Luxembourg Income Study Working Paper Series

Working Paper No. 177

The Effects of Changing Labour Markets and Social Policies on Income Inequality and Poverty: Hungary and the Other Visegrad Countries Compared

Michael Förster and István Tóth

March 1998

Luxembourg Income Study (LIS), asbl

The Effects of Changing Labour Markets and Social Policies on Income Inequality and Poverty: Hungary and the other Visegrad countries compared

Michael F. Förster and István György Tóth

Michael F. Förster is an economist working with the OECD Social Policy Division. He has been Co-ordinator of the Luxembourg Employment Study (LES at CEPS/INSTEAD), and is currently directing Social Policy courses at the Joint Vienna Institute. The views expressed here do not necessarily reflect those of OECD or its member countries. **István György Tóth** is director of the Social Research Informatics Centre (TÁRKI) in Budapest, and associate professor at the Budapest University of Economics. He is the project manager of the Hungarian Household Panel Study.

This paper was prepared for presentation at the conference „*Inequality and Poverty in Transition Economies*", EBRD, 23-24 May, 1997, London

The authors are grateful to Péter Szívos (TÁRKI, Budapest) for his useful and most valuable comments, and to Ildiko Nagy for assistance. Any errors remain their responsibility. For **comments**, please write to: michael.forster@oecd.org or toth@tarki.hu

TABLE OF CONTENTS

ABSTRACT

The transition to a market economy has lead to liberalisation in great many spheres of society in the reform economies of Central and Eastern Europe. At the same time, financial insecurity of many households persisted or increased, and certain parts of the population face for the first time risks of impoverishment. To respond to this situation and to design effective programmes combating poverty under budgetary constraints is therefore one of the prime objectives of social policy in these countries.

We argue in the paper that there may be two major determinants of income inequalities and poverty. First and foremost, labour and capital markets play a very important role, through the allocation of jobs and earnings opportunities to the various segments of the population. Secondly, social policies, via the re-distribution of taxes through the state budget from those having higher incomes to those having lower incomes also play a role in shaping income inequalities.

There are at least two different sets of mediating mechanisms channelling the effects of labour market adjustments. One the one hand, the transition has brought a polarisation of employment opportunities resulting in an decreasing share of the population which remains economically active. On the other hand, among those who managed to keep their labour market attachments, there has been a widespread growth of wage and earnings differentials.

Most of the post-communist countries inherited a wide array of social policy measures. Some of them reformed their income maintenance policies, some of them just planned to implement reforms. However, social policies, reformed or not, affected the income composition of the population, and also, the incidence of various transfers.

Table 1.
The role of labour markets and social policies in shaping inequalities:
a draft outline to the paper:

FACTORS	PROCESSES	IMPACT
Labour markets	polarisation of employment opportunities	poverty, growth and restructuring
	growth in wage differentials	
Social policies	change in income composition change in incidence of transfers	inequalities, growth and restructuring

The paper is organised along these lines (Table 1). First an attempt is made to compare the most important features of the „transformational recession" (Kornai, 1993) in these countries. The second chapter is devoted to the assessment of labour market developments. Hungarian changes and trends are in the primary focus. However, comparisons to the experience of other countries, in particular the countries from the Visegrad group[1], will also be made, wherever possible. The next chapter gives a short overview of the extent of social policies and their effects on income composition of households and on the incidence of social transfers. Again Hungary is to be compared with the other Visegrad countries. The fourth chapter is for the assessments: effects on poverty and inequalities will be outlined. The last chapter concludes.

We choose those four Central and Eastern European (CEE) countries that are often quoted as forerunners of reforms (EBRD 1996, World Bank 1996a). Each of these countries is having different past experiences with the reforms. However, there are also a many similarities between them. We also could have chosen other countries into the analysis. An incorporation of, for example, Slovenia, could equally been justified. However, when writing this paper, we did not yet have micro data sets at hand that could be sufficiently comparable with the other datasets we used for the Visegrad countries.

In the analysis, we rely on various data sources. For Hungary, results of the Hungarian Household Panel Study (HHP) will be used as a benchmark. For the other Visegrad countries, micro data sets of LIS (Luxembourg Income Study) will be analysed[2]. And, for a few calculations, the SOCO data base (Social Costs of Transformation) will be used. The paper contains telegraph style glossaries of data-sets used and of the methodological terms in annexes.

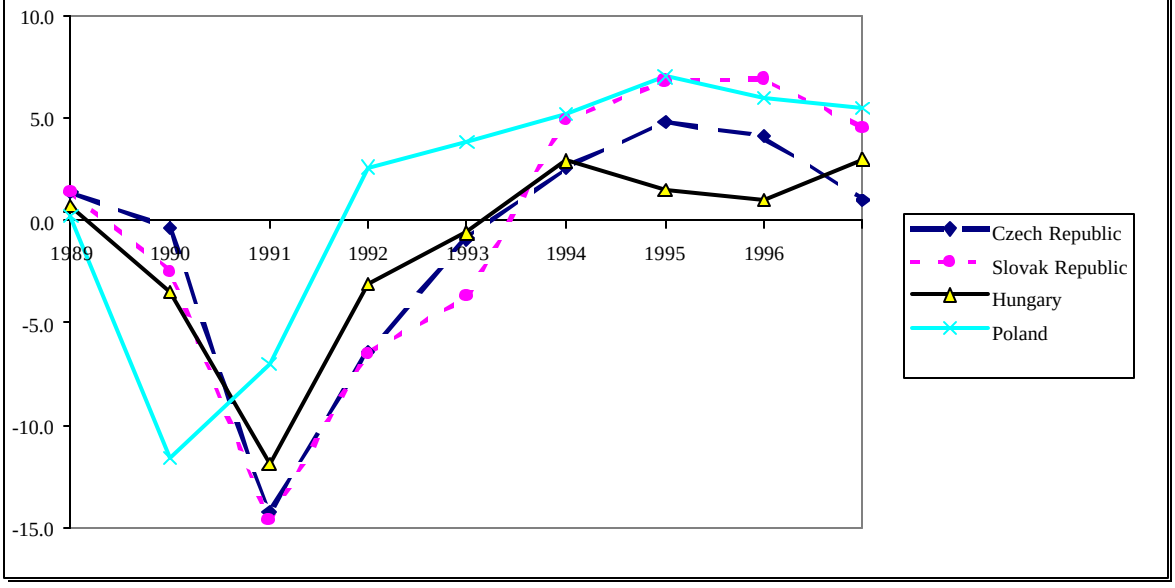
1 The Visegrad group comprises the Czech Republic, Hungary, Poland and the Slovak Republic.

