market to be compared to the experience of other transition economies. Regarding policy implications, the analysis identifies potential risk-groups which would need greater support to (re)enter employment.

### **1. Data sources on unemployment**

Prior to reforms, Estonian labour force statistics was largely confined to the information derived from the reports of enterprises and organisations. Aggravated by an incomplete coverage, the data content of referred statistics was limited to the aggregate number of employees with no breakdown by socio-demographic characteristics. Comprehensive individual-level information on economic activity became available only once in ten years from population censuses, though only partially consistent with international definitions. To account for the dynamic processes introduced by transition and to place the national experience into comparative perspective, the development of basically new system of labour market information became a necessity. Similarly to many other countries, the system in Estonia draws unemployment statistics from two sources: administrative records and the labour force survey. To the list could be added the census, however, its infrequency makes it less useful for the monitoring of dynamic change.

Administrative records are kept by the National Labour Market Board and cover registered unemployment. Introduced in 1991, the procedure foresees the completion of a standardised form for each individual contacting the regional employment office. The form holds information on a person's individual and household characteristics, educational qualifications, previous work history, details of each consultation at the office, receipt of unemployment benefits,

participation in training schemes, public works etc. Although primarily meant to facilitate the job placement, computerised records are also used for the monitoring of labour market situation. With monthly periodicity the Labour Market Board compiles a set of statistical tabulations reflecting the number of registered unemployed and their characteristics, number of vacancies and the amount of provided labour market services. A selection of these tables is regularly published in the *Information Bulletin* of Labour Market Board and monthly issues of *Estonian Statistics*.

Being a by-product of administrative procedure, labour exchange data have the advantage of relatively low cost, promptness of reporting, and due to the coverage of events, the capacity to provide information on the smallest territorial units. Based on the continuous operation it could also offer a basis for flow statistics and other longitudinal data, but this potential has so far not been used in Estonia. To a certain extent, the same circumstances which provide the advantage imply the limitations of labour exchange data. By definition, these statistics lack the information about persons who are looking for jobs without contacting the public service. Additionally, the dependence of administrative records on nationally adopted legal arrangements make them ill-suited for cross-country comparisons. Considering these limitations, labour exchange statistics could be used as a supporting source to several purposes.

The main source of information on population's economic activity is formed by the labour force survey. Apart from administrative records and institutional statistics, the survey provides full and flexible coverage of labour market processes, including all forms of unemployment and underusage of labour (Hussmans et al. 1990). Not being constrained by legal arrangements, the survey estimates can be compared between different countries. Lagging behind the early Central European reformers, Estonia started its preparations for the labour force survey in autumn 1993. To prepare and implement the Estonian Labour Force Survey<sup>1</sup> (ELFS), the Working Group uniting researchers and experts from various government agencies was established in early 1994. At different stages of the project, immediate implementation functions were performed by Statistical Office and its regional bureaux, Estonian Interuniversity Population Research Centre, Ministry of Social Affairs, Ministry of Education and other institutions.

Since the very beginning, the programme of ELFS aimed at meeting the needs of both short-term economic indicators and more comprehensive labour market

---

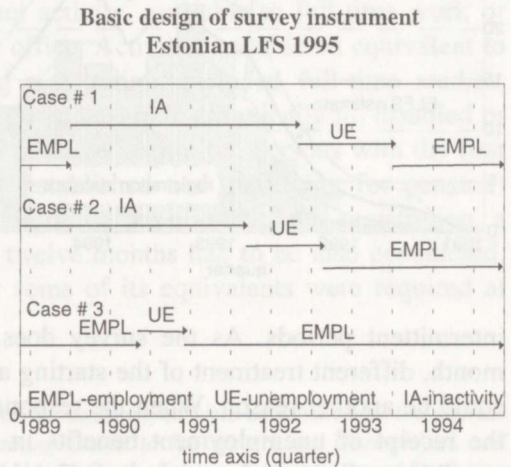
<sup>1</sup> The target population of the ELFS consisted of permanent residents of Estonia who were 15–74 years old in the beginning of 1995. A nationally representative sample was drawn from the 1989 census, national and local address registers were used to locate the respondents. After excluding the overcoverage of sampling frame, 10,955 cases were assigned to county statistical bureaux to be interviewed. Of those, ultimately 9,608 individuals (87.7 per cent) were interviewed. Nonresponse was attributable mostly to non-location (5.1 per cent), emigration (3.7 per cent) and refusals (1.9 per cent). On the whole, the distribution of respondents approximates closely the target population (Noorkõiv and Puur 1996).

information. The combination of these objectives was motivated by several reasons. Since the most recent comprehensive individual-level data on Estonian labour force dated back to the 1989 census and statistics drawn from establishment surveys and administrative records could reflect the processes only partially, an extensive information gap had emerged regarding the labour market developments during the transition period. An application of conventional LFS approach would have provided only a snapshot picture of interview situation, with no reference to its emergence. Under the existing budget constraints, the combined approach proved to be the only way to secure the information needs of research community.

To secure more comprehensive information, an extensive retrospective section was added to the ELFS questionnaire, methodologically building on the event history design (Tuma and Hannan 1984, Blossfeld et al. 1989). In the survey, each respondent's labour market experience was followed from January 1989 to the date of the interview in January-April 1995. Covering the mentioned timespan with monthly precision, separate information was collected on three basic labour market spells: employment, unemployment and out-of-labour-force (Figure 1). For each spell the starting and ending dates, mode of entry and exit as well as the basic characteristics were recorded. Regarding unemployment the latter covered the methods of job-search, continuity of job-search, contacts with labour exchange, (sub)periods of unemployment benefit receipt, participation in training schemes, public works and sources of income. To provide individual work histories with dynamic context, parallel event information was also collected on studies, changes in marital status, childbirth and geographic mobility. Indeed, the questionnaire included the traditional section on current activity, following closely the standard international recommendations.

Since the survey required recollecting all activities up to six years before the time of the interview, the interviewers were carefully trained to crosscheck the answers for the spells of employment, unemployment and inactivity. To ensure the quality, numerous controls were incorporated in the data entry facility, and each time inconsistencies were discovered, additional clarification was requested. Careful attitude at each stage of the survey resulted in high consistency of the data and extremely low levels of date-specific non-response. Post-collection checks give good reason to suspect that the information is reliable even though it has required the effort of

Figure 1



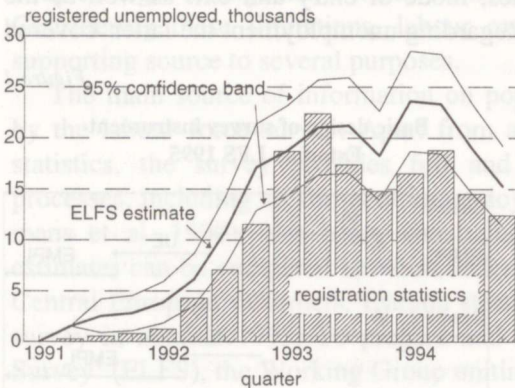
recalling events several years old. The use of 1989 census microdata for a sampling frame enabled to match the individual census records with survey answers provided in 1995. Recall data on economic activity corresponded quite well with responses provided at the census, and the majority of discrepancies are attributable to changes in labour force definitions (Noorkõiv and Puur 1996).

Regarding unemployment, earlier analyses have indicated the risk of under-recording in retrospective surveys (Elias 1991). To take this into consideration, similar verification was performed against labour exchange records. Though potentially feasible on the level of individual respondents, low responsiveness of National Labour Market limited the exercise to population aggregates. The shape of estimated and observed patterns appear similar and the data indicate neither omission nor underreporting of registered unemployment. Instead, with the exception of a few time points, the survey provides somewhat higher estimates of

joblessness than has been actually recorded (Figure 2). The comparison does not reveal systematic deterioration of the accuracy when moving further away from the date of interview, and with the exception of cross-over observed in early 1993, the difference between more recent and distant periods remains quite similar. Slight overreporting may be related to several reasons. First, in the survey people could have omitted the waiting periods which separate the application for unemployment benefits and their actual receipt or combined

Figure 2

**Accuracy of unemployment estimates  
Estonian LFS 1995**



intermittent periods. As the survey does not go beyond the precision of one month, different treatment of the starting and ending points of the receipt periods could be another reason. When the respondent had stated the beginning or end of the receipt of unemployment benefits in a specific calendar month, it was not possible to distinguish which part of the month was actually covered. Although the record-linkage on individual level would have provided conclusive answers to these questions, the difference fits quite closely into the calculated confidence interval, suggesting that retrospective data have replicated the observed development with reasonable accuracy.

