PART IV POPULATION CHANGES IN THE CONTEXT OF SOCIETAL TRANSITION

CHANGES IN THE ECONOMIC ACTIVITY OF THE POPULATION: CASE OF ESTONIA 1989-1995

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Reforms started in Central and Eastern Europe in the early 1990s have led to an extensive change of political, social and economic realities. Essential role in this system transformation is played by the restructuration of labor market mechanisms aimed at more productive and competitive allocation of human resources. Being a mirror of a country's economy, labor market developments serve for the irrefutable test-ground of government policies and source of public awareness. Whether the reforms can proceed smoothly or are hindered, depends to a substantial extent on the social approval of currently implemented changes and related costs.

Since the collapse of central planning, researchers have expended considerable effort in monitoring the progress of labor markets under the transition period. For a variety of reasons, most of the research has been produced on Central European economies. Consequently, knowledge of labor markets in Bulgaria, the Czech Republic, East Germany, Hungary, Poland, Slovakia and Slovenia is fairly advanced and continuously expanding. Compared to that, much less is known about the progress of transition in the former Soviet republics and the Baltic countries. Data from new sources that have started to become available offer favorable prospects to fill this gap. Starting conditions and chosen strategies of the reforms have provided each country with its own path towards market economy. Knowledge of this diversity is relevant not only for the characteristics of individual countries but contributes to the understanding of transition processes in general.

Based on the first round of the national labor force survey, the present paper attempts to outline the main features of labor market developments in Estonia since 1989, placing them into the perspective of similar experience from other transition economies. Compared to earlier analyses on Estonian labor market (Venesaar 1995, UNDP 1996), its novelty lies in the newly-available data collected for the first time on the basis of internationally recommended statistical definitions of employment, unemployment and inactivity.

1 Estonian Labor Force Survey 1995

Countries of Central and Eastern Europe have reoriented their statistical system and commenced survey-based data collection during the past five years to account for the changes occurring at their labor markets,. Lagging somewhat behind the most advanced reformers, Estonia started its preparations for the survey in the fall of 1993. To prepare and implement the Estonian Labor Force Survey (ELFS), the Working Group uniting researchers and experts from various government agencies was established in early 1994.

Since the very beginning, ELFS aimed at meeting the information needs for both short-term economic indicators and comprehensive labor market mechanisms. The combination of these two objectives was motivated by several reasons. As the most recent comprehensive individual-based data on the labor force dated back to the 1989 population census, an extensive information gap had emerged regarding the Estonian labor market. Establishment surveys and administrative records could not reflect these developments adequately, leaving the most turbulent period uncovered. Aside substantive reasons, the combination of approaches was the only practical way to consider the needs of research community under the existing budget constraints.

To go beyond the conventional snapshot picture, the ELFS questionnaire was added an extensive retrospective section, methodologically building on the event history design (Tuma, Hannan 1984; Blossfeld et al

1989). In the survey, each respondent's labor market experience was followed from January 1989 to the date of the interview in January–April 1995. Covering the time-span between the mentioned dates with monthly precision, separate information was collected on three basic labor market spells: employment, unemployment and out-of-labor-force. For each spell the basic characteristics, starting and ending dates, and modes of entry and exit were recorded. To provide individual work histories with dynamic context, retrospective event histories were also collected on studies, changes in marital status, childbirth and geographic mobility. Indeed, the questionnaire included the traditional current activity section, consistent with international statistical recommendations (Hussmanns, Mehran and Verma 1990).

Target population of the ELFS consisted of permanent residents of Estonia who were 15–74 years old at the beginning of 1995. Nationally representative probability sample of 10 thousand individuals was drawn from the micro-data of the 1989 census, providing both respondents and non-respondents with a diverse set of background characteristics (Katus, Puur 1993). Fieldwork of ELFS was conducted by the newly-established governmental interviewer network based on county statistical bureaus The crude response rate was 88.7%. Post-collection checks have indicated rather good consistency of the data and revealed extremely low date-specific non-response. When leaving aside systematic differences resulting from definitions, the same was revealed by the individual-level matches of survey data with respondents' census records, verifications against population aggregates and data on registered unemployment (Puur, Noorkõiv 1996). In early 1997, the methodological report and a volume of standard tabulations were published.

2 Reconstruction of time-series of basic labor market indicators

Longitudinal design applied in the ELFS allows for a variety of analytical applications from which the present paper takes an advantage of the time-series' reconstruction. This simple method builds on the capacity of event history data to provide the continuous status of each surveyed individual throughout observation period. When aggregated, these individual statuses allow for cross-sectional distributions of survey population, which in turn can be used for the calculation of traditional labor market indicators. Arranged into time-series, the indicators provide a rich and varied picture of basic trends in employment, unemployment and inactivity, characteristics and relative position of specific population subgroups, etc.

In this article, retrospective data has been used for the reconstruction of quarterly time-series of labor force participation, employment and unemployment rates, distributions of employed by industry, occupation and social status. For computational considerations, each quarter was represented by its central month. Operational definitions of employment, unemployment and inactivity have been kept as far as possible consistent with the current activity measurement framework, which in conventional labor force surveys is applied to short reference period. Still, as a compromise between the recall ability of the respondents and measurement objectives, some departures from this framework were inevitable regarding the measurement of unemployment and second jobs. It was not attempted to record recurrent changes in the availability for work, because it would have required splitting each respective unemployment spell into several smaller sub-periods, implying unacceptable respondent burden. Another similar modification concerned second jobs which also tend to have frequently irregular nature.

As both the retrospective and current activity frameworks were operationalized in the questionnaire, it proved possible to evaluate the potential bias introduced by these modifications. While the distributions of survey population from the endpoint of retrospective measurement and survey week referred to the same time point, discrepancy between frameworks was reflected in their difference. As misclassification in opposite directions tends to cancel out, the reconstruction approach seems to have worked sufficiently well for characteristics that are relative stable at a particular job (Noorkõiv, Puur 1996).

The main advantage of the presented approach is its cost-efficiency which is particularly relevant for a small country under transitional budget constraints. To collect similar quarterly data on a continuous basis, one would have had to conduct over 35 thousand interviews each year starting from 1989. But perhaps even more important, stretching to the early beginning of transition, reconstruction method has avoided the discontinuity which is quite often introduced by the shift from old to new statistical definitions accompanying the transition. Not addressed in this paper, the applied design is particularly suitable for the analysis of labor force dynamics without introducing difficulties that are common to record-linkage (Lemaitre 1994).