2. The HHP is the basis for the Hungarian LIS data file.

1. BACKGROUND: OVERVIEW OF ECONOMIC DEVELOPMENTS IN THE VISEGRAD COUNTRIES

Each of the observed countries experienced a sharp contraction of output in the first years of the transition. The most dramatic fall in GDP occurred in 1991, with the only exception of Poland, where the largest drop happened in 1990 already. After some signs of slowdown of the recession, growth started around 1994. The rise of GDP seemed to be the steadiest in Poland: this was the only country among the Visegrad group that approached closely the pre-transition levels by 1996. By the end of 1996, the other three countries seemed to be lagging behind in recovery. However, with the exception of Hungary, all the observed countries are expected to continue some growth in 1997 (EBRD, 1997).

Chart 1. Annual real GDP growth in Visegrad countries, 1989-1997



Source: EBRD 1997: 530. 1997 data are projections.

As far as the dynamics of inflation is concerned, the observed countries show three distinctly different patterns (Table 2). Poland was in a different range than the others. An enormous hyperinflation was gradually decreasing to a „normal" level during the second half of the period. The Czech Republic and Slovakia experienced a major price shock in 1991, but since then, despite the fact that a second increase occurred in 1992, inflation remained on a relatively low level. In Hungary, the peak was also in 1991. However, after some decrease in the election year, inflation turned back in 1995 and 1996 again (due, most importantly, to the shock-like stabilisation policies implemented in 1995).

Table 2.
Annual inflation rates in Visegrad countries 1989-1996
(retail price index, annual average)

	1989	1990	1991	1992	1993	1994	1995	1996
Czech Republic	2.3	10.8	56.7	11.1	20.8	10.0	9.1	9.0
Hungary	17.0	28.9	35.0	23.0	22.5	18.8	28.2	23.6
Poland	251.1	585.8	70.3	43.0	35.3	33.2	27.8	21.0
Slovak Republic	2.3	10.8	61.2	10.1	23.2	13.4	9.9	7.0

Source: EBRD, 1996, Czech Republic: 191, Slovak Republic: 204, Hungary: 195, Poland: 201.

As a result of a number of factors like GDP fall, labour market restructuring and various deliberate policy measures, real wages tended to decline in each of the countries between 1989 and 1991. The increase started in 1991 in the Czech Republic and (with some fluctuations) in the Slovak Republic. In Poland, real wages tended to stagnate between 1990 and 1995, while the Hungarian figures declined again, after a moderate increase in 1994. By 1995, real wages were above 90% of their 1989 level in the Czech Republic, and around three quarters of their 1989 level in the other three countries (Table 3).

Table 3.
Annual index of real wages in Visegrad countries, 1989-1995

	1989	1990	1991	1992	1993	1994	1995
Czech Republic	100	94.5	69.6	76.7	79.6	85.8	92.4
Hungary	100	94.3	87.7	85.9	82.5	88.3	78.4
Poland	100	75.6	75.4	73.4	71.2	72.5	75.4
Slovak Republic	100	94.6	67.5	72.9	69.5	71.6	78.3

Source: UNICEF, 1997, pp 140.

In the following, we concentrate on Hungarian income and labour market developments, poverty and inequalities. However, when assessing the impact of these trends, facing with the challenge of international comparisons is especially compelling. Problems of this type will be further explored in chapter 4 on poverty and inequalities and also in Annex 1 and Annex 2[3].

[3] These comparative data refer to the years 1991 and 1992. These years reflect the deepest point of the recession, and are highlighted by the grey shaded columns in tables 2 to 5. Therefore, some of the conclusions may be affected by these particularities.

2. THE ROLE OF LABOUR MARKETS

We emphasise two important tendencies on the labour markets. First, there has been a drastic polarisation process in employment opportunities. Secondly, these tendencies also resulted in the differentiation of market incomes.

2.1 Polarisation of employment opportunities: growing differentiation in access to jobs

The most striking feature of the transition on the Hungarian labour market was the drastic decline in employment. While GDP dropped by almost a fifth of its 1989 value in the first four years of the transition, employment continued falling after that and by 1995 formal employment also dropped by more than a quarter of its pre transition level. Between 1989 and 1993 more jobs were destroyed than were created in the whole communist period before (Tímár 1995).

The drop of employment was drastic in all Central and Eastern European countries. As Table 4 shows, employment rates fell in all four Visegrad countries by approximately on fifth in the period 1989 to 1995. Within the Visegrad group, Hungary recorded the highest changes: this concerns both the absolute decline and the employment rate at the end of the period. The second, more recent times series derived from labour force surveys suggests that the employment rate has stabilised by 1996/1997 in the other three countries, whereas it continued to decline in Hungary.

Table 4.
Employment rates in Visegrad countries, 1989-1996

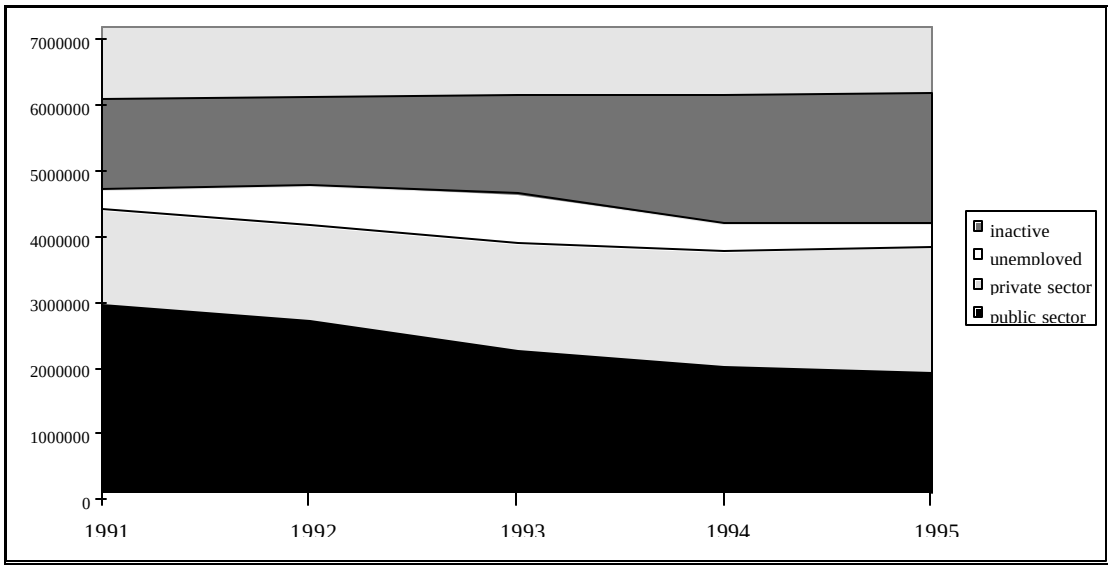
	1989	1990	1991	1992	1993	1994	1995	1996
Czech Republic, 1	94.8	81.7	84.8	79.5	79.2	77.5	77.5	-
2	-	-	-	-	77.2	77.6	74.0	74.2
Hungary, 1	83.8	83.7	81.2	76.0	67.7	64.8	64.2	-
2	-	-	-	65.5	61.6	60.6	58.8	58.4
Poland, 1	81.1	75.1	71.5	69.2	67.7	67.9	66.1	-
2	-	-	-	61.6	60.5	59.9	59.8	60.0
Slovak Republic, 1	82.7	80.4	69.9	69.9	67.2	66.0	-	-
2	-	-	-	-	64.7	64.5	65.1	67.3