Regarding the results of the survey, the Statistical Office has published a methodological report and a volume of standard tabulations (ESA 1997a, 1997b). However, the published tabulations focus almost exclusively on the interview period, limiting it to just a few selected averages for earlier years and leaving the

rich potential of retrospective data unused. To consider the development of Estonian labour market since the very beginning of transition in detail, the author has undertaken the reconstruction of quarterly and monthly time series of basic labour market indicators. The applied approach and building on it, the overview of the main labour market developments in Estonia have been published in a recent issue of the *Journal of Baltic Reviews* (Puur 1997). The present paper extends the analysis, focusing more specifically on the issues of unemployment.

## 2. Registered unemployment

As it is generally known, the levels and trends in registered unemployment are shaped by varying eligibility criteria, scope and efficiency of employment offices and the motivation of population to take advantage of provided services. Regardless of these limitations, the uneven availability of labour force surveys has often forced the analysts to rely on registration data (for example (Boeri and Keese 1992, Rutkowski 1995, UN ECE 1995)). Apart from being a proxy for the entire process, registered unemployment provides important information about prevailing labour market policies.

In Estonia, the registration has been guided by a series of Government decrees, first introduced in 1991<sup>2</sup>. According to these decrees, the status of registered unemployed could be applied to by persons who were in statutory working age, out of employment and other equivalent activity, available to full-time work or training and listed at local employment office. Activities considered equivalent to employment, and therefore preventing registration, included full-time studies, compulsory military service, registered guardianship to chronically ill, disabled or old persons and staying in a medical or punitive institution. Persons with the first or second degree disability (medically established and qualifying for pension) were also denied the registration. To determine the eligibility for registration, a person's activity during the preceding twelve months had to be also considered. To become registered, employment or some of its equivalents were required at

---

<sup>2</sup> The basic principles of the social protection of the unemployed were established by the decrees No. 2 *On the Allocation and Payment of Training Grants to Job-seekers and Unemployed, and Unemployment Benefits* (January 4, 1991) and No. 64 *On the Temporary Instruction of Declaring a Job-seeker Unemployed, the Allocation and Payment of Unemployment Benefits* (March 28, 1991). Some details of eligibility rules, waiting period and duration of payment were amended by decrees No. 178 (June 12, 1992) and No. 32 (February 4, 1993). Public works for job-seekers and unemployed were introduced by the decree No. 297 (October 13, 1992), soon replaced by more detailed instructions by decree No. 121 (April 26, 1993). Provision of training and retraining grants was specified by the joint decree by Ministries of Education and Social Affairs No. 2/8 (February 27/28, 1992). Labour market subsidies to support the risk groups and entrepreneurial initiative were established by the decree of Ministry of Social Affairs No. 11 (March 25, 1991). Government decree No. 354 (October 10, 1994) increased the level of training grants and minimum wage rates paid at public works. Implementation of the decrees was further specified by the instructions of Labour Market Board.

least during 180 days in the last twelve months. In this context, being a parent to a child up to age 14 was added to qualifying conditions.

The actual registration of the unemployed was performed in two steps. First, a person was registered at an employment office as a job-seeker, the office was meant to provide such person with available job offers and (re)training opportunities. The procedure required the job seeker to contact the office for information every fifteen days. In case it proved impossible, within 30 days, to provide a person either with a job matching his/her qualifications and health status or with the training to move to another specialty, the person became eligible for the official status of registered unemployed and the relevant benefit. Compared to the registration as a job-seeker, receiving the status of official unemployed required additionally the absence of any earnings or income during the last 30 days. The amount of unemployment benefits was initially set at 80 per cent of officially established minimum wage (but no less than physiological minimum of subsistence). To encourage the mobility of displaced workers, training grants were established at 50 per cent higher rate. The payment of unemployment benefits and training grants commenced within a week after acquiring the status, and assuming regular visits to the office, could be continued up to 180 days. After crossing this limit, the status of official unemployed and eligibility to benefits were lost. Still, a person could (re)register as a job-seeker and remain eligible to job placement, training courses and training grant.

The basic features of the scheme have remained unchanged since 1991. However, the development of the labour market situation and gained experience have resulted in several reformulations. In June 1992, the eligibility was restricted in two aspects. The scope of equivalent activities considered during the last 12 months was constrained by the exclusion of parenting the children aged 7–14. As for the newly graduates from educational establishments, the waiting time between the registration as job-seeker and the payment of unemployment benefits was extended to 90 days. Given the increasing worker displacement in 1991–1992, the amendment from February 1993 provided the local employment offices with the right to extend the duration of unemployment benefits above 180 days. Additional payment was limited to 90 days during the six month period and the payment had to be made in three parts for no more than 30 days at a time. To provide job-seekers and unemployed with some additional income, an organisation of public works was started from October 1992.

The 1995 *Law on Social Protection of the Unemployed*<sup>3</sup> further extended the eligibility by excluding disability and guardianship from the conditions denying

---

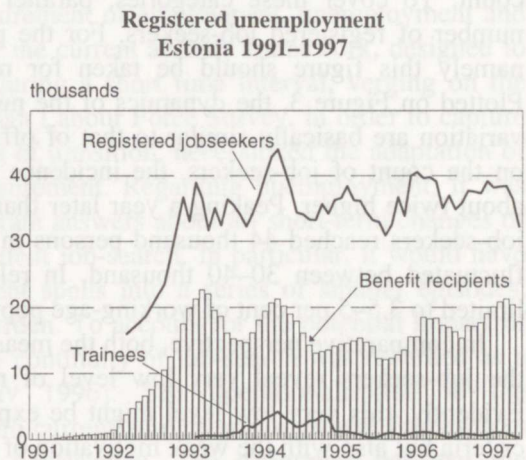
<sup>3</sup> The *Law on Social Protection of the Unemployed* was adopted by State Assembly on October 26, 1994 and enforced from January 1995. The implementation of the Law has been specified in a series of government (No. 62 from February 9, 1995) and ministerial decrees (No. 9 and 10 from February 10, 1995 by Ministry of Social Affairs) replacing the previous set. During 1996–1997, the legal provisions have remained unchanged.



the payment of unemployment benefits. The reduction of the general waiting period from thirty to ten days, additional provisions extending the duration of payment for persons in immediate pre-retirement age, parents to three or more underage children and women at the last trimester of pregnancy, moved in the same direction. Also, the 1995 Law extended the duration of payment for the periods of training and participation in public works. Apart from the duration of payment, the amount of unemployment benefits was not changed. Despite the legal link to minimum wage and the increase of the latter<sup>4</sup>, the amount of unemployment benefits remained at 180 kroons until 1992. The amount of training grants was increased to 450 kroons in October 1994. The 1995 Law released benefits from other socio-economic indicators and indexation, leaving the issue fully to government's decision. As a result, the ratio of benefits dropped from the initial 80 per cent to just 26 per cent of the minimum wage. Compared to the average wage, the deterioration has been even more dramatic and has left unemployment benefits in Estonia with merely symbolic value.

Described features of labour market policies largely explain the pattern of registered unemployment in Estonia. Following the introduction of legal provisions, the first unemployed were registered in May 1991. Successive months did not involve any dramatic change and by the end of the year local employment offices listed less than a thousand benefit recipients. Consistent with the timing of reforms and macro-economic stabilisation, the increase in registered unemployment accelerated in 1992. Continuing until April-May 1993, the number of benefit recipients peaked beyond 22 thousand. Contrary to some pessimistic expectations, the trend then reversed and the observed record has remained unbeaten until today. Subsequent dynamics of registered unemployment is influenced by recurrent seasonal fluctuations (Figure 3). Each year the maximum number of benefit recipients is reached in March-May, summer periods are marked by declines which are typically lowest during September-November and turn to new increase. The scale of these fluctuations is rather extensive, accounting for 40–50 per cent of the number. Although there has

Figure 3



<sup>4</sup> In October 1992 the minimum wage was increased to 300 kroons, in September 1994 to 450 kroons and in January 1996 to 680 kroons.

been no specific study on the factors underlying the seasonality pattern in Estonia, it could be associated with the propensity of some part of unemployed to quit job search during summer, extended waiting periods for school-leavers and the increase in the availability of temporary jobs.

Disregarding the seasonal variation, the number of benefit recipients demonstrates slight curvilinearity over the recent years. After the referred peak in spring 1993, the following two years were marked by a decline in registered unemployment. The number of beneficiaries reached the lowest point in 1995 when the maximum did not exceed 17 thousand. Unlike several East European countries which had started from relatively generous provisions, and in view of the rising displacement were forced to revise their schemes, the observed decline in Estonia should not be attributed to the restrictions of eligibility. Instead, as mentioned above, the decline coincides with the extension of maximum payment duration by 50 per cent. The period from 1995 onwards has again witnessed a slightly increasing trend, and in April–May 1997, the number of benefit recipients approached the level observed in early 1993. This increase may be partly related to additional provisions extending the period of eligibility; for example, in October 1996 almost one third of recipients got their benefits under extended duration.