3 Employment

Prior to reforms, labor markets of today's transition economies featured remarkably high levels of labor force participation. Proclaiming work both a right and obligation, socialist development strategies aimed at mobilizing

all available labor resources and zero unemployment. To meet established production targets in face of uncertain inputs, enterprises tended to keep substantial reserves creating an excess demand and widespread labor shortage. The introduction of market-oriented reforms brought to the end the incentive to maintain this largely unproductive manpower supply. In most countries, this coincided with a series of external shocks involving energy supply, price adjustment to world levels and trade losses. Except for major energy exporters, these shocks would have had adverse effects on labor market even without reforms.

Estimations based on ELFS suggest that between 1989 and 1995, total employment in Estonia has declined by more than 22.4% (192 thousand). In the eve of transition the number of employed accounted close to 860 thousand of which less than 670 thousand remained by early 1995. From the demographic perspective, the decline in aggregate employment can be regarded as a combined result of changes in the size and structure of population, on the one hand, and employment levels on the other hand. Due to the deteriorating coverage of residence registration during the 1990s, the first component should be regarded with great caution in the case of Estonia. Recent calculations performed by Statistical Office indicate that an alternative treatment of migration statistics accounts for a cumulative difference of about 75 thousand in the number of population (Statistics Estonia 1997).

To consider the uncertainty of population aggregates, separate estimation of the effect of declining employment levels and population base was performed. According to this, falling demand for labor and shrinking employment opportunities have brought about the cumulative reduction of 18.9% (slightly above 160 thousand). Adding the increase in part-time employment, the volume of employment has probably fallen to even greater extent.

The employment decline escalated gradually, culminating in 1992. Paralleling with macro-economic stabilization and reorientation of trade flows, reduced demand accounted for the net loss of 65 thousand in that year (Figure 1). Later the reduction slowed down, reaching the level of just one per cent during 1994. Observed pattern is closely consistent with the dynamics of GDP which has showed a moderate recovery since 1995 (Ministry of Economics 1996). Keeping in mind the inherent difficulties of international comparison of employment statistics, the pattern of cumulative employment decline in Estonia is comparable to the advanced reformers of Central and Eastern Europe. Suggesting relatively large redeployments, its extent exceeded the levels observed in the Czech Republic, Poland, Romania and Slovenia (Figure 5). Once started, the decline was not hindered by policies discouraging the destruction of failing and unprofitable firms, or setting them serious barriers in firing the workers. In this view, the Estonian pattern has been rather different from the experience of CIS countries which have, despite much extensive recession in output, displayed considerably smaller employment adjustments and continued labor hoarding. From economic point of view, such a preserving of redundant jobs is likely to protract the adjustment and delays the resumption of economic growth. Returning to employment reductions in Estonia, quarterly time-series reveal considerable dissimilarity across sub-populations. Comparison focusing on the working-age population indicates that the cumulative decline in employment has been somewhat more extensive among women. Aside this, the general time pattern of job losses has been diverse between sexes. During the first years of transition female employment shrinked more rapidly than that of males, in 1992 this excess reduction ceased. As male employment has continued to shrink also in the subsequent years, women have by now recovered almost half of their initial loss (Figure 2). The recovery is brought about mostly by fertility decline, the contribution of changing employment structure and other factors has to be disentangled by further analysis.

Figure 2 FEMALE LABOUR MARKET EXPERIENCE
Estonia 1989-1994

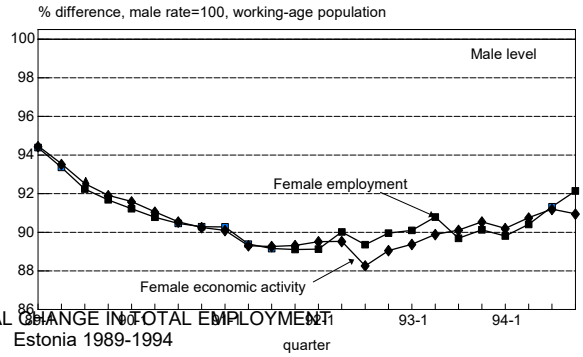
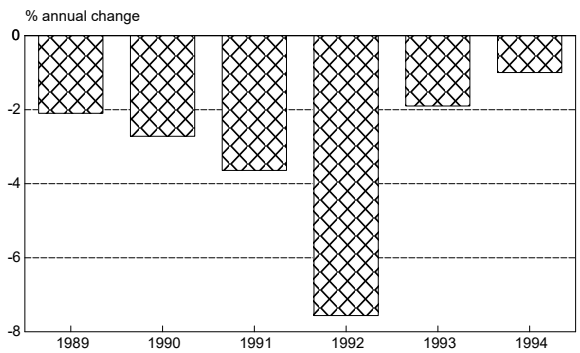
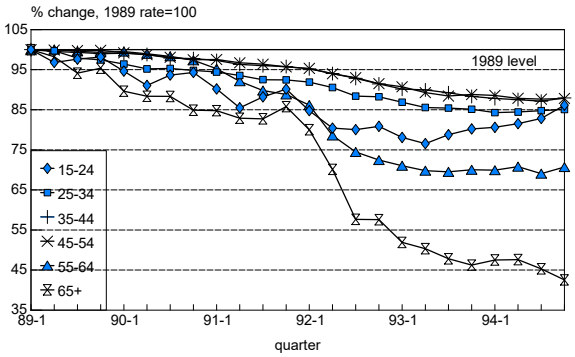


Figure 1 ANNUAL CHANGE IN TOTAL EMPLOYMENT
Estonia 1989-1994



Examination of age-specific employment losses reveals that the negative impact of transition

Figure 3 AGE-SPECIFIC EMPLOYMENT RATE
Estonia 1989-1994



on work opportunities is concentrated among older workers (Figure 3). While the decline is limited to 5–8% relative to the 1989 level in the prime ages, employment levels at age 55–64 dropped by one fourth and in ages above 65 only 40% of the initial employment has been left. As such, excessive reductions among older workers are not surprising. Being entitled to retirement pensions they had an alternative source of income, though smaller, differently from working-age population, .This made firing the older workers socially less costly.