Source 1: UNICEF 1997: 139 ff.
Source 2: OECD 1997a

Part of the fall of employment appeared as an increase in unemployment (Chart 2). The build-up of large scale open unemployment, starting in the end of the 1980s in Hungary, but remaining fairly low until 1990 (below 1% of the economically active population) and accelerating during 1991, resulted in a 13.6% unemployment rate by February 1993. The rise of unemployment, however, was only partly caused by increases in dismissals and enterprise shutdowns (Micklewright and Nagy 1994; Boeri 1994). Also, the capacity of the economy to absorb those outside the labour market was very low. Therefore, long-term unemployment rapidly increased. In 1995, over 40 percent of those unemployed were jobless for more than a year (Csaba 1995). By 1996 this ratio achieved some fifty percent (KSH 1997). The social problems of

the long-term unemployed are further aggravated by some peculiar features of the household characteristics of the Hungarian unemployed: Hungary, together with Slovakia, has a very high rate of long-term unemployed living in households without any other earners: this concerns one out of two long-term unemployed in these two countries, whereas only one out of three in the Czech Republic, in Poland and in Slovenia (Förster 1997a).

Chart 2.
The structure of the active age population, Hungary 1991-1995



Source: estimates based on HHP

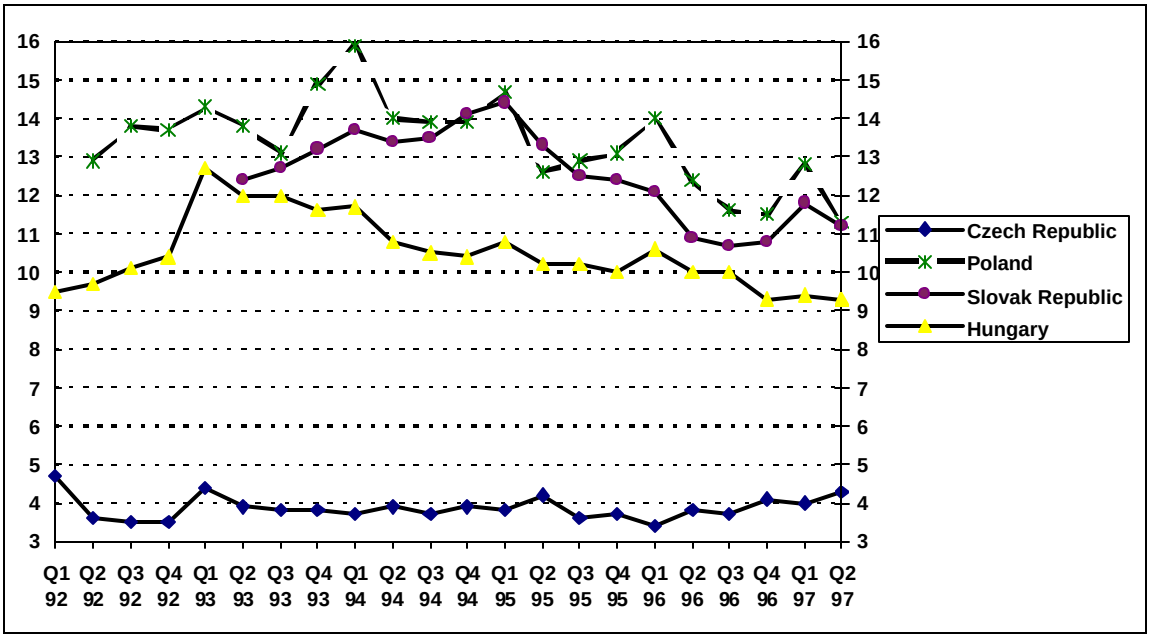
The development in unemployment showed similar features in the Visegrad countries, with the exception of the low Czech figures. The unemployment rate in Slovakia, Poland and Hungary remained in the range of 11-16% between 1992 and 1995, and decreased slightly afterwards. The Czech rate, though growing in 1996, still remained in a lower range. Table 5 shows the development of registered unemployment.

Table 5.
Annual registered unemployment rates in Visegrad countries, 1990-1995

	1989	1990	1991	1992	1993	1994	1995
Czech Republic	-	0.3	2.6	3.1	3.0	3.3	3.0
Hungary	0.4	0.8	4.1	11.0	13.4	12.0	11.1
Poland	0.3	6.3	11.8	13.6	16.4	16.0	14.9
Slovak Republic	-	1.6	7.8	11.1	12.7	14.4	13.8

Source: UNICEF 1997: 139 ff

Chart 3
LFS unemployment rates in Visegrad countries, 1992 - 1996



Source: OECD 1997a

The rise of unemployment in Hungary, though rapid and unprecedented, did not offset the fall in employment. Between January, 1990 and January, 1995, the employed population fell by more than 1.4 million, while unemployment increased by approximately 500 thousand. These two trends resulted in a drop of more than 900 thousand in the economically active population. The size of the active-age population remained largely the same, so this drop was not a result of demographic trends. The growth in inactivity was first due to social policies which lowered labour market supplies through increased education enrolment and an easier entry into the pension system. This characterised the developments in 1990 and 1991. Then, in 1992-1994, economic inactivity also spread among those in active age, and this became the most important single source in the growth of inactivity. (Tóth, forthcoming).

The dynamics of the increase in the private sector was impressive in Hungary. While in 1989 the share of private sector employment was some 10%, in 1996 the private or partly private forms of employment constituted more than 55 percent of total employment and over 70 percent of employment in the competitive sector (Kolosi, Bedekovics and Sik 1997). The increase of the share of private sector in output was even more impressive. In 1992 already, approximately 44% of the GDP was produced by the private sector (TÁRKI-GKI 1994: 29). Private sector output was largest in trade and agriculture, while in mining, energy, education, and health it was below 5%. Meanwhile, private production in manufacturing climbed above 40%. A „rough EBRD estimate" shows the Hungarian private sector share to be 70% in GDP, while the same study estimates 75%, 70% and 60% for the Czech, Slovak and Polish figures, respectively (EBRD 1996: 11).

The reliability of these estimates, of course, depends heavily on the extent to which the visible economy represents the whole economy. Estimates about the size of the hidden or informal economy show that if the Hungarian GDP in 1992 had included the hidden economy, it would have been 16% higher than

published figures. This clearly indicates an increase from 11.2% in 1980 and 12.6% in 1990 (Árvay and Vértes 1994). However, since some parts of the informal economy are estimated within the officially published GDP, this 16% show only part of the story. The total GDP was approximately 29.6% higher in 1992 than the "documented" or "exposed" GDP, since the official GDP estimate already contains some part of the hidden economy (Árvay and Vértes 1994).