Although precisely documented, not too great expectations should be placed on registered unemployment as the characterisation of the entire workers' displacement process. Specifically, the legal definition which provides a basis to registration data, restricts the unemployed exclusively to benefit recipients. Persons who had contacted the employment office but did not qualify for the benefit or whose duration of payment had expired, have not been included in the count. To cover these categories, parallel statistics has been reported on the number of registered job-seekers. For the purpose of international comparisons namely this figure should be taken for registered unemployment in Estonia. Plotted on Figure 3, the dynamics of the number of job-seekers and its seasonal variation are basically similar to that of official unemployment. However, based on the count of job-seekers, the incidence of registered unemployment appears about twice higher. Peaking a year later than the official measure, the number of job-seekers reached 44 thousand persons in April 1994, since then the level has fluctuated between 30–40 thousand. In relative terms, the incidence has been limited to 3.5–5 per cent of working-age population.

In comparative perspective, both the measure referring to benefit recipients and the job-seekers reveal very low level of registered unemployment in Estonia. Evidently, this very low level might be explained not only with strict eligibility criteria but also with the weak motivation of population. Besides the poor replacement capacity of benefits, employment offices have proved rather inefficient in job placement. Firms rely on other recruitment strategies and therefore vacancies are only seldom reported. The monthly number of job placements has fluctuated between 1–1.5 thousand, and as a result, the jobs could be offered to just between

2–5 per cent of all currently registered job-seekers. Despite the stabilisation of labour market situation and moderate economic growth in recent years, chances of getting jobs through employment offices have shown no signs of improvement. An additional reason for non-registration was the restricting of the scope of services offered to non-recipients. Taken together, these features have made registered unemployment a particularly poor guide to labour market developments in Estonia.

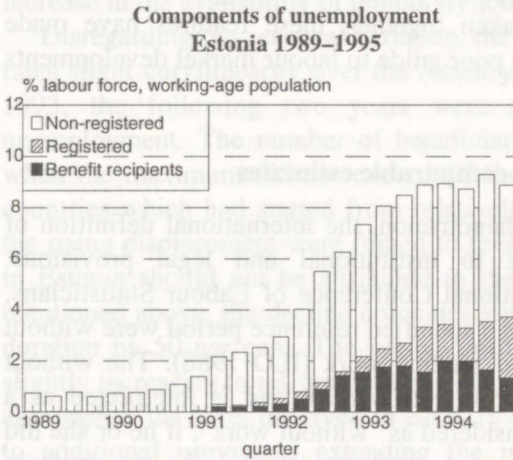
### **3. Internationally comparable estimates**

To explain the true extent of the phenomenon, the international definition of unemployment avoids any reference to institutional and legal provisions. According to the resolution of International Conference of Labour Statisticians, the unemployed are persons who during a specified reference period were without work, currently available for work and seeking work (ILO 1988). The without work criterion draws the distinction from employment and is interpreted as a total lack of work: a person is to be considered as “without work”, if he or she did not work at all (not even for one hour) nor was temporarily absent from employment. Seeking work is defined as having taken some specific steps (of which contacting public employment service is one possibility) to find a job, independent of the duration and type of employment sought. Availability for work means that, given an opportunity, a person should be able and ready to take up employment. The seeking and availability criteria provide objective grounds to make a difference from economically inactive population. From the application point of view, the international definition is, in fact, best suited for labour force surveys.

In labour force surveys, the measurement of employment, unemployment and economic inactivity follows typically the current activity framework, designed to reveal the status of the population during a short time interval, verging on the interview moment. The aim of Estonian Labour Force Survey, in order to capture the developments since the beginning of transition, necessitated the adaptation of the framework to retrospective measurement. Regarding unemployment, it was considered unrealistic to expect accurate answers about all short-term changes of the labour force status under intermittent job-search. In particular, it would have required splitting many unemployment spells into a series of smaller episodes, implying unacceptable respondent burden. To account for the potential impact of this modification, information on the continuity of job-search was recorded as a separate item (Puur and Noorkõiv 1996). The operationalisation in the questionnaire of both retrospective and current activity measurement frameworks allows for the evaluation of their consistency. The difference between the distribution of respondents at the end of the retrospective period and reference

week which refer to the same timepoint reveals relatively good consistency of ELFS dual unemployment estimates<sup>5</sup>.

Figure 4



1991, i.e. only slightly later than in advanced reformers of Central Europe. From the timing perspective it is interesting to note an about 1–1.5 years' timelag between the beginning of job reductions and the upsurge of unemployment. In 1989–1990, paralleling with the fast accumulation of economic difficulties and decline in outputs, the net loss accounted for about 5 per cent (ca 40 thousand) jobs (Puur 1997). The first adjustments evidently concerned groups which were less closely attached to the workforce and therefore likely to leave the market without any attempt to return. As the reforms progressed, the adjustment capacity became exhausted, opening a way to the expansion of unemployment.

A major increase in the level of joblessness occurred in Estonia within a short period between early 1992 and mid-1993. In these months, unemployment rate in working age population more than tripled. In absolute terms, the number of unemployed grew from ca 20 to over 60 thousand over the same period. Until

Turning to the dynamics of unemployment, the reconstructed time series reveal that a small amount of joblessness has existed even prior to reforms (Figure 4). Considering the definition, this result is not surprising since people have exited and entered employment, implying intermediate episodes of job-search, regardless of economic system. Under prevailing labour shortage, however, these episodes were quickly resolved which prevented the expansion of the phenomenon. The transitional increase in unemployment began in Estonia during early

<sup>5</sup> 71 respondents (0.7 per cent) who were classified as jobless at the end of retrospective section, appeared non-active in the reference week. For these persons, the most common reasons for inactivity were illness, the need to take care of one's family members and discouragement. As a substantial part of the referred excess inactivity had temporary nature, the difference would have been definitely smaller if a reference period longer than one week would have been applied to seeking work criterion. Misclassification due to the inavailability to employment was lower than any of the above-mentioned reasons, suggesting the harmlessness of the omission of availability criterion in retrospective measurement. Misclassification in opposite direction was rare with only a few currently unemployed respondents categorised as inactive in retrospective section; mostly these were discouraged workers who had resumed job-search lately. Due to irregular second jobs, 11 retrospectively unemployed respondents (0.1 per cent) were classified as employed during reference week.

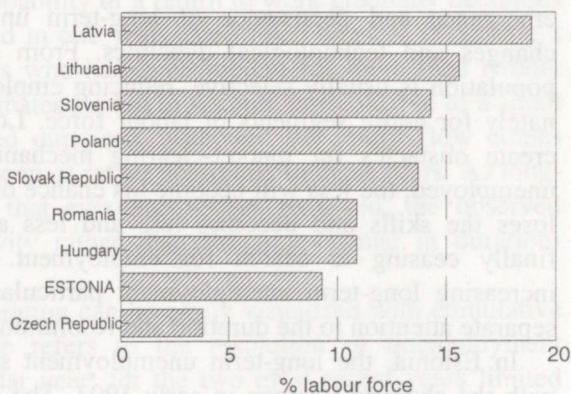
early 1993, the expansion of joblessness was paralleled by the increase of inactivity. By that time, the reforms had evidently sifted out most of the less tightly attached segments of economically active population, and further employment reductions concerned exclusively the groups which could not afford dropping out of the labour market. The relatively quick response of labour market to macro-economic adjustment can be explained by the stance of Estonian economic policies which *inter alia* did not attempt to postpone the bankruptcies and layoffs; the process was further facilitated by the transfer of enterprise-provided social services and infrastructure (housing, child and health care etc) to local governments. These factors gave workers little incentive to stay long at failing state or quasi-state enterprises.

In 1994 the increase of unemployment levelled off, showing a clear tendency towards stabilisation. Unemployment rate referring to working-age population peaked in the third quarter of 1994 at 9.3 per cent which in absolute terms translates into slightly more than 70 thousand persons. The trend towards stabilisation is similarly characteristic of the volume of employment which practically discontinued reduction by 1995. Evidently, the stabilisation pattern draws on the macro-economic development – after peaking at 14.2 per cent in 1992, the fall in Estonia's GDP has gradually diminished, and in 1995 the statistics showed, for the first time, a moderate 3 per cent recovery (Ministry of Economics 1996). Persistent economic growth in 1996–1997 together with the relative stability of registered joblessness gives reason to assume that during the two most recent years, the level of unemployment has not exceeded its previously achieved level.