Structurally, the observed age-pattern has been supported by lower educational attainment of older workers and their concentration in shrinking sectors. The timing of the decline reveals the peak of job losses in 1992, particularly for the age groups with steeper decrease. It is interesting to note that while in age-group 55–64 the downward trend came to an end by 1993, the employment rate among the oldest has continued to fall until the end of the observation period.

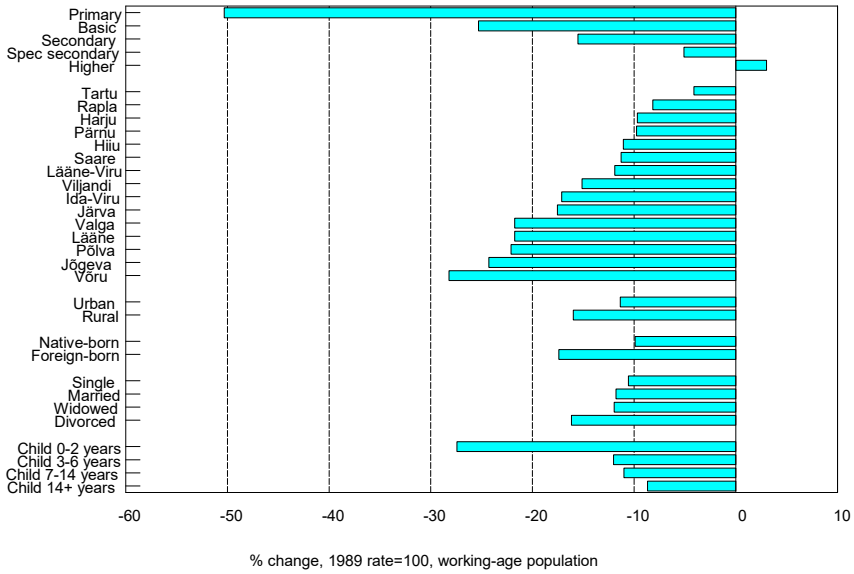
From a social policy perspective, attention must be called to the implications of employment decline on income maintenance around retirement age. Unlike the development in the industrialized market economies, the downward trend in older workers' economic activity reverted to an increase in Estonia during the mid-1970s. Prior to transition, it became increasingly common to extend working beyond statutory retirement age set at 60 for males and 55 for females (Puur 1995). Aside improving educational composition of new pension cohorts, this was induced by the worsening replacement ratio of (unindexed) old-age pensions. Data from ELFS indicate that since 1989 the median age of retirement for males has dropped by four years and for females by three years. At the same time, ongoing pension reform foresees the increase of statutory retirement for both sexes. Given these opposing trends, relevant policies should include monitoring of employment levels to tackle the potential long-term unemployment in immediate pre-retirement ages. If not a concern on general level, it may involve problems for selected groups of older workers.

The trend in employment levels among the youth has differed from both prime-age and older workers. With seasonal fluctuations employment of 15–24 year-olds dropped until the beginning of 1993. However, unparalleled in any other age group, youth employment turned into increase since that. Quite unexpectedly, labor force participation rate of 15–24 year-olds in 1995 exceeds the 1989 level. Evidently, the emergence of new sectors and occupations has depreciated the relative value of earlier experience against the adaptability of the young, particularly in combination with modern education and entrepreneurial spirit. Unique historical circumstances seem to have equipped transition's youth cohort(s) with the perspectives of very rapid career advancement. This favorable situation, however, cannot be expected to be long-lasting. As the turbulence of initial restructuration passes and the development stabilizes, the relative advantage of the youth can be expected to diminish. Still, youth cohorts of the 1990s will probably retain their advantage provided by entry conditions.

Aside age and sex, selective employment experience can also be found across other dimensions of population. Consistent with well-documented findings from other transition economies, education has started to provide significant employment advantage also in Estonia (Figure 4). Emphasizing the importance of professional training and skills, the magnitude of net job losses appears directly dependent on the duration of schooling. Referring to working age population, employment has risen for those with university degree, while it has fallen for all other categories. Employment of workers with specialized secondary education has fallen by 5%, each step down the education hierarchy involves additional reduction. Partly reflecting their concentration in older age groups, employment of workers with just primary education has halved. Although Estonia is small in territory, considerable variation exists in employment reductions by region. Reflecting the diversity of starting conditions and variable adjustment potential, the biggest employment declines have occurred in agricultural counties of South-East Estonia as well as in Jõgevamaa and Läänemaa. Regions building around big cities, but also Raplamaa, Lääne-Virumaa and the islands have fared better than average. The observed pattern of geographical differentiation can to a large extent be explained by employment composition.

Figure 4 CHANGE IN EMPLOYMENT LEVELS

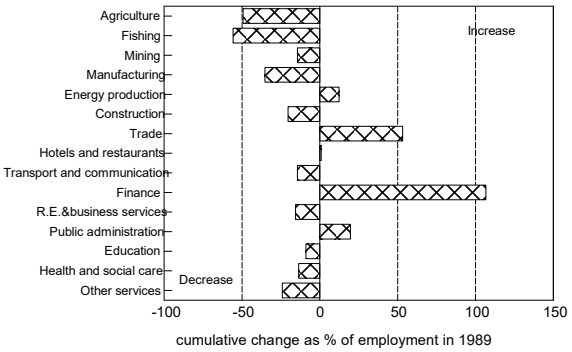
Estonia 1989-1994



% change, 1989 rate=100, working-age population

A specific feature of Estonian labor force is the large segment of immigrants from the former Soviet Union, mainly from Russia. Dating back to the timing of demographic transition, native- and foreign-born populations have displayed distinct patterns across a range of demographic and social behaviors, including labor market behavior (Katus, Sakkeus 1993). Being concentrated into large industrial enterprises that specialized almost exclusively for the Soviet market, the foreign-born population has generally been less successful in adapting to the rapidly modified circumstances. Their employment level had dropped more than 17% by 1995, whereas among the native-born population the reduction was limited to 10%. Further analytical effort is required to determine the extent to which the excessive decline among foreign-borns reflects greater shock determined by starting position or lesser capacity to find alternative work opportunities.