Although less emphasised by labour economists and sociologists, harsh selection processes took place in employment opportunities of the population. Skills and personal strategies, that may have been successful in the pre-transition Hungary, became re-valued, some combinations of personal assets were devalued, others were valued more than previously. It seemed quite clear right at the outset that the selection process occurred systematically, rather than simply randomly, along clearly defined social dimensions.

The composition of those being driven out of the labour market differed markedly from those who were able to remain there. Earlier it was assumed that the restructuring will take place in a way that employees of the shrinking public sector will shift to the private sector through experiencing some spells of unemployment. However, this did not prove to be the case. Most of the movements from the public to the private sector were direct job-to-job shifts (Boeri, 1994; Köllõ, 1993) and both ownership sectors were net contributors to the unemployment pool in 1991-1995. Those driven out from the labour market may or may not have experienced unemployment spells, and most of them ended up in inactivity, either supported by some of the social policy systems (early retirement, maternity benefits, etc.), or just relying primarily on the active members of their households.

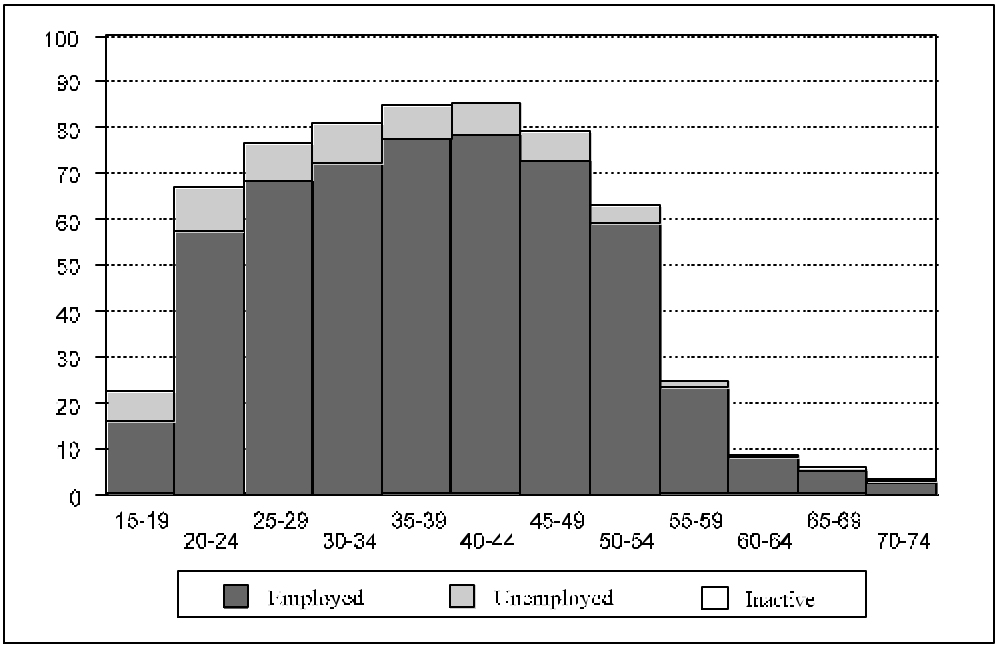
An analysis of inflows, outflows and exclusion in the labour market on the basis of the 1993 panel data showed that the stock of those working in the public or private sector in terms of average age or years of education did not differ very much. The unemployed, were younger and much less educated than the other groups. The share of women - and this seems to be a peculiarly Hungarian phenomenon - were much lower among the unemployed (35%) than that of men and were more concentrated in the public sector, which showed a high share of women (almost 60%). A comparison of the characteristics of the people flowing from one sector to the other with the respective characteristics of the population stock of the overflow sector showed that the people changing from public to private firms were younger and somewhat more educated, with women being under-represented. On the other hand, people working in firms which became privatised were older and less educated, with women being under-represented. (Tóth 1994).

Flows from the unemployed and inactive to the private sector were characterised by a larger than average share of women, by the better educated, and by the younger. Generally, the road from the private sector led mostly to unemployment and inactivity. Mostly male, the lower educated, and older persons travelled that road.

The risk of unemployment differed widely by social strata (Scarpetta and Torres 1995). The most vulnerable groups were the young, the unskilled and gypsies. Their unemployment rates were significantly higher than the average throughout the period. Rates of unemployment for women are not higher than for their male counterparts. This quite peculiar feature of the Hungarian unemployment can partly be explained by the differential rates of job destruction in "male" and "female" industries, by the wide range of maternity benefits available and by differential rates of inactivity. Chances for re-employment were higher for the young and mobile, for males, and for higher skilled persons. Chances for becoming inactive seemed to be determined by gender and educational level. Women became inactive more likely than men, especially those having lower level of education.

But the drastic polarisation of employment opportunities also had a macro consequence: the growth of inactivity and non employment in general, posed a very difficult dilemma for the financing of social policies. In 1995 on each one hundred employed person we can find one hundred and sixty three to be supported, meaning a serious burden for the employed persons. (For an illustration of part of the inactivity burden, see Chart 4.) As pointed out above, the increase of non-employment in Hungary was the largest among the Central and Eastern European countries: between 1991 and 1996, the non-employment rate almost doubled from 25% to 46%, whereas it increased only from ca. 22% to 26% in the Czech Republic and to 33% in the Slovak Republic, and remained slightly above 40% in Poland. This may also at least partly explain the difficulties the Hungarian economy faces when looking for ways of recovery.

Chart 4
Labour force status by age (% of respective total population), Hungary 1994



Source: Tóth, forthcoming

2.2 The dispersion of earnings and market income inequalities

The differential chances for remaining in the labour market also determined earning possibilities. Earnings of those being able to stay permanently on the labour market increased much more than earnings of those having only temporary employment (Table 6).

In general, the dispersion of earnings grew significantly during the transition. Occupational status seems to be a very important determinant for wage differentials: in 1994 the average for non-manual workers was approximately 70% higher than that of manual workers. Wage differentials by gender are also marked: male wages tended to be approximately 23% higher than female wages on average (KSH, 1995).