Although a poor consolation for those who have lost their jobs, in the context of Central European transition economies, Estonia's unemployment record could be regarded as moderate. Within comparable timespan, for example, only Czech Republic has reported (much) lower levels of joblessness. Similar or somewhat higher levels have been reported by Hungary and Romania, considerably higher unemployment rates can be found in Bulgaria, Poland, Slovakia and Slovenia. Evidence from Latvian and Lithuanian LFS conducted in 1995–1996 have also documented higher joblessness (Figure 5). Estonia's moderate unemployment record is worth stressing in view of the country's relatively disadvantaged starting position and almost exclusive isolation from economic cooperation

Figure 5

Comparable estimates of unemployment rate  
Selected transition economies around 1995



beyond the former Soviet Union. The progress has been achieved mostly due to rapid development of alternative employment opportunities and successful re-deployment of manpower from shrinking to expanding sectors. Measured, for example, by the net sectorial shift only Hungary has experienced greater reallocations of labour since the late 1980s (Puur 1997).

As a structural feature, consideration of internationally comparable estimates of unemployment inevitably draws attention to large differences between the levels of total and registered unemployment in Estonia. Although the introduction of unemployment insurance scheme was relatively contingent in Estonia, the registered joblessness has been limited to about half of total unemployment, and the official unemployment defined through benefit receipt has accounted to just about one fourth of the phenomenon. Consistent with the above-discussed, ELFS reveals that the main reason for unpopularity of public employment services in Estonia is not the restrictive eligibility rules or low level of benefits, but mostly the low competitiveness compared to other job-search methods. In this context, registration at employment office is regarded as a backup for situations where other methods of employment search are either not available or have not produced desired results. Due to an uneven reliance on alternative job search methods, the ratio between registered and non-registered unemployment displays substantial variation across subpopulations. Therefore, limiting the attention to registered unemployed or even benefit recipients could provide inaccurate picture about not only the level of unemployment but also to the composition and characteristics of risk groups.

#### **4. Duration of unemployment**

The severity of unemployment depends to a large extent on the duration of time-span under which failures in job-search efforts are experienced. For the individuals concerned, short-term breaks between jobs are more easily acceptable, particularly in case of an unexpected displacement. Long-term unemployment, usually considered as unemployment lasting over one year, involves on the other hand much greater social and economic strain. From economic perspective, the emergence and persistence of long-term unemployment relates to structural changes and technological dynamics. From social perspective, its impact on population is usually selective, reducing employment opportunities disproportionately for entire segments of labour force. Long-term joblessness also tends to create obstacles for market-clearing mechanisms. The longer a person stays unemployed, the less will become his chance of finding a job: he or she gradually loses the skills and becomes less and less attractive for potential employers, finally ceasing to search for employment. These features make high and increasing long-term unemployment particularly difficult to remedy, requiring separate attention to the duration and resolution of unemployment spells.

In Estonia, the long-term unemployment started to accumulate during 1992 with the sharpest upsurge in early 1993. The time lag with the increase of total

unemployment resulted, of course, from the timespan required for new entrants to pass the threshold of long-term joblessness. Time series reconstructed from ELFS indicate that the increase persisted until late 1994 (Figure 6). By that time, the level of long-term unemployment had reached 3.9 per cent which in absolute terms is equivalent to 30 thousand persons. In 1995 the long-term unemployed formed more than 40 per cent of the total jobless, which notably exceeds the proportion of official unemployment.

Moreover, as the scheme restricts the duration of eligibility periods to six months (with the possibility of extension for additional three months), only a smaller part of long-term unemployed can be found among benefit recipients. Denying the access to persons who had lost their eligibility to benefits from free labour market training, the 1995 revision of the scheme even reduced the public support to these hard-core unemployed. Having lost the eligibility, considerable number of such persons have become unregistered.

The longitudinal feature of ELFS provides, apart from cross-sectional design, an immediate insight into the progression of individuals through labour market states. Regarding unemployment, it becomes possible to monitor the speed at which jobless persons find their way back to employment, or alternatively, quit job-search and become economically inactive. Compiling the information from over two thousand spells observed in the survey between 1989-1995, the data reveal a clearly non-linear duration-dependence of unemployment exits. The probability of finding an employment stands at highest during the first three-four months period when close to one third of the entrants leave unemployment. Reaching higher durations, the probability of a return to work gradually decreases with the monthly rate being halved in one year. The lowest chances of getting a job were observed among persons who had been jobless for more than twenty months, beyond that point the estimates started to become unstable due to a small number of cases at such extended durations. Although the return flow comes nowhere to full halt, its volume becomes rather negligible in three years. As long-term unemployment is the state that everyone wishes to avoid, the observed pattern evidently reflects selectivity rather than the true change in duration-specific exit probabilities.

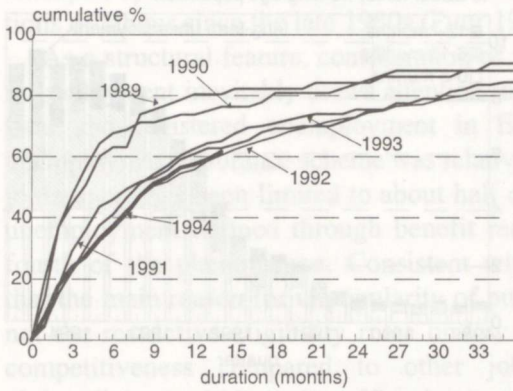
The trend in unemployment duration can be easily visualised with cumulative profiles of outflow. Each profile refers to the resolution of unemployment episodes started at specific calendar year; for the two most recent years limited

Figure 6



Figure 7

**Outflow from unemployment  
Estonia 1989–1995**



observation period prevents us from the presentation of full curve (Figure 7). More clearly than suggested by the dynamics of cross-sectional estimates, the major distinction lies between 1989–1990 and the following years. Characteristic feature of the first two years was the remarkably rapid return to employment: assuming the positive resolution of all spells, the median duration required to take up a job was below 5 months in 1989. In 1991 the pattern changed and during subsequent years the median has fluctuated between 8–9 months. Compared to early years of transition, the shape of profiles has shifted towards linearity. Regarding the distinction between short- and long-term joblessness, more than four fifths of unemployed had managed to find employment within a year in 1989; by 1992 this proportion had dropped to 56 per cent. Building on the experience of 1992 unemployment cohort which has been observed in sufficient length, roughly 80 per cent of unemployed have managed to return to employment in three years, slightly less than 10 per cent had given up job-search and 10 per cent continue to count as unemployed. Similarity of profiles for 1992–1994 suggests the stability of this pattern over recent years.

Similarly to the estimates of total unemployment, the level of long-term unemployment in Estonia has been moderate among the countries of Central Europe. Comparable to that in Hungary and Poland, Estonian level is lower than in Bulgaria, Romania, Slovakia and Slovenia (UN ECE 1995). Latvian and Lithuanian LFS from 1995–1996 have also indicated higher levels. According to the same data, only the Czech Republic has been characterised by lower levels of long-term joblessness. Regarding labour market policies, the persistence of long-term unemployment emphasises the necessity of labour market training not only at the entry level, but through the entire working life-span of individuals.

### 5. Characteristics of the unemployed

Regarded from population perspective, unemployment has been a concern in society to a varying extent. Research on Central Europe has demonstrated the concentration of unemployment risks among specific subgroups which have been hit harder by economic restructuring and/or less successful in adapting to modified conditions. At the same time, some other groups have managed to avoid excessive risks and take better advantage of emerging opportunities. Across



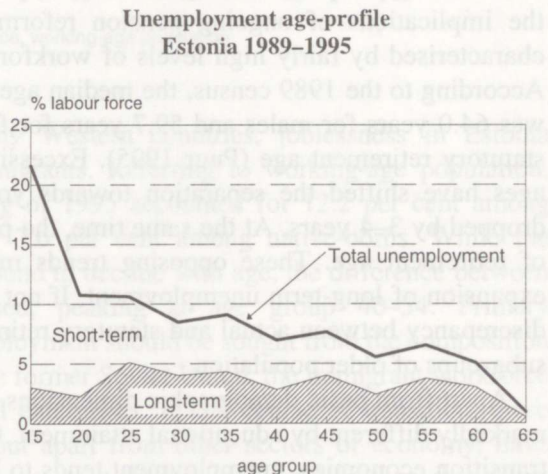
countries, these groups have not necessarily been the same, and therefore the pattern of unemployment differentiation offers an additional insight into the development and functioning of transitional labour market. In terms of policies, this information has been traditionally used for the identification of groups which require greater support from society.

Starting from the basic demographic dimension, in transition economies the higher risk of unemployment has been usually associated with women. In Estonia, neither short- nor long-term joblessness indicate disproportionate hardship among females. The quarterly time series of gender-specific unemployment rate display considerable degree of similarity, reflected in repeated cross-overs of profiles. By the end of the observation period, unemployment has reached even higher level among males. Evidently, women have been favoured by rapid sectorial shift and excessive job creation in tertiary branches as well as the domination of female occupations in less turbulent budget sector. Another factor could have been the fertility decline. It must be noted here that the described pattern revealed by labour force survey appears markedly different from official unemployment. Due to simpler eligibility to regular benefits (raising a child under age seven is considered equivalent to employment under qualifying conditions), the number of benefit recipients is dominated by females. Besides Estonia, lower female unemployment is characteristic of Hungary and Slovenia (UN ECE 1995).