Figure 5 CHANGE IN EMPLOYMENT BY ISIC SECTORS
Estonia 1989-1994



cumulative change as % of employment in 1989

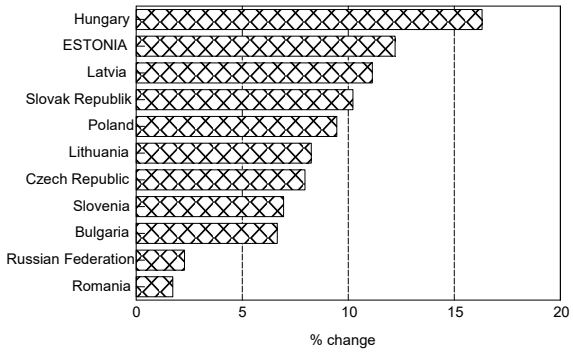
As to family characteristics, employment reductions did not display much variation by civil status except for divorced and never-married males in the middle ages whose job losses have been somewhat higher. Still, the largest family-related change has occurred to women with pre-school children. Employment of those having a child under three years has dropped by more than 40% relative to 1989 level. In early 1995 only a quarter of women with that young children were currently employed. Given the extent of the decline and its potential implications to the situation of young families, a closer examination of exit and entry patterns surrounding childbirth are needed to reveal the extent to which women have chosen to stay at home themselves, and to which they may have been discouraged to return. Having older children at home as well as higher parity were much less important. Basically, the observed employment reductions across population categories have been consistent with simultaneous wage adjustments, suggesting flexible response of markets to changing demand factors.

4 Composition of Employment by Sector

Aside large declines in employment, another characteristic feature of transitional labor markets has been their structural adjustment. Despite challenging for individuals concerned, restructuration forms an inevitable precondition for improved allocation of labor. Somewhat paradoxically, the most extensive and painful restructuration is often faced in sectors which under previous system were considered the most vital and advanced. Relative to industrialized market economies, Estonia's most specific feature was the very high share of primary sector employment. Due to remarkable specialization in agricultural production for Russian market, it accounted for 21.6% of total employment. During the same time in geographically adjacent Scandinavia, primary sector ranged from 3.5% in Sweden to about 9% in Finland. Even among today's transition economies only Poland and Romania featured higher primary sector shares.

Decomposition of aggregate employment decline reveals quite diverse pathways of job losses across sectors. Leaving aside the uncertainty with population aggregates, between 1989 and 1995 employment in primary sector dropped by 48% and 29% in secondary sector (Figure 6). According to similar estimation, tertiary sector experienced cumulative growth of 4% over the same period. In absolute terms declines in primary and secondary sector turned out to be equal, accounting for 89 thousand each. Among individual branches, the single biggest decline concerned fishery where more than half of jobs had been lost. Net losses in agriculture accounted for a little less, however, in absolute terms agricultural employment in Estonia was cut by 73 thousand jobs.

Figure 6 NET CHANGE IN SECTORAL SHARES
Selected transition countries 1989-1995



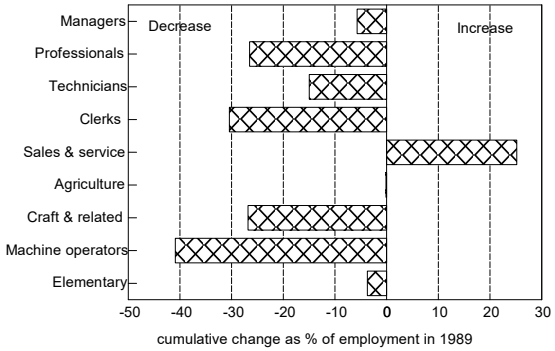
Compared to the rest of primary sector branches mining has fared better suffering only a 15% reduction. In the secondary sector, 35% of jobs (78 thousand) were lost in manufacturing and slightly more than 20% (13 thousand) in construction. Employment in gas, electricity and water supply has gained more than two thousand jobs, evidently thanks to the delayed privatization of key enterprises of infrastructure and their monopoly market position. The most rapidly expanding branches have been the formerly underdeveloped finance (doubled, cumulative net increase close to 5 thousand jobs), wholesale and retail trade (increase 53% or 34 thousand), and public administration (20% or nearly 8 thousand jobs). Employment in hotels and restaurants seems to have increased only marginally while transport and communications, real estate and business services (includes research and development), education, health and social care have experienced slight declines.

Examination of sectoral employment experience by calendar years reveals somewhat varying time paths of decline and recovery. Estimations abstracting from population aggregates suggest that, the employment declined in all three sectors until 1991, though to a different extent. In 1992, net reductions first came to an end in tertiary sector which has shown moderate employment growth every following year. Consistent with the reported dynamics in industrial output, encouraging signs appeared also in secondary sector which reached zero growth by 1994. Thus, continued decline throughout the period was characteristic only to primary sector. In 1994 the reduction accounted still for nearly 8%, predicting the continuation of decline in future.

On a more detailed level of disaggregation, only trade stands out for a continuous growth record since 1989. Finance services have enjoyed expansion since 1990 when the development of new financial institutions got under way. Re-establishment of national government institutions explains the increase in public administration following 1991, hotels and restaurants have added employment since 1993. Substantial job creation during 1993–1994 suggests that the growth in these branches may well persist in subsequent years. From the opposite end, continuous decline has been characteristic to agriculture and fishing. Manufacturing ended the

1994 with zero growth, at the same year construction, and energy production increased employment for the first time since 1989. Fluctuations in both directions prevent us from clear-cut conclusions regarding other branches.

Figure 7 CHANGE IN EMPLOYMENT BY ISCO-88 GROUPS
Estonia 1989-1994

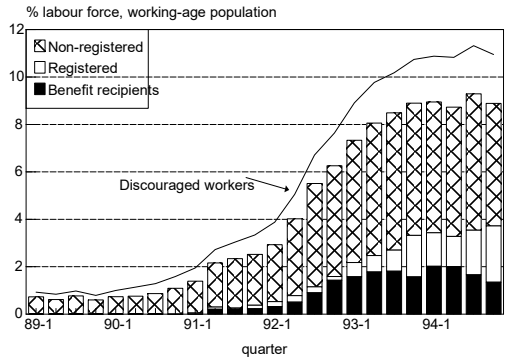


As a result of the described trends, sectoral composition of employment has undergone substantial change. Between 1989 and 1995 the share of primary sector has dropped from 21.6% to 13.9%, and that of secondary from 35.7% to 31.2%. Over the same period, tertiary sector has increased its share from 42.7% to 54.9%. Comparison of 1989 and 1995 employment structures reveals that the sectoral adjustment in Estonia has been more extensive than in most of transition economies (Figure 7). Measured by the net sectoral change (the sum of reductions in the share of declining sectors and increases in expanding sectors) only Hungary seems to have experienced greater reallocations. The general experience of Latvia has been quite similar to Estonia, however, in Latvia the bulk of adjustment seems to have been concentrated in secondary sector rather than in agriculture. In 1995 higher proportion of tertiary branches was reported only in Hungary and Latvia.