Table 6.
Cross sectional and longitudinal wage indices (March-March data)

		93/92	94/93	95/94	96/95
Panel A					
Cross sectional wage indices: total wages in current year/total wages in previous year, % (R)					
total		117	120	120	110
public sector		117	120	121	108
private sector		111	121	120	110
Panel B					
Standardised cross sectional wage indices: wage changes for those present on the labour market in both the start and of the end of the period: index of average wages in each categories (r1)					
total		117	124	117	112
ownership sector in first year	ownership sector in second year				
public	public	116	123	116	109
private	public	107	118	119	112
public	private	117	127	122	112
private	private	119	125	119	115
Panel C					
"Longitudinal" wage indices: wage changes for those present on the labour market in both the start and of the end of the period: average of individual wage indices in each categories (r2)					
total		131	133	130	123
ownership sector in first year	ownership sector in second year				
public	public	126	131	123	115
private	public	130	128	129	117
public	private	128	132	136	122
private	private	142	134	137	130
March CPI figures		124	117	127	126

Notes:
$R=(\sum_{h=1,n} (y_{t+1}) +\sum_{i=1,m} (x_{t+1}))/ (\sum_{j=1,n} (x_t) + \sum_{k=1,o} (z_t))$,
$r_1=(\sum_{i=1,m} (x_{t+1}))/ (\sum_{j=1,n}(x_t))$.
$r_2=(\sum_{i=1,m} ((x_{t+1})/ (x_t))/m$,
where
$x_{t, i=1,n}$ and $x_{t+1, i=1,m}$ denotes the wages of those having at least some wage in both waves,
$z_{t, k=1,o}$ denotes the wages of those who had wages only at the beginning of the period and
$y=(y_{t+1, h=1,n})$ denotes the wages of those who had wages only at the end of the period.

Source: Tóth 1997

Trends in earned market incomes also affected the overall income differentials of households. Previously, income inequalities were more compressed in Hungary than in OECD countries. With the liberalisation of wage policies, inequalities among different social strata increased. The ratio in mean incomes of the uppermost decile to that of the lowest decile increased from 3.8 in 1982 to 5.2 by 1991. (KSH, 1990). From 1991 to 1994, the ratio increased further. In 1996, households in the highest decile (as measured by per capita incomes), shared well over seven times more than those in the lowest decile (Kolosi, Bedekovics and Sik 1997).

The dispersion of market incomes of households increased by some 10% in the period 1989 to 1995 as shown by the values of the Gini coefficient. This change was dominated by increased dispersion of earnings. If all pre-transfer incomes (i.e., market incomes and non-public inter-household transfers) are taken together, the dispersion also increased, from 0.43 to 0.49 in the period 1992 to 1995 (see Table 11 below).

As a summary, it should be concluded that the most important division lines were drawn between labour markets and those being excluded. These trends had their consequences on earnings and income position of the various households. Further analysis of these trends will be given in the section below on poverty and inequalities.

3. THE ROLE OF SOCIAL POLICIES IN SHAPING INCOME INEQUALITIES

In addition to market trends, social policies may also play an important role in shaping inequalities. Most of the social welfare benefits of the post-communist countries were inherited from the past. The wide array of cash programs included pensions, family leave and bonuses, sick and disability pay, some limited needs-based welfare payments, and, more recently, unemployment insurance. Their scale and scope were based upon a centrally planned economy, in which most prices were controlled, and substantial subsidies were granted throughout the economy. In addition to that, health and education services were financed and provided for free by state (governmental) agencies, and significant fiscal support was granted to the housing sector as well.

Three aspects of change in this system will be traced here: macro-economic costs, income composition of households and the incidence of social transfers.

3.1 Major trends of social spending priorities and institutional changes

Despite the continued (though sometimes hesitant) efforts of the consecutive governments to reduce and restructure the role of the state in the economy, the share of Hungarian government expenditures in GDP did not drop below 55% of the GDP. The expenditure share even increased above sixty percent between 1992-1994 (EBRD 1996:194) However, the transition brought a significant shift in the structure of expenditures: government expenditures on economic services fell dramatically, paralleled by a marked increase in the relative size of welfare expenditures. Although expenditures on social protection fall in real terms (in most of the cases and in most CEE countries), an increasing share of GDP had to be devoted to financing social policies.

There is a growing literature on the social policy systems in Visegrad countries (see, for example, Cichon 1995, EBRD 1996, OECD 1993, 1995, 1996, PHARE 1996, World Bank 1995, 1996a). There is an agreement among the various papers that welfare reforms lagged behind economic reforms in each of the countries. Some countries may have implemented some measures to tackle the challenges of marginalisation and impoverishment. However, most of the welfare systems remained to a big part untouched. Universal rights to services, relatively generous social policies were going hand in hand with inadequate targeting. Lack of eligibility cuts in the period of growing needs has resulted in erosion of benefits in most of the cases.

Despite these similarities, there were some dissimilarities also. Part of the expansion of social expenditures may be attributed to increased demand for social policies independent of the economic transition: e.g., demographic challenges like the ageing of the society, the increase of dependency burden, and the change in family patterns. Other factors like the fall of household disposable incomes and the increase of poverty, were endogenous. As a result of these strong pressures and of the drop of the GDP, the Hungarian social expenditure share in GDP climbed to about 1.4 times the OECD average by 1992 .

(Tóth 1994; OECD 1995). Polish social expenditures relative to GDP were in the same range as the Hungarian ones in 1992, and the Czech and Slovak were somewhat lower (Table 7).

Table 7.
Public social expenditure shares in GDP in Visegrad countries, 1992

	health	education	pensions	family and maternity benefits	social assistance and unemployment	total
Czech Republic	5.5	4.8	8.1	3.8	2.0	24.2
Hungary	4.8	5.9	11.0	4.1	2.9	28.7
Poland	4.9	4.3	14.7	2.0	2.3	28.2
Slovak Republic	6.2	5.8	9.1	3.0	1.3	25.4

Source: UNICEF, 1997

A sharp recent decrease in the Hungarian social expenditure share may be suspected because of the slight increase of the GDP and also due to the austerity measures introduced in 1995, when promising growth figures of 1993 and 1994 were accompanied by widening macroeconomic disequilibria. Fiscal and current account deficits reached a level (7 and 9 percent in 1994, respectively) that was perceived as unsustainable by the government. A strict stabilisation policy was announced in March 1995, containing measures like devaluation of the national currency, strengthening the tax base and cutting public sector wages, employment and social expenditures. As a result, macroeconomic balances improved by the end of the year, though many observers perceive the social costs as too high for that. Social expenditures dropped: family policy expenditures were cut half.

Social spending priorities are better shown by the relative shares of various cash programmes. In table 8, the expenditures on the elderly, on child rearing families and on the poor/unemployed are presented, as a share of all cash transfers. Pensions received the largest share in Poland: they make up over three quarters of social expenditures. Family and maternity benefits seemed to be the highest relative share in the Czech Republic, while the package of unemployment benefits and social assistance received the biggest share in Hungary out of the total expenditures.