Age-pattern of unemployment displays a typical peak in the youngest age group. In early 1995, reported unemployment rate among 15-19 year olds exceeded 20 per cent which is more than twice above the level of general population (Figure 8). To some extent, this figure may provide an exaggerated impression since only less than a third of this age group has become economically active. High youth unemployment is fully understandable and stems from school-to-work transition which inherently assumes job-

search. For that reason, unemployment at the lower end of age-spectrum can be expected to persist even under the most favourable economic conditions. Potentially stressful on individual level as any major life transition, youth unemployment will develop into a labour market problem when limited opportunities fail to provide the entrants with reasonable waiting time. Such situations may occur due to inadequate training and skills among young people,

Figure 8



demographic pressure created by numerous birth cohorts and other factors. Downturns in economy compound the problem as young people lack seniority and are therefore more exposed to dismissal. Decomposition by duration reveals major concerns about youth unemployment largely unfounded in Estonia since its high level has been almost exclusively generated by short-term joblessness, with youth rate of long-term unemployment more than twice lower than in general population.

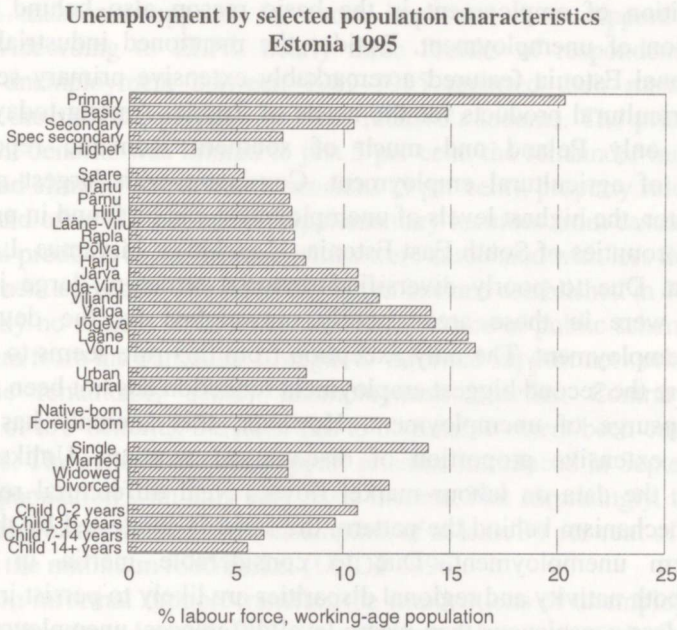
Regarding prime age groups, the unemployment experience appears mixed. On the one hand, the general level of joblessness declines when moving to more mature ages. The absence of a second peak at the upper end of age spectrum could be explained primarily by the direction of employment exits. Poor chances in getting new jobs and entitlement to retirement pensions have made dismissed older workers more likely to drop out of the labour force. On the other hand, however, there is a clear indication of growing severity of unemployment in older age groups. Poorer perspectives of older workers become evident from the proportion of long-term unemployed, and more strikingly, from the duration and resolution of joblessness spells. For example, in the age group of 55–64, only half the unemployed succeed in returning to employment, from the remainder nearly 50 per cent quit job-search without finding a job. The severity of unemployment among older workers is also revealed by their higher propensity to register at employment offices.

From the perspective of older workers, particular attention should be paid to the implications of ongoing pension reform. Prior to transition, Estonia was characterised by fairly high levels of workforce participation among the elderly. According to the 1989 census, the median age at separation from the labour force was 64.0 years for males and 59.7 years for females, exceeding significantly the statutory retirement age (Puur 1995). Excessive employment reductions at older ages have shifted the separation towards younger ages, by early 1995 it had dropped by 3–4 years. At the same time, the pension reform foresees the increase of retirement age. These opposing trends may well create a potential for the expansion of long-term unemployment. If not a concern on the general level, the discrepancy between actual and statutory retirement might become a problem for subgroups of older population.

Apart from basic demographic dimensions, unemployment experience appears markedly different by educational attainment. Consistent with findings from other transition economies, unemployment tends to be associated with lesser schooling and lower skills in Estonia. Referring to working age population, unemployment rate among persons with higher education was just about 3 per cent in early 1995. Each step towards lower attainment increased unemployment which among primary education population approached the level of 20 per cent (Figure 9). Data on labour market flows reveal that the difference is caused by the better educated individuals losing their jobs less easily, and more importantly, their better chance in finding a new one. Among the university educated, for example, half of the

newly unemployed managed to return to work in six months, for primary education population it took almost 14 months. With somewhat lesser sharpness, similar pattern is repeated in occupational differences.

Figure 9



Sharing the experience of many Western countries, joblessness in Estonia appears more common among immigrants. Referring to working-age population, unemployment rate at the beginning of 1995 accounted for 12.2 per cent among immigrants while it averaged only 7.6 per cent among native-borns. While the unemployment rate was generally found to decline with age, the difference between native- and foreign-borns increased, peaking at age group 40-54. Primary explanation for this excessive unemployment should be sought from the composition of employment. Originating from the former Soviet Union, the immigrant workforce was concentrated in large industrial enterprises. In the course of transition, these enterprises lost their old markets, but apart from other sectors of economy, have proven less successful in finding replacement. Examination of labour market flows shows that the excessive unemployment among immigrants stems exclusively from their higher risk in becoming unemployed. Return to employment appears only slightly slower than among native population, and at longer durations, the cumulative proportion of re-entrants becomes equal between two sub-populations; identical severity is also suggested by the similar ratio between registered and non-registered unemployment. Concerning Estonia as a whole, the main problem related to immigrant unemployment does not stem so much from the level but from the

sheer number. Due to unusually high proportion in total population, immigrants push up Estonia's general unemployment record and place additional burden on adjustment policies. Moreover, transition's selective impact on specific economic sectors can be easily interpreted as a conscious limitation of opportunities and used in political argument.

Composition of employment is the basic reason also behind the regional differentiation of unemployment. Besides the mentioned industrial enterprises, pre-transitional Estonia featured a remarkably extensive primary sector, specialised on agricultural products for the needs of Russia. Among today's transition economies, only Poland and much of southern Romania reported higher proportions of agricultural employment. Consistent with largest reductions in primary sector, the highest levels of unemployment can be found in predominantly agricultural counties of South-East Estonia, Jõgevamaa, Järvamaa, Läänemaa and Viljandimaa. Due to poorly diversified sectorial structure, large job losses in agriculture were in these areas poorly outweighed by the development of alternative employment. The only exception from this rule seems to be the Põlva county where the second biggest employment reduction has not been accompanied with the upsurge of unemployment. However, this anomaly has to do with remarkably extensive proportion of discouraged workers. Unlike in case of immigrants, the data on labour market flows reveal differential return chances being the mechanism behind the pattern, the same is suggested by the proportion of long-term unemployment. Due to considerable inertia in employment structures, both nativity and regional disparities are likely to persist in future.

Perhaps less conspicuous than macro-level differences, unemployment variation can be found also across family characteristics. Regarding civil status, the highest joblessness is characteristic of the never-married and divorced, the lowest respectively among married persons. Leaving aside the plausible mechanisms behind these differences, unemployment tends to cumulate among persons with less tight family ties, considered one of the most important sources of support in case of hardship. Differentiation of joblessness across civil status appears much greater among males, implying more extensive cumulation of risk factors among them.

## 6. Welfare implications of unemployment

High levels of unemployment represent a waste of human resources. From economic perspective, becoming unemployed typically implies a decline in personal income and an increased risk of impoverishment. On a wider scale, however, the adverse impact of displacement is not limited to the deterioration of living standards. Considering the novelty of the phenomenon in the beginning of transition, unemployment forced individuals to face situations for which old coping behaviours appeared useless and new survival strategies were not yet discovered. This could result in growing anxiety and stress which has been increasingly recognised as a potential health risk, contributing to sudden deaths due to cardiovascular diseases (for example Cornia 1996). From the variety of

consequences, the following discussion is limited to economic implications of unemployment as more easily quantifiable.