5 Composition of Employment by Occupation

An alternative insight into the changing composition of employment is provided by occupation, reflecting the kind of work, scope of responsibility and functions performed by an individual worker. Over the long run, there is a marked tendency for the occupational structure to develop towards higher skill content of jobs. Given the selectivity of employment reductions, it was natural to assume this trend to accelerate during the transition. Consistent with expectations, reconstructed time-series from ELFS reveal that across ISCO-88 major groups, the biggest reduction in Estonia has occurred among machine and plant operators and assemblers (Figure 8). Abstracting from the dynamics in population aggregates, between 1989 and 1995 the number of such jobs was reduced by 41% (60 thousand). Cumulative losses in craft and related occupations were somewhat smaller, accounting for 27% of the jobs in 1989 (49 thousand). Evidently, the losses in both referred groups are a direct result of the change in sectoral composition of employment, particularly the decline in agriculture and manufacturing.

ure 8 DEFINITION-SPECIFIC COMPONENTS OF UNEMPLOYME
Estonia 1989-1994



Despite excessive reallocations from primary and secondary sectors, reductions have not been limited to blue-collar occupations. Of ISCO-88 major groups, the second biggest losses were observed among clerks whose number decreased by 30% (16 thousand). Quite unexpectedly, significant reductions occurred also in professional occupations with net losses accounting for 27% (31 thousand). While the decrease of clerks as one the least qualified white-collar occupations was highly conceivable, reduction in professional occupations deserves indeed closer attention. In Western Europe, for example, the number of people engaged in professional (and managerial) occupations has continued to increase even during recession years, showing low sensitivity to current fluctuations in general demand (European Commission 1996). As it would be inappropriate not to regard the transition as a major modernization process, the observed decline in professional occupations should rather be viewed as a reaction to former overstaffing of professional positions. On the other hand, the referred decline may to a certain extent prove a statistical artifact. Under centrally planned economy the skill level, range and complexity of the tasks actually performed in these occupations could be have been actually inferior to the levels reflected in occupational titles. From this perspective, the occupational adjustment brought about by the transition can be regarded as overcoming the mismatch between the titles of occupations and their functional equivalents. This hypothesis is supported by nearly twice smaller decline in semi-professional occupations (15%), but it certainly requires a lot of careful elaboration of occupational classification. To allow for this, ELFS has applied parallel coding according to Soviet and international classifications.

Regarding other occupational groups, the employment reductions have been much smaller. Interestingly, there has been virtually no net reductions in production occupations in agriculture despite the massive job losses in primary sector. Apart from craft workers and machine operators, jobs in elementary occupations have experienced only minor reductions. Relative to 1989, the net loss of jobs in these occupations has been less than four per cent (2.5 thousand). Expectedly, the biggest progress has been recorded in sales and service occupations which have gained 25% increase (15 thousand jobs). The interpretation of the slight decline in managerial occupations again rises the uneasy question about the comparability of occupational data referring to centrally planned and market economy settings.

An additional insight into the dynamics of labor market adjustment is provided by the timing of occupational change. During the first three years of transition, the biggest relative declines were observed in professional occupations revealing substantial overstaffing and redundancy in respective positions. It was only in 1992 when large cuts reached blue-collar occupations. With a temporary decline in 1991, the number of jobs in service occupations has increased ever since 1990. Since 1993 the growth has been characteristic to the extremes of the occupational scale – managers and elementary occupations. From the viewpoint of labor market policies, further analyses building on flows in and out of different occupations are required to judge upon the extent to which the increase in elementary occupations and decline in skilled manual and professional occupations has involved downgrading on the individual level, particularly among displaced workers.

As the declines and increases have progressed at a different pace, shifts in the proportions of occupational groups do not necessarily coincide with shifts in numbers. In Estonia, occupational groups gaining employment share included managers, technicians, sales, service and also agricultural workers. The share has declined for professionals, clerks, craft workers and machine operators. Drawing the separation line between the sales and service workers on one hand, and clerks on the other hand, the proportion between manual and non-manual occupations has remained largely untouched over these years. To put it in another way, transitional modernization in terms of occupations has concerned rather the content of work than the proportions between major occupational divisions. More limited shifts, for example compared to sectoral division, can be explained by considerable degree of skill specialization associated with specific occupations. Required educational qualifications that prerequisite years of training, limit or practically exclude several paths of occupational mobility. The same is not the case for sectoral mobility, as jobs with approximately similar skill level can be found across different sectors. Major developmental shifts in occupational distribution are still linked to educational attainment of the population, and unless very extensive retraining programs are introduced, the main vehicle for the latter remains the cohort flow.

6 Other Characteristics of Employment

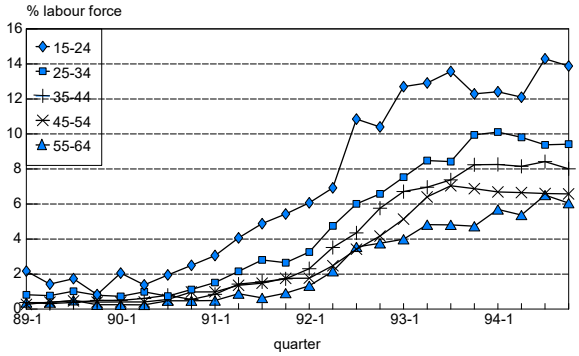
Sharing the pattern of the former Soviet republics, the characteristic feature of employment structure in Estonia was the absence of private sector. Respectively, one of the key elements of economic restructuration has been the growth of private sector, both through new firms and privatization of existing enterprises. According to ELFS, in early 1989 the private sector accounted for slightly more than 4% of total employment, including newly-established cooperatives and self-employment. By early 1995, the share of the private sector had exceeded 50%,

reflecting a simultaneous decline in state enterprises and collective farms, but to some extent also the reductions in the budget sector. Leaving aside the difficulties related to classification, from the employment perspective it is important to notice a differential pace at which the privatization process has affected the population. Evidently due to specific sectoral composition, the first waves of restructuration have to a greater extent touched native-born population. Thus, by beginning of 1995 the proportion of employment transformed into private sector accounted for 54% among native-borns whereas its share did not exceed 45% among immigrants. As privatization of large state-run enterprises in energy production and related infrastructure is to be completed last, the conclusive stage of the process can be expected to involve disproportionate number of foreign-borns.