Table 8.
The relative importance of pensions, family benefits, social assistance and unemployment benefits in Visegrad countries, 1992
(relative share in total social transfers)

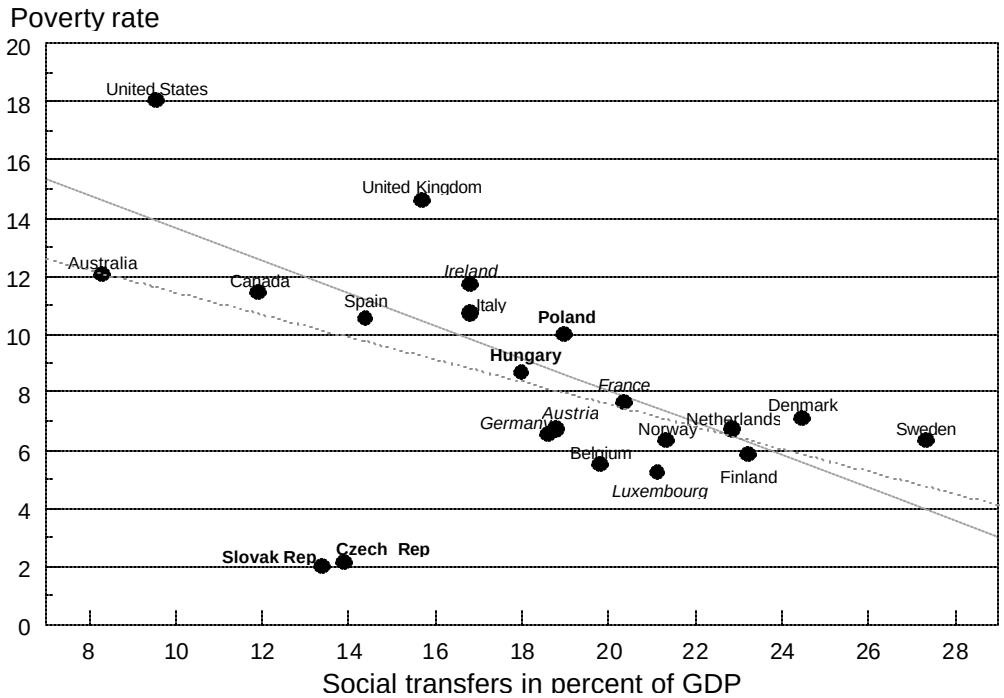
	pensions	family and maternity benefits	social assistance + unemployment benefits	total
Czech Republic	58.3	27.3	14.4	100.0
Hungary	61.1	22.8	16.1	100.0
Poland	77.4	10.5	12.1	100.0
Slovak Republic	67.9	22.4	9.7	100.0

Source: UNICEF 1997, own calculations

To which extent does public social spending influence the level of poverty? There are arguments relating the size of the welfare state to cross-national variations in poverty. Chart 5 shows this relationship: the size of the welfare state is proxied by the share of social transfers (non-health social expenditures) in GDP, and is traced on the x-axis. The level of poverty as dependent variable is proxied by the relative poverty rate[4]. The continuos line in Chart 5 represents the regression line for 'traditional' OECD countries only, and suggests a relatively strong negative correlation between social expenditure and poverty levels. Looking at these countries only, two groups can be distinguished: "low spenders" with above-average poverty rates: the Anglo-Saxon and the Southern European countries. And "high spenders" with low poverty rates: the Continental European and Nordic countries.

Putting the four Visegrad countries into this picture diversifies this country grouping (the figures shown refer to the 50%-poverty line; but the same findings apply when moving to a higher cut-off, e.g. 60%; see table 14 below): Hungary and Poland together form a group between the two country groupings designed above, with medium levels of both spending and poverty. And the Czech and the Slovak Republic are outliers combining low spending with the lowest relative poverty rates[5]. The dotted line represents the regression line for all 21 countries.

Chart 5.
Social transfers and poverty rates



Source: Förster (1994: 191) and updated calculations from LIS micro data and OECD Social Expenditure data base.

[4] The adequacy of relative versus absolute poverty estimates when comparing Visegrad countries is discussed below in Chapter 4 and Annex 1.

[5] It should be noted, that the data for social expenditures for the Visegrad countries stem from another data source (UNICEF 1997), and are therefore not strictly comparable with the remaining figures.

Notes: Data refer to a year between 1990 and 1992, except countries in *italics*: year around 1986. Poverty rate defined as percent of persons in households with incomes below 50% of median disposable income; all incomes adjusted for household size.

3.2. Income composition of households

In general, the share of social incomes in the composition of household budgets grew significantly due to the transition process in the last few years. The proportion of households with no market incomes at all remains fairly high throughout the period: as many as one fifth of households either relied solely on social incomes and social insurance benefits or, possibly, on help from other households or other household members (Förster and Tóth 1995). The proportion of households receiving earnings related social insurance benefits is almost as high as the ratio of market income recipients, i.e. almost 80%. More than half of such households received some sort of pension (old age pension, disability-pension, widow's pension) and about 13% of all households received some sort of unemployment benefits (either insurance or assistance benefits) between 1992 and 1996. The rate of recipients of maternity benefits seems to decrease slowly, being around ten per cent of all the households. Approximately one-third of all households receive family allowances for at least one child, whereas only about 10% of the households is receiving social assistance.

Table 9 shows the composition of total household incomes in Hungary, for the period 1992 to 1996. It can be seen, that within this four-year period the share of market incomes fell for six percentage points to 57 %, whereas the share of social insurance incomes increased for the same amount, to 36%. The share of other income components (mainly public social transfers)[6] remained the same. The increase in the share of social insurance incomes is primarily accounted for by pensions, while the share of unemployment and maternity benefits decreased.

Table 9.
Composition of household incomes, Hungary 1991/92-1995/96

INCOME TYPES	1991/92	1992/93	1993/94	1994/95	1995/96
1. market incomes total	62.8	55.8	54.3	59.8	57.1
2. social insurance total	30.0	34.2	34.8	32.6	35.7
2.a pensions	26.0	29.5	30.2	29.2	32.8
2.b unemployment insurance	1.5	2.1	1.9	1.1	0.8
2.c maternity benefits	1.5	1.4	1.3	1.2	1.2
3. public social transfers	5.6	6.2	6.0	5.2	5.2
3.a social assistance	0.6	0.8	0.5	0.5	0.5
3.b family allowances	4.5	4.5	4.2	3.6	3.1
4. inter-household transfers	0.5	0.4	0.7	0.5	0.7
5. other household incomes	1.1	3.4	4.2	1.9	1.3
total	100.0	100.0	100.0	100.0	100.0

6. In the following, the term "public social transfers" refers to non-earnings related social transfers, such as social assistance or family allowances.

Note: percentage distributions computed from total incomes of households
Source: own calculations on the basis of the Hungarian Household Panel Study

These findings reflect the shares of different income components for the total population, on average. The role of market and non-market incomes for various population groups appear in Table 7. As the data show, market incomes accounted for approximately 23% of the incomes of households where the head is pensioner. They also accounted for roughly half of the incomes of persons in households with inactive or unemployed heads, and for approximately 85% of the incomes of households, where the head was employed. The most vulnerable groups rely more heavily on some sorts of social transfers, though, even in their cases, social transfers may not be the most important sources of income.