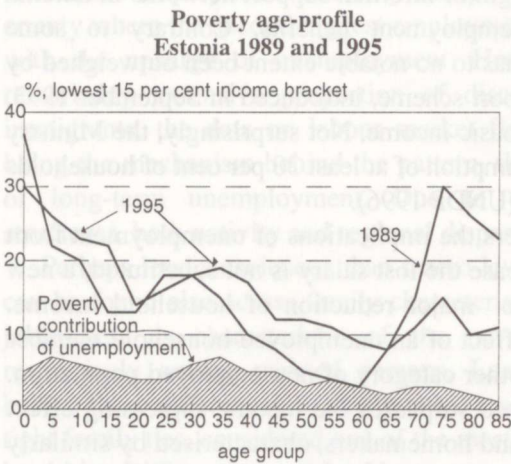
For the population concerned, the ability to cope with economic strain depends on the one hand on the development of income maintenance schemes, and the availability of help from family members and kin on the other hand. In Estonia, the informal assistance appears far more important than support by official institutions. According to ELFS, nearly three fourths of respondents who had experienced unemployment between 1989-1995 reported their main source of livelihood as the spousal, parental or other relative's income. The primary role of unemployment benefits was limited to just 5 per cent, the remainder included child allowances and alimony (6 per cent), pensions (5 per cent), property sales and loans (4 per cent) and other (10 per cent). Supplementary incomes from casual jobs, sales of agricultural products or business activities were associated with less than one fifth of unemployment episodes. The referred pattern became established in 1991 and has shown virtually no change since that. Limited relevance of public scheme does not, of course, stem from the particular strength of informal support networks in Estonia but from the remarkably scanty unemployment benefits. Contrary to some justifications of low benefits, the latter has to no notable extent been outweighed by other schemes. The general income support scheme, introduced in September 1993, provides the population with only very basic income. Not surprisingly, the Ministry of Social Affairs has estimated the consumption of at least 30 per cent of households falling below the minimum food basket (UNDP 1996).

Reliance on informal support transfers the implications of unemployment from an individual directly to household. In case the lost salary is not substituted, a new unemployed person inevitably leads to major reduction of household income. Evidence from ELFS reveals that the effect of an unemployed household member exceeds the impact introduced by any other category of non-employed population. Notably, the presence of the unemployed surpasses the income-suppressing effect of students, women at maternity leave and homemakers, characterised by similarly marginal income level. From the perspective of economic status, the implications of unemployment are not limited to a numerical decline in incomes, but involve considerable risk of dropping into the lowest income bracket. Taking the lowest 15th percentile for a proxy of poverty, the proportion of poor in general population was limited to 12 per cent (with the exclusion of the unemployed); among the households with at least one unemployed member, their share accounted for 42 per cent. Though less sharply, the disadvantaged position of unemployed's households can be followed in the amount of accumulated wealth. Differentiation in this relatively invariable element of economic status endorses, apart from the implications of joblessness, the pre-selection into unemployment.

The modesty of public income maintenance in Estonia emphasises the decisive importance of household factors for the severity of unemployment. Under these circumstances, the economic implications of job losses are largely pre-determined by household composition. Though the families are able to cushion the adverse

consequences in the majority of cases, their coverage cannot be regarded universal. In case the ability of the household proves inadequate, a person's living standard is likely to drop to very low levels. Judging by the age-profiles of economic indicators, unemployment-related poverty displays a clear concentration among households with young children. Increasing the already poor dependency ratios, the job loss of a principal or secondary income-earner extends the poverty risk close to 60 per cent. The effect is particularly severe when there is no alternative source of earned income. In early 1995, the average per capita income in households with dependent children and no wage-earners accounted to just less than 300 kroons, with the poverty risk ranging between 70–90 per cent. Examination of subjective experience adds the household composition with the duration of unemployment as the second moderator of individual welfare outcomes. Besides stretching one's financial resources, long spells of joblessness are likely to increase one's frustration from failed job search attempts.

Figure 10



On more general level, unemployment has made a central contribution to the modification of Estonia's poverty profile during transition. Comparison with the 1989 situation reveals that the poverty increase has been concentrated in ages 30–64, and due to family links, mirrored among children. The pattern matches well the poverty-generating effect of joblessness, without the latter most of the observed poverty increase would have never occurred (Figure 10). Only beyond age 50, unemployment's contribution is accompanied by earlier retirement

and more frequent separation from the labour force due to health reasons. Surprisingly to common perception of the elderly as primary losers in transition, the poverty level beyond age 65 has been reduced since 1989. In our opinion, this can be explained by the abolition of unindexed Soviet pension system, which placed the older recipients into increasingly disadvantaged position. Further, the referred poverty increase could be related to the growth in income inequality, between 1989–1995 the ratio of incomes in the lowest and highest deciles increased from five to twelve times in Estonia. Consistent with the modesty of welfare benefits, the income inequality in the country seems to be one of the highest among transition economies (UNICEF 1995).

On population level, the emergence of unemployment has, together with the decline in labour force participation, brought along considerable modification of economic dependency, and through it, the society's capacity to finance different social needs. Prior to transition the commitment to full employment and remarkably high levels of

workforce attachment among women and elderly helped Estonia to maintain particularly favourable dependency ratios. The number of employed persistently outnumbered economically inactive population, for example between 1970-1989, the total dependency ratio stayed around 80 dependents per hundred employed. The transition made an end to this stability, and in a few years the relative number of dependents reached 120 (Figure 11). As the change in demographic dependency ratio was limited to just a few per cent over the same period, the observed

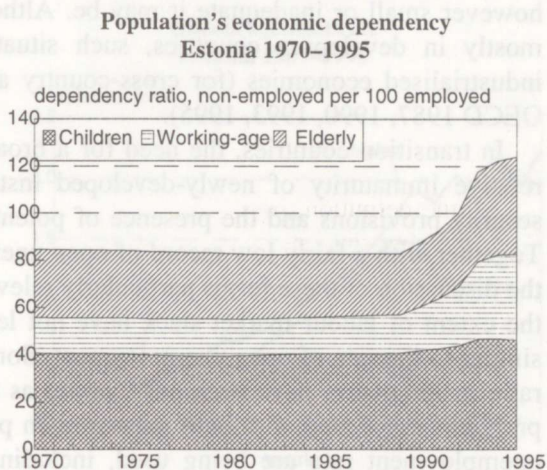
upsurge in dependency results entirely from the patterns of employment and unemployment. The somewhat astonishing scope of the deterioration can be explained by arithmetic mechanism: reducing the denominator, each employment dropout simultaneously adds to the numerator, increasing the dependency ratio at twofold rate.

Implications of the referred development should not be limited to the general shrinking of tax base and expansion of social expenditure, consideration should also be given to the structure of dependent population. In this respect, the transition has led to the equivalence of dependency by children, elderly and working-age population. As the income maintenance of the two latter groups relies on public transfers to a larger extent than in case of children, the true fiscal effect of changes in population's economic activity may be even greater than indicated by dependency ratios. Consideration of regional differences gives the economic implications of unemployment truly great weight.

## 7. Complementary estimates of labour market slack

The traditional focus on full employment has made the unemployment rate a key indicator upon which the performance of labour market is estimated. While identifying the total lack of work, open unemployment does not account for slack that might exist within employment or outside the labour force. Less extreme forms of labour underutilisation appear particularly relevant in situations where, for example due to the extent of localities and the nature of activities, most workers have more or less complete knowledge of existing employment opportunities which makes the continuous job search unnecessary. With poor coverage of unemployment insurance and other public relief schemes, only limited number of people can afford to be unemployed for extended periods of

Figure 11



time; the bulk of population must engage in some economic activity or other, however small or inadequate it may be. Although encountered on massive scale mostly in developing countries, such situations are constantly monitored in industrialised economies (for cross-country analyses see *Employment Outlooks*, OECD 1987, 1990, 1993, 1995).

In transition countries, the need for a broader approach is emphasised by the relative immaturity of newly-developed institutional framework, scanty social security provisions and the presence of potentially extensive informal sector etc. Together with a fairly low record of open unemployment, the same features make the discussion of these forms particularly relevant for Estonia. Attempts to capture the extent of labour market slack have not led to one generally agreed statistic, similar to the rate of open unemployment. Sometimes the employment/population ratio or its inverse have been put forward as an alternative, but there are several problems associated with both measures. In practice, several complements to the unemployment rate are being used, including R1 to R9 in Canada (Deveraux 1992) and the U1 to U7 measures published by the US Bureau of Labour Statistics (Sorrentino 1993), measures R1 to R11 for Mexico (Fleck and Sorrentino 1994) and many others. From this variety, the present paper addresses the two major groups: discouraged workers and involuntary part-time workers. In addition to the extent of a specific group, their impact on the pattern of labour resource underutilisation is considered.