Across age, the share of private sector as a source of employment is clearly at highest among youth. In age-group 15–19, the private sector accounted for nearly 65% of all jobs in early 1995. In immediate pre-retirement ages this share was close to just 40%, and conversely, the proportion of budget sector employment was about twice higher among older workers. Evidently, the observed pattern results from selective recruitment of young and new entrants into private sector jobs while older workers have been less likely to move to private firms successfully. As a result, the transition has led to relatively younger age composition of the private sector work force, supportive to more energetic and dynamic development.

Closely related to the development of the private sector, transition to market economy has been featured by the emergence of self-employment. Being the core of many innovations, the self-employed can be distinguished both in terms of their scope of liability and degree of involvement. Reconstructed time-series from ELFS reveal that over the years 1989–1995 the share of self-employed has risen from 1.6% to 8.1% of total employment (Figure 9). Consistent with the boom of new businesses, the relative increase in self-employment has been at highest in 1991–1993, and since 1994, some signs of slowing down the growth can be noticed. By early 1995, the absolute size of total self-employed work force in Estonia was estimated around 50 thousand.

Figure 9 AGE-SPECIFIC UNEMPLOYMENT RATE
Estonia 1989-1994



Being opposed to paid workers, the self-employed themselves form a heterogeneous category. On a more detailed level, ELFS distinguished between employers operating own economic enterprise and hiring one or more employees, own-account workers running a business without paid helpers and contributing family members. No specific provision was made for the members of producers' co-operatives as it could have introduced ambiguity involving the former and transformed collective farms. On that level of detail, employers accounted for 3.3%, own-account workers for 3.6% and contributing family members for 0.8% of total employment. Similarly to other nations, working as self-employed is more typical to men in Estonia. Across age scale, the highest levels of self-employment can be found not among prime-age workers but in the oldest age groups. This somewhat unexpected pattern stems from the considerable engagement of the rural elderly in small-scale agricultural production.

7 Unemployment

At the expense of considerable labor hoarding, low work discipline and distorted incentives, centrally planned economies offered workers an extraordinary degree of job security. Once entered a job, employment was virtually guaranteed until they wanted to leave. When the reforms in Central and Eastern Europe started, there were certain hopes that despite unemployment will emerge, it will be to a large extent transient and most of the excess labor will soon be absorbed in the expanding sectors. The true development has proved less favorable and, as a result of structural adjustment, unemployment has reached double digit levels in the majority of transition economies. Being one of the major economic and social costs of reforms, coping with unemployment has become

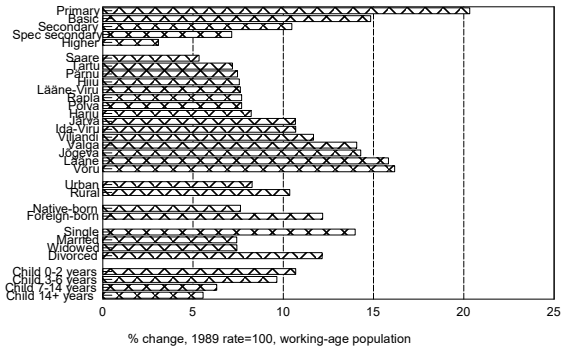
one of the most essential challenges for governments. A large number of job-seekers with limited reintegration into work and the related spread of poverty form a potential threat to social support gathered around reforms.

Monitoring the trends and levels of unemployment in transition economies has frequently been confused by the duality of registration and survey-based measures. In the case of Estonia, registration data have been guided by the 1991 government decrees which consider only the persons eligible for unemployment benefits as unemployed. To this end it must be noted that the Estonian unemployment insurance scheme has clearly been one of the most scantiest among transition economies (UN ECE 1995). Unchanged between October 1992 and July 1996, the benefits have been paid at a flat rate with replacement ratio just around around 10–15%. The maximum duration of eligibility has been limited to six months, with up to three months extension under specific circumstances (for a more detailed overview see (Venesaar 1995)).

Providing no incentive of being idle, it is not surprising that adopted policies have kept registered unemployment at very low levels in Estonia. First reported in May 1991, the number of benefit recipients grew until April–May 1993 reaching an absolute maximum close to 23 thousand. In the following years, registered unemployment has not exceeded this level. Also reported by the Labor Market Board, the number of registered job-seekers which in addition to benefit recipients includes other non-employed clients of employment offices indicates about twice higher levels. The number of registered job-seekers peaked during Spring 1994 at 45 thousand, in subsequent period it has fluctuated between 30–40 thousand. By this low level of registered unemployment, Estonia differs markedly from the countries of Central and Eastern Europe, being rather close to CIS countries. Compared to Latvia and Lithuania, Estonia's experience of registered unemployment has been the lowest. However, as noted above, the pattern of registered unemployment reflects rather the institutional framework than the labor market situation.

As only part of individuals willing to take up work are registered, registration data understate the true extent of unemployment. Addressing the issue, ELFS applied the internationally recommended definition which defines unemployed persons as currently out of employment, actively searching for work and able to accept a job once provided (Hussmanns, Mehran, Verma 1990). To match alternative approaches, special provisions were made with respect to registration and receipt of benefits in the questionnaire. Reconstructed time-series reveal that a small amount of open unemployment has existed even prior to reforms (Figure 10). Considering the definition, this result was fully expected since people have exited and entered employment regardless of economic system, implying interleaving periods of job-search. The transitional upsurge of unemployment in Estonia begun in early 1991. It is interesting to note that there was a 1.5 year time lag between early job reductions and expansion of unemployment. Evidently, the adjustments focused first on population groups which were in some ways less tightly attached to the labor force and therefore likely to leave the market without an instant attempt to return. Rapid increase in the levels of unemployment proceeded until 1994 when the signs of stabilization started to emerge. The unemployment rate referring to working-age population peaked in the third quarter of 1994 at 9.3%.