Table 10.
Composition of household incomes by employment status of the household head, Hungary 1994/95

INCOME TYPES	Employed public sector	Employed private sector	Unemployed	Pensioner	Inactive	Average
1. Market incomes	85.3	84.2	51.4	22.7	47.7	59.9
2. Social insurance transfers	7.5	7.8	27.1	72.3	19.1	32.5
2.a Pensions	4.1	4.3	5.0	70.8	13.1	29.1
2.b Unemployment	0.6	0.7	15.9	0.6	4.0	1.1
2.c Maternity benefits	1.4	1.8	3.9	0.2	1.9	1.2
3. Public social transfers	5.6	5.8	19.4	2.2	25.9	5.1
3.a. Social assistance	0.4	0.3	1.0	0.5	5.7	0.5
3.b. Family allowances	4.1	4.7	13.4	1.2	9.6	3.6
4. Other income types	1.7	2.1	2.1	2.7	7.3	2.5
Total	100.0	100.0	100.0	100.0	100.0	100.0
Total, thousand Forints per year	319.2	325.3	166.1	223.2	135.5	252.4

Note: numbers in table show distribution and amount of total equivalent incomes, e=0,73.
Source: authors' calculations on the basis of the 5th wave of the Hungarian Household Panel Study

3.3 Incidence of the social transfers

A great majority of households receive social incomes in one form or another. Overall it seems clear that the wide inequalities of primary earnings (there is a twenty times difference between the earnings in the top decile and earnings in the bottom decile in Hungary, for instance) are significantly reduced by social incomes. This can also be illustrated by an analysis of Gini coefficients for certain types of incomes. The overall dispersion of pre-transfer incomes in 1992, represented by Ginis between 0.32 (Slovakia) and 0.42 (Hungary) is reduced considerably when social transfers are accounted for. Table 11 shows Gini coefficients for pre-transfer incomes, and for household incomes when public social transfers, and social

insurance transfers are added in[7]. First, it is noteworthy, that the main effect in decreasing the Gini coefficient stems from social insurance transfers, rather than from public social transfers, in all three Visegrad countries that have data on this distinction available. Second, overall, transfers reduce the Gini coefficient by at least one third in Hungary and the two Republics of former Czechoslovakia, but much less so in Poland.

Table 11.
Gini coefficients for total incomes and before accounting for transfers in Visegrad countries

	Czech Republic 1992	Hungary 1991/92	Hungary 1994/95	Poland 1992	Slovak Republic 1992
pre-transfer incomes	0.3438	0.4283	0.4953	0.3575	0.3189
pre-transfer incomes + public social transfers	0.3415	0.4203	0.4782	n.a.	0.3082
pre-transfer incomes + public social transfers + social insurance transfers = total household incomes	0.2047	0.2812	0.3188	0.2914	0.1868

Notes: pre-transfer incomes = market incomes (labour and capital) +other non public transfers
Gini coefficients show the concentration of non-zero equivalent incomes of persons in households (e=0.55)
Source: own calculations from LIS micro data

As it has been shown elsewhere for Hungary (Tóth 1997), the decrease in the share of the households receiving market incomes was accompanied by an increasing dispersion of market incomes among those receiving market incomes. However, inequalities of equivalent pre-transfer incomes were at least partly compensated for by transfers only in the first half of the period. In 1992-1993, the inequalities of total household incomes, despite increases in pre-transfer inequalities, even decreased as a result of social redistribution. The next two years, however, showed a controversial role of redistribution in the narrowing of income inequalities (Kolosi, Bedekovics and Sik, 1997, Tóth 1997).

To better understand the role of various social programmes in shaping income inequalities, illustrations of possible redistributive effects of social programmes are shown in Chart 4a. Five different, hypothetical distributional patterns are presented there with the help of Lorenz curves (based on cumulative distribution of incomes in fixed cumulative population deciles, defined on the basis of total adjusted household equivalent incomes).

There are five different hypothetical distributional patterns. Should all the deciles receive the same amount, Lorenz curves will be equal to the diagonal. When some of the income types show a somewhat concentrated distribution, the shape of Lorenz curves will deviate from the diagonal, either upwards, or downwards. A distribution is called „targeted" when a distribution of certain income types is skewed to the left (towards the direction of the lower deciles). The line called „unequal" shows a distributional pattern

7. It should be noted that results obtained by this method of "adding in" successively income components do not reflect the 'pure' contributions of the various income types to overall income inequality: they are influenced by the order in which the different components are added in, and by the absolute magnitude of components (public social transfers, for example, represent a very small part in total household incomes).

skewed towards the right (that is, towards the uppermost income deciles). When the income deciles in the middle receive more than the average, we may call it as „middle class" distributional pattern. In principle, a fifth pattern may also happen: when the two ends of the income scale receive relatively more of the given income types. This will be called „bi-modal" distributional pattern.

Chart 6a.
Hypothetical distributional patterns as represented by Lorenz Curves

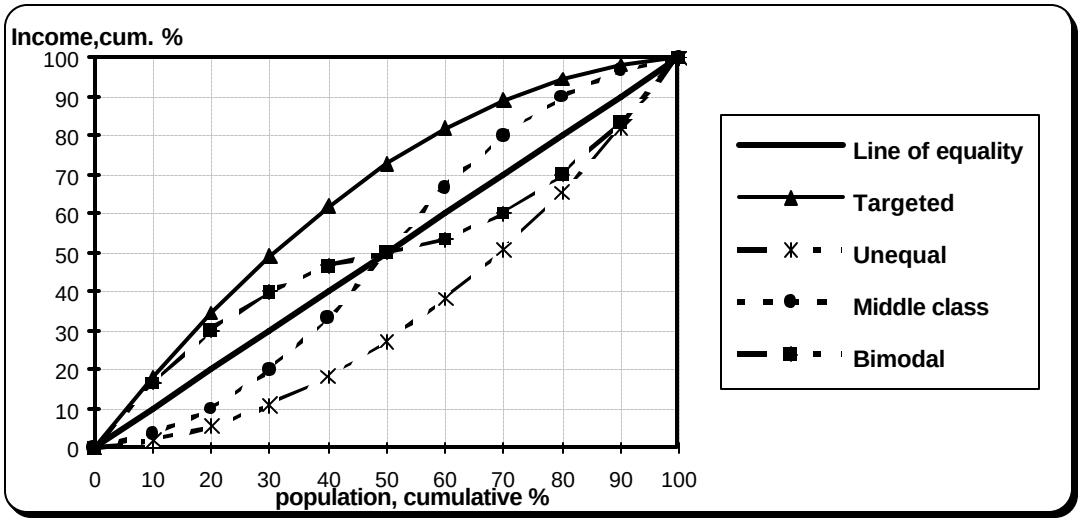


Chart 6b.
Distributional Patterns of Market Incomes and Earnings Related Benefits, as Represented by Lorenz Curves, 1995/96