Discouraged workers generally means persons who would like to work and who are currently available for work but who have given up any active search for it. Periodical review of definitions and survey applications in industrialised economies is provided in (OECD 1987, 1993, 1995). In contrast to objectively-based measures of unemployment which build on specific activities, discouragement is subjective and draws on the *feeling* that no suitable job is available. The reason for such feeling may be related to the characteristics of local labour markets, such as the absence of employment opportunities within the area, or personal factors such as the belief that they lack qualifications or employers think them too young or too old. According to international guidelines, discouraged workers are counted as out of the labour force since they are not looking for work. Because they say that they would like to work, and because many studies have found their number to vary pro-cyclically, discouraged workers are often viewed as being closer to the labour market than other non-participants.

In ELFS discouraged workers were regarded as persons who wanted a job but did not seek for it due to the absence of employment opportunities in local labour market, had quitted job-seeking for previous negative experience, or simply did not believe they could get any job. Additional criteria referring to the availability of work and previous employment/job search were not required. However, adding the mentioned criteria reduced the estimates by less than 10 per cent. Data reveal that in Estonia the dynamics of discouraged workers has been quite similar to that of unemployment. Prior to transition, discouragement was virtually non-existent,



accounting for 0.1–0.2 per cent of the working-age population. The increase in the number of discouraged workers started in early 1990, somewhat preceding the upsurge in open unemployment, and culminated in 1992 (Figure 12). Since the second half of the following year, the increase gradually stopped, and during 1994 more or less the same level was maintained. Discouragement rate referring to working-age population reached 1.7 per cent for both males and females, the corresponding labour force based measure has displayed a maximum of 2.1 and 2.3 per cent respectively. Although moderate in absolute terms (translates into ca 15 thousand persons), discouragement has made the single biggest contribution to the increase of economically passive population among working-age men, and the second biggest among women.

Characteristics of discouraged workers indicate an uneven distribution of labour market slack across population. While the experience of men and women is essentially similar, discouragement is most evident among the middle-aged. According to population-based measure, the prevalence of discouragement in age group 45–54 exceeds the levels observed among the youngest and the oldest by 2–2.5 times. Notably, by early 1995 the increase in age-specific discouragement had not stopped for the middle-aged population, and among them the number of discouraged workers accounts for more than 50 per cent of the unemployed. Compared to the younger, the somewhat disadvantaged position of middle-aged population reflects their worse chances in re-entering employment; apart from the older population middle-aged persons cannot afford full withdrawal from the labour market because of poor income maintenance. From another perspective it is instructive to consider discouragement in relation with labour force since this gives an idea what the impact would be if the discouraged workers would, in fact, be counted in the labour force. From this aspect, the pattern appears somewhat different. Consistent with findings from other economies, the decline in labour force participation puts forward a continuous age-related increase in discouragement: the level peaks in extreme age group of 65–74 where discouraged workers outnumber the unemployed.

Several features suggest the association between discouragement and unemployment in Estonia. In addition to an almost simultaneous emergence, the gradients of discouragement rate in respect to nativity, education, region and urban-rural residence basically repeat the pattern of unemployment differentials. The examination of survivorship functions reveals that discouragement has been characterised by

Figure 12

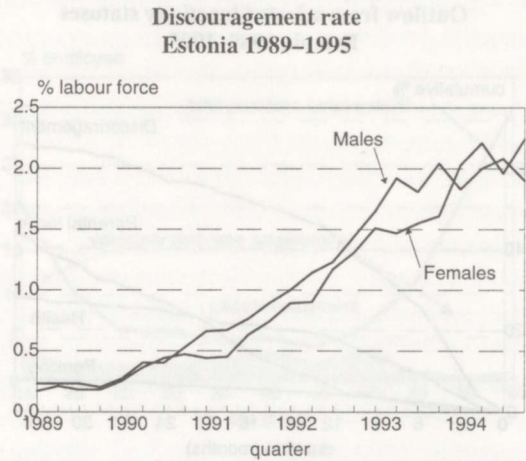
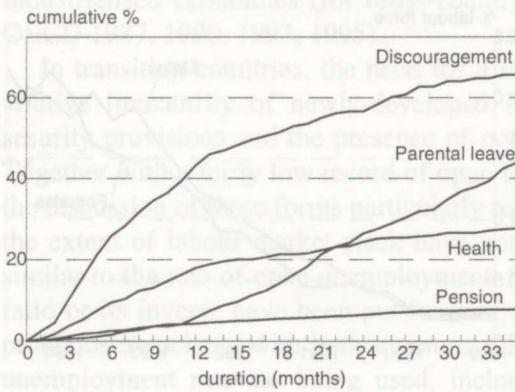


Figure 13

**Outflow from selected inactivity statuses  
Estonia 1989–1995**



years perspective discouraged workers outdo all other categories of non-participant population (Figure 13). Subjectively, their stronger attachment to labour force is evident from reported intentions, according to which three fourth of the discouraged workers consider future resumption of employment likely. As to the timing of return, no other group of non-participants preferred to take up employment as quickly as possible. The specificity of discouragement is stressed by economic status which is the worst among non-active population and practically identical to the unemployed.

Another widespread form of labour market slack is involuntary part-time work. According to international definition, persons visibly underemployed comprise individuals in paid or self-employment, working involuntarily less than the normal duration determined for the activity, who were seeking or were available for additional work. The involuntary nature of work is usually determined by examining the reason why persons have worked less than normal duration. To be counted as visibly underemployed economic reasons like the period of economic slack, temporary shortage of materials, technical breakdown, lack of clients etc are considered. Although frequently not optional on individual level, reduction of working hours due to personal and family reasons is not regarded a part of underemployment. In practical terms, it therefore appears quite justified to interpret the distinction *voluntary* versus *involuntary* in the sense of *non-economic* versus *economic*. The additional criteria, seeking and availability, serves to maintain consistency with activity principle embedded in the labour force framework; on the other hand, it reinforces the involuntariness of short working hours and can be regarded as complementary or even somewhat overlapping with the latter.

Regarding underemployment, ELFS provided the estimates for early 1995. Considering the threshold of 35 hours per week, data on usual working hours reveal relatively moderate spread of part-time employment in Estonia. Among working-age men the proportion of part-time workers constituted 5.9 per cent of

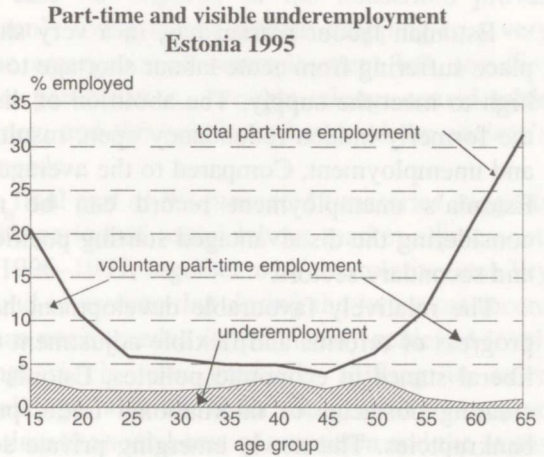
quite considerable outflow to other labour market states. For example, by the end of third ordinal year, 48 per cent of discouragement episodes had been resolved through (direct) entry into employment and 18 per cent by the resumption of job seeking. Although the outflow is slower and cumulatively up to one fifth smaller than in case of unemployment. In the same way discouraged workers can be distinguished among non-active statuses. Falling behind the two youth categories, school-leavers and demobilised conscripts, in three

total employment, among women the share accounted for 11.5 per cent. In general, most of the observed part-time employment results from deliberate choice rather than from necessity and/or unavailability of full-time alternative. Persons working at involuntary part-time jobs on regular basis, currently looking and/or available for additional work accounted for 2.3 per cent of total employment. Adding individuals who normally work full hours but for lack of work were temporarily (in the majority of cases during just one

month) forced to do shortened hours or be temporarily out of work, as well as those involuntary part-time workers who preferred full-time employment but were currently looking for and/or available, takes the proportion close to 4.5 per cent. The experience of males and females tends to be fairly similar. However, among males underemployment dominates part-time work. The age-pattern of underemployment reveals concentration among middle-aged and older population (Figure 14), its closeness to other forms of labour market slack is stressed by gradients of educational, regional and urban-rural differences. In absolute terms, the number of underemployed in Estonia could be estimated at ca 30 thousand persons. Defining underemployment by inadequate labour income, provides somewhat higher estimates which, of course, are crucially dependent on the applied cut-off level.

To sum up, the referred findings are consistent with the idea that the underutilisation of labour resources is not limited open unemployment. In Estonia, consideration of discouraged workers and underemployed would take the cumulative volume of labour market slack well beyond 100 thousand persons or one sixth of labour force in relative terms. Though the patterns of labour market slack are somewhat different, their prevalence appears quite consistent with the levels observed in developed market economies (OECD 1995, European Commission 1996). The main issue in connection with discouraged workers and the underemployed is not whether the relaxation of statistical definition and their inclusion in the unemployment count is appropriate, but it is their consideration in the evaluation of labour market situation and development of policies. Exclusion of these categories tends to create an unnecessarily optimistic impression.