Figure 10 UNEMPLOYMENT RATE
Estonia January-April 1995



The addition of discouraged workers who are generally regarded as a part of economically inactive population, brings the figure close to 12% (Figure 10). In absolute terms, the number of unemployed can be estimated close to 70 thousand in Estonia. Compared to transition economies in Central and Eastern Europe, Estonia has fared relatively well in terms of unemployment. In late 1994 only the Czech Republic reported (much) lower levels of joblessness and virtually same level with Estonia was recorded in Hungary and Romania. Bulgaria, Poland, Slovakia and Slovenia featured considerably higher unemployment rates. The evidence from

Latvian and Lithuanian LFS conducted in 1995–96 also speaks for relatively modest levels of unemployment in Estonia, particularly in view of experienced labor reallocations.

From both individual and population perspective, the severity of unemployment depends to a large extent on the time-span under which failures in job-search efforts are experienced. To account for this, separate consideration is given to long-term unemployment, lasting for more than one year. Time-series reconstructed from ELFS indicate that following total unemployment with certain time lag, long-term unemployment started to accumulate in 1992 (Figure 11). The increase in long-term joblessness persisted until mid-1994, by 1995 long-term unemployed formed more than 40% of total unemployment. The level of long-term unemployment reached 3.9% which in absolute terms is equivalent to 30 thousand persons. Regarding labor market policies, long-term unemployed deserves special attention. Apart from short-term unemployed, this group is likely to remain out of employment unless acquiring better skills. Being found across the entire age spectrum, long-term unemployment emphasizes the necessity of labor market training not only at the entry level, but throughout the entire working life-span of the individual.

Figure 11 UNEMPLOYMENT RATE
Selected transition countries around 1995

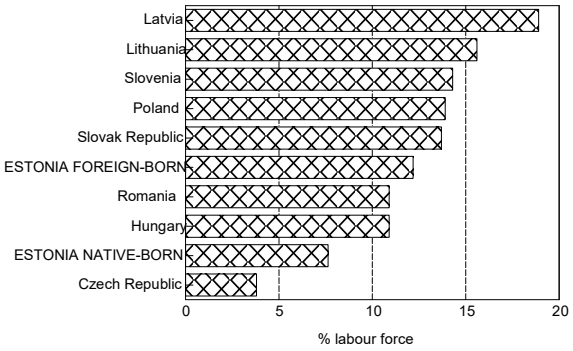
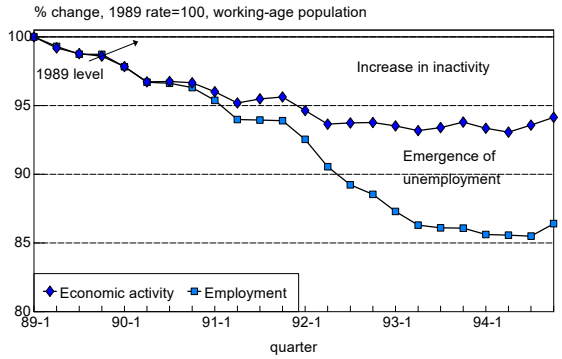


Figure 12 CHANGE IN EMPLOYMENT AND ECONOMIC ACTIVITY
Estonia 1989-1994

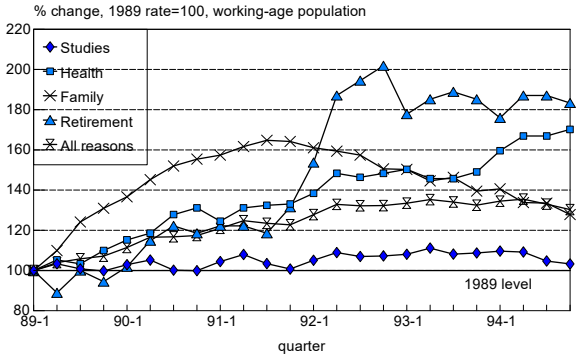


Similarly to employment reductions, emerging unemployment appears selective across sub-populations. Classically, age-pattern of joblessness displays a peak of unemployment in the youngest age group. Reported unemployment rate in age group 15–19 has exceeded 20% which is more than twice higher than unemployment in the total population at working-age (Figure 12). As such, excessive youth unemployment stems from the school-to-work transition inherently assuming job-search. Potentially stressful on individual level as any major life transition, it may develop into a social problem when employment opportunities prove limited to absorb new entrants with acceptable waiting time. Decomposition of youth unemployment into short- and long-term components reveals that this is not the case in Estonia: the share of long-term joblessness in total unemployment appears about twice lower among younger workers than in general population. Still, as the initial adjustment passes, youth unemployment will require increasing attention.

In Estonia, women seem not to have experienced disproportionate unemployment, instead, unemployment has reached somewhat higher levels among men. In that sense, Estonia shares the same experience with Hungary and Slovenia (UN ECE 1995). Evidently, women were favored by the sectoral shift, rapid job creation in tertiary

branches and the concentration of female occupations in less turbulent budget sector. Along other characteristics, unemployment experience has been strikingly different by skill level. Individuals with better skills have not lost their jobs that easily. Moreover, when it happened, they have had less difficulty in finding a replacement. In early 1995 the unemployment rate referring to working age population was limited to just three per cent among persons with higher education. Each step down the educational attainment added unemployment reaching 15% among those with incomplete secondary and primary education (Figure 13). Regions with highest unemployment levels are generally those with previously strong agricultural orientation and, accordingly, large employment reductions. Due to insufficient versatility of employment opportunities in such areas, regional pattern of unemployment is likely to become a persistent concern for Estonia.

Figure 13 CHANGE IN REASON-SPECIFIC INACTIVITY RATES
Estonia 1989-1994



Similarly to the general pattern observed in the Western countries, immigrant population features higher unemployment levels also in Estonia. According to ELFS, the unemployment rate among the foreign-born population stood at 12.2% while it averaged only 7.6% among the working-age native-borns. While the unemployment rate was generally found to decline with age, the difference between native and immigrant populations increased, peaking at age group 40–54. Being concentrated around specific industrial and occupational profiles and areas, and less adapted to local conditions, immigrants have evidently had more difficulties in finding alternative employment opportunities. However, the severity of the problem related to immigrant unemployment does not stem so much from its higher incidence but from the sheer number of immigrants. Due to the unusually high share of immigrants in the population of Estonia, their presence also pushes up Estonia's general unemployment record and places significant additional burden on adjustment policies. Moreover, the selective impact of economic transformation on specific sectors can be easily interpreted as a limitation of opportunities and used for political argument.