Figure 14



## Summary

Estonian labour market has, in a very short period of time, shifted from the place suffering from acute labour shortage to the one with a demand insufficiently high to meet the supply. The abolition of distorted regulation mechanisms made the formerly hidden redundancy open, resulting in sizeable worker displacement and unemployment. Compared to the average experience of transition economies, Estonia's unemployment record can be regarded as moderate, particularly considering the disadvantaged starting position and the job reductions in primary and secondary sectors.

The relatively favourable development has been put forward by the general progress of reforms and flexible adjustment to market conditions. Along with its liberal stance in economic policies, Estonia did not withhold restructuration by creating obstacles to international trade, private entrepreneurship, layoffs and bankruptcies. The newly emerging private sector managed to take advantage of provided circumstances, offering considerable amount of new employment opportunities for population redundant in shrinking sectors.

In Estonia, registered unemployment appears a particularly poor guide to the true development of labour market. Considerable discrepancy between internationally comparable estimates and officially recognised unemployment cannot be explained merely by restrictive eligibility criteria but also with the weak motivation of population. Besides extremely low replacement capacity of benefits, employment offices have proved persistently inefficient in job placement. Registration at an employment office is regarded as a backup for situations where other methods of employment search are either not available or have not produced desired results.

Consistent with findings from other transition economies, developments have clearly favoured better educated and more skilled individuals. Women who are considered another traditional risk group in transition economies, fare relatively well and have not displayed excessive levels of joblessness. Decomposition by duration reveals the problem of youth unemployment largely unfounded in Estonian transition since its high level has been almost exclusively generated by short-term joblessness. Persistent differences can also be found across regions, reflecting the geographic concentration of shrinking sectors. Specific concern for labour market developments in Estonia is formed by the massive immigrant population. Being concentrated into specific areas and sectors, immigrants have found it more difficult to find new employment opportunities. Their unusually high proportion in population pushes up Estonia's general unemployment record as well as places additional burden on adjustment policies.

The modesty of public income maintenance in Estonia emphasises the decisive importance of household factors for the severity of unemployment and ability to cope with it. Under such circumstances, the economic implications of job loss are largely pre-determined by household composition. Though families are able to cushion adverse consequences for the majority of population, their coverage

cannot be regarded universal. In case the capacity of the household proves inadequate, nothing prevents a person's living standard from dropping to a very low level. On population level, the emergence of unemployment has, together with the decline in labour force participation, brought along considerable modification of economic dependency, and through it, undermined the society's capacity to finance different social needs.

The stabilisation observed in the final part of the presented timeseries suggests that Estonia had by 1995 passed the period of initial labour market adjustment. Continuity of economic growth in 1996-1997, together with the relative stability of registered joblessness gives ground to assume that during the two most recent years, the level of unemployment has not exceeded its previously achieved level. Along this development, the emphasis is now gradually shifting to more developmental tasks. The main challenge is to allow for the growth to become sustainable, addressing at the same time the social cost of transition and the status of risk groups. This will evidently require an increasing amount of conscious effort to determine the preferable pathways well ahead of time and devise the measures to approach them. An important role in this process has to be played by government institutions, particularly regarding human resources, infrastructure and institutional framework.

Address:

Allan Puur

Estonian Interuniversity Population Research Centre

P.O. Box 3012 EE0090 Tallinn Estonia

Phone: +372 6 409 451

Fax: +372 6 409 453

E-mail: allan@ekdk.estnet.ee

## References

- Blossfeld, Hans-Peter, Alfred Hamerle and Karl Ulrich Mayer (1989) *Event History Analysis. Statistical Theory and Application in the Social Sciences*. Hillsdale, New Jersey: Lawrence Erlbaum Associates Publishers.
- Commander, Simon and Ruslan Yemtsov (1994) *Russian Unemployment: Its Magnitude, Characteristics, and Regional Dimensions*. Policy Research Working Papers No. 1426. Washington: World Bank.
- Cornia, Giovanni A. (1996) *Labour Market Shocks, Psychosocial Stress and the Transition's Mortality Crisis*. RIP No.4. Helsinki: WIDER.
- Devereaux, M.S. (1992) "Different Measures of Unemployment". *Perspectives on Labour and Income*. Statistics Canada.
- Eamets, Raul (1994) "Labour Market and Employment Issues in Transition Economies: The Case of Estonia". *Communist Economies and Economic Transformation* 6, 1.
- Elias, Peter (1991) "Methodological, Statistical and Practical Issues Arising from the Collection and Analysis of Work History Information by Survey Techniques". *Bulletin de Methodologie Sociologique* 31, June, 3-31.

- ESA (Statistical Office of Estonia) (1997a) *Estonian Labour Force Survey 1995. Methodological Report*. Tallinn-Viljandi.
- ESA (Statistical Office of Estonia) (1997b) *Estonian Labour Force Survey 1995. Estonian Labour Force at the Beginning of 1995 and General Changes in 1989–1995*. Tallinn–Viljandi.
- European Commission (1996) *Employment in Europe 1996*. Brussels, Luxembourg.
- Fleck, Susan and Constance Sorrentino (1994) "Employment and Unemployment in Mexico's Labour Force". *Monthly Labour Review* 11.
- Ham, John, Jan Svejnar and Katherine Terrell (1994) "The Emergence of Unemployment in the Czech and Slovak Republics". *Comparative Economic Studies* 35, 4, 121–134.
- Husmanns, Ralf, Farhad Mehran and Vijay Verma (1990) *Surveys of Economically Active Population, Employment, Unemployment and Underemployment: An ILO Manual on Concepts and Methods*. Geneva: ILO.
- ILO (1988) *Current International Recommendations on Labour Statistics*. Geneva: ILO.
- Jones, Derek and Takao Kato (1993) *The Nature and Determinants of Labour Market Transitions in Former Socialist Economies: Evidence from Bulgaria*. WP No.93/5. Hamilton College.
- Krueger, Alan B. and Jorn-Steffen Pischke (1995) "A Comparative Analysis of East and West German Labour Markets: Before and After Unification". In *Differences and Changes in Wage Structures*. Richard B. Foseman and Lawrence F. Katz, eds. Chigago: Chigago University Press.
- Lehmann, Hartmut (1993) *Labour Market Flows and the Evaluation of Labour Market Policies in Poland*. Centre for Economic Performance, London School of Economics.
- Ministry of Economics (1996). *Estonian Economy 1995–1996*. Tallinn.
- OECD (1987) *Employment Outlook*. Paris, July.
- OECD (1990) *Employment Outlook*. Paris, July.
- OECD (1993) *Employment Outlook*. Paris, July.
- OECD (1995) *Employment Outlook*. Paris, July.
- Rutkowski, Michal (1995) *Workers in Transition*. Policy Research Working Papers No. 1556. Washington: World Bank.
- Puur, Allan (1995) "Labour Force Participation Trends in the Baltic States 1959–1989". In *Demography, Economy, Welfare*. Christer Lundh, ed. Lund: Lund University Press. 285–303.
- Puur, Allan and Rivo Noorkõiv (1996) *Estonian Labour Force Survey 1995: Experience from Retrospective Data Collection*. Paper presented to the European Conference of Statisticians. June 1996, Paris.
- Puur, Allan (1997) "Changes in Economic Activity of the Population: the Case of Estonia". *Journal of Baltic Reviews*, forthcoming.
- Sorrentino, Constance (1993) "International Comparisons of Unemployment Indicators". *Monthly Labour Review* 3.
- Standing, Guy (1994) *Enterprise Restructuring in Russian Industry and Mass Unemployment: The RLFS Fourth Round*. Geneva: ILO.
- Tuma, Nancy and Michael Hannan (1984) *Social Dynamics. Models and Methods*. New York: Academic Press.
- United Nations Economic Commission for Europe (1995) *Economic Survey of Europe 1994–1995*. United Nations: New York and Geneva.
- UNICEF, International Child Development Center (1995) *Public Policy and Social Conditions. Central and Eastern Europe in Transition*. Regional Monitoring Report No.3.
- United Nations Development Programme (1995) *Estonian Human Development Report*. Tallinn.
- United Nations Development Programme (1996) *Estonian Human Development Report*. Tallinn.
- Venasaar, Urve (1995) "Labour Market". In *Transforming the Estonian Economy*. Olev Lugas and George A. Hachey, Jr., eds. Tallinn: EAS Institute of Economics. 328–351.
- Vodopivec, Milan and Samo Hribar-Milic (1993) *The Slovenian Labour Market: Issues and Lessons Learned*. Policy Research Working Papers No. 1175. Washington: World Bank.
- Witkowski, Jan (1995) *Labour Market in Poland. New Trends and Old Problems*. Warsaw: Central Statistical Office.