Perhaps less important at macro-level, differences in unemployment risk can also be found across family characteristics. Regarding civil status, the highest levels of joblessness tend to be concentrated among never-married and divorced, the lowest among married persons, respectively. As widowhood emerges in older ages where unemployment is already declining, difference between married and widowed is attenuated by the age composition of these two categories. Leaving aside the question about plausible mechanisms behind these differences, unemployment tends to cumulate among persons with less tight support networks. Differentiation of joblessness across civil status appears particularly high for men, implying thus more extensive cumulation of risk factors.

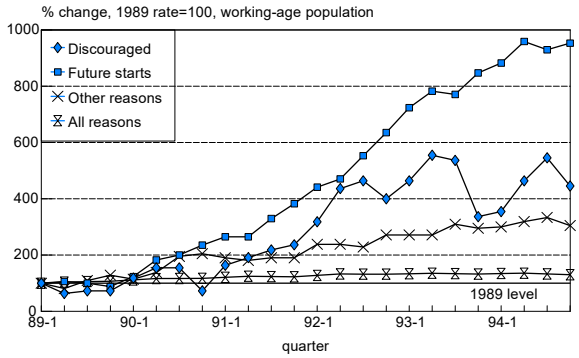
8 Inactivity

Although the reduction of employment opportunities and emergence of unemployment have been related, a closer examination of these parallel changes indicate the cumulative extent of unemployment being lesser than the fall in employment. Timing of these two inter-related processes reveals that until the second half of 1990, the absolute majority of employment exits were directed to inactivity. Evidently, it was not because unemployment had not yet been openly recognized and institutionalized, but rather because labor shedding had started from groups which were most likely to leave the labor market. In later years, exits into inactivity were paralleled with those into unemployment, indicating the employment reductions having reached the core of the labor force. More or less parallel expansion of unemployment and economic inactivity lasted until early 1993 when the increase in

the latter ceased. Following the same consideration, by that year the reductions had mostly cleared the less tightly attached segments of active population, and further employment reductions concerned population groups which could not afford dropping out of the labor market.

Apart from the establishment-level information and administrative records, the labor force survey allows for the coverage of entire population, including persons out of economic activity. To provide the insight into the conditions of the latter, inactive population is divided into subgroups. For the purposes of the current article, inactive population has been classified into five groups by the reason for inactivity: studies, illness or disability, family reasons, retirement, discouraged, and waiting for a job to be started in future. Decomposition referring to working-age population reveals that despite increase in the general level of inactivity, its structure has remained relatively stable. Both prior and during the transition, three single most important reasons for being out of labor have been studies, family reasons (mostly taking care of pre-school children), and health. The change has concerned only the fourth position in which discouragement from continued job-search has replaced retirement.

Figure 14 CHANGE IN REASON-SPECIFIC INACTIVITY RATES
Estonia 1989-1994



In relative terms, the smallest change has concerned studies which experienced growth just less than 10% (Figure 13). Inactivity due to family reasons displays an interesting pattern with upward trend until mid-1991 and continuous fall since that year. Evidently, the explanation for this pattern comes from the fertility trend which peaked during the late 1980s and turned to steep decline since 1990. Among traditional reasons, the largest increases have been observed for inactivity due to health reasons and retirement. From its 1989 level the rate of health-related inactivity has increased more than 70% and, apart other traditional inactivity reasons, has not started to show signs of stabilization.

Being virtually non-existent prior to transition, both inactivity due to discouragement and periods of waiting for employment has risen manifold (Figure 14). This feature together with the involuntary nature of the situation brings discouragement and job waiting rather close to unemployment. Similar to unemployment seems also the timing of their emergence and dynamics. The shape of the curves indicates that despite the persistently upward gradient, the upsurge in these categories has mainly passed. Across categories of population, the patterns on inactivity increase are basically consistent with these discussed in connection with employment reductions and unemployment.

9 Summary

To sum up the substantive developments discussed in the article, in a very short period of time Estonian labor market has shifted from a place suffering from acute labor shortage to the one with a demand insufficiently high to meet supply. The most relevant changes have been a significant drop in the levels of employment, emergence of open unemployment and considerable transformation of employment structure. Due to previously tight economic integration with the Soviet Union, required reallocations have been larger than in many countries of Central and Eastern Europe. The complexity of the transition was added by the need to simultaneously re-establish government institutions.

Along with its liberal stance in economic policies, Estonia did not attempt to delay restructuration by putting blocks on international trade, private entrepreneurship, layoffs and bankruptcies. Accumulated adjustment pressure and exercised non-intervention approach led in short time to comparatively large labor market adjustments. Considering the extent of reductions in primary sector and manufacturing, these adjustments did not

involve equally high levels of unemployment and labor market slack. On one hand it may be explained with room provided for the development of new employment opportunities. On the other hand, comparatively low level of joblessness may have been brought about by the remarkable modesty of implemented unemployment insurance scheme. As such, it has left very little possibilities of being idle.

As elsewhere, the cost of adjustments has been selective to subgroups of population. Consistent with findings from other transition economies, developments have clearly favored better educated and more skilled individuals. Women, who are usually considered a major risk group in transition economies, have fared relatively well and recovered half of their excessive employment reduction at the beginning of the transition. Largest employment reductions have concerned older workers, bringing the actual retirement close to statutory. Judging upon labor market indicators, a major concern for labor market developments in Estonia is formed by the massive foreign-born population. Being concentrated into specific areas and insufficiently adapted, foreign-borns have found it more difficult to find new employment opportunities. Their unusually high proportion in population pushes up Estonia's unemployment record as well as places additional burden on adjustment policies. Persistent differences can also be found across regions, reflecting the geographic concentration of shrinking sectors.

The stabilization observed in the ending part of presented time-series suggests that Estonia had by 1995 passed the period of initial labor market adjustment. Along this development, the emphasis is now gradually shifting to more developmental tasks. The main challenge is to allow for the growth become sustainable, addressing at the same time the social cost of the transition. Evidently, this will require an increasing amounts of conscious effort to determine the preferable paths well ahead of time and devise the measures to approach them. An important role in this guiding process has to be played by government institutions, particularly regarding human resources, infrastructure and institutional framework. Among several prerequisites, this requires further development of an appropriate statistical system of labor market monitoring

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