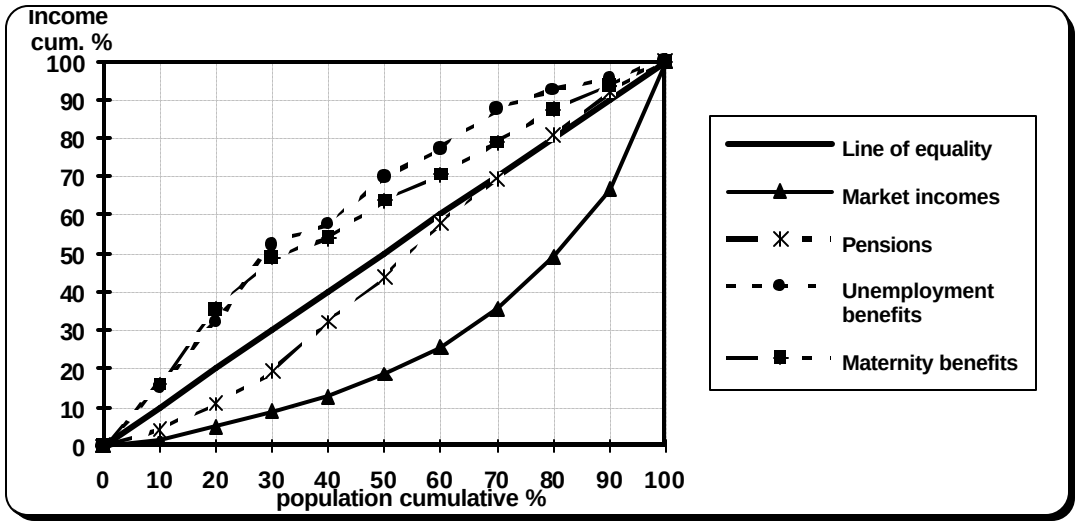
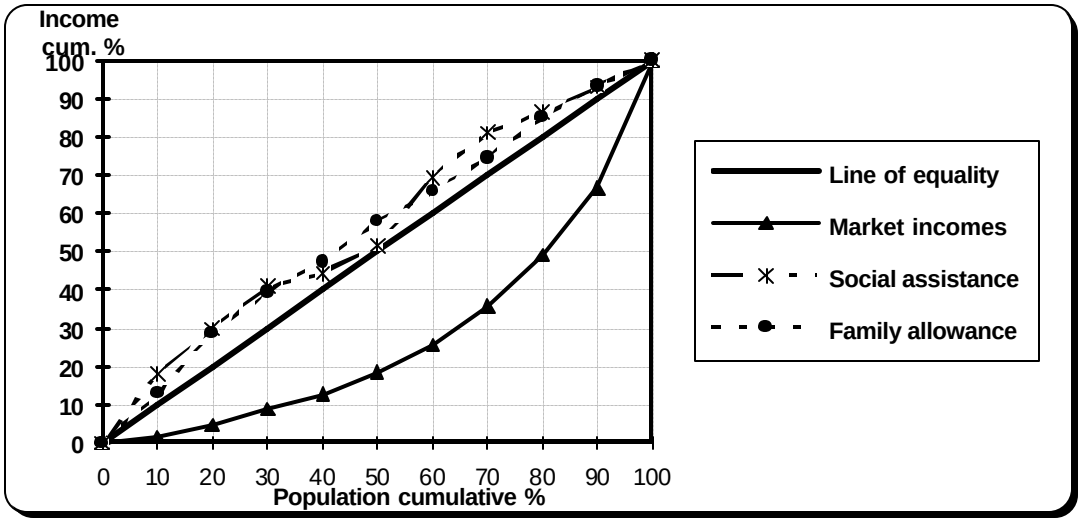


Chart 6c.
Distributional Patterns of Market Incomes and Social Incomes, as Represented by Lorenz Curves, 1995/96



The samples b through d in Chart 6 apply the actual estimates from the Hungarian Hosuehold Panel for different types of transfers to our model. Chart 6b shows the distributional patterns of market incomes and social insurance benefits in 1995/96. From this it is clear that unemployment benefits and, to a lesser extent, maternity benefits show a targeted pattern, despite the fact that they both were earnings and employment related at the time of the survey. Pensions show a sort of „middle class" pattern. Chart 6c is to show the distributional pattern of social assistance payments and family allowances. Social assistance seem to favour the poor, though seemingly to a lesser extent than maternity or unemployment benefits. Family allowances were close to the „equal" distributional pattern, that is, most of the deciles received approximately the same amounts.

It should be noted, however, there were important changes in the distributional patterns of various social incomes in the last couple of years in Hungary. A closer observation shows that the „targeting" of various benefits has been improved during the last five years, despite the fact that strong policy restrictions were only applied later. There may be two reasons for that. The first is the assumption that social benefit recipients tended to shift down in the income ladder. The second possible explanation can be found in some of the institutional changes in the various social programs. There is only one exception to this trend: pensions tended to move towards a more „middle class" pattern, most likely as a result of the changed benefit indexing practices (Tóth 1997).

The incidence of social transfers can be compared across the Visegrad countries for the year 1992, on the basis of the LIS micro data. In addition, a second data point allows to trace some changes for Hungary (1991/92 through 1994/95). Chart 7a through 7d show the share of the population receiving transfers, by quintile groups. Four important programmes are examined: social insurance pensions, unemployment benefits, family allowances and means-tested benefits (mainly social assistance). Polish data are available for pensions only.

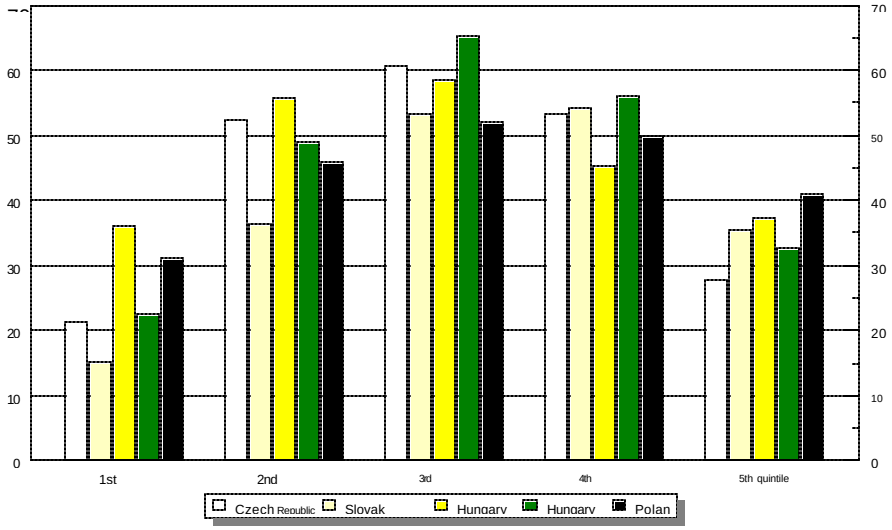
The distribution of pensions is in all Visegrad countries concentrated rather towards the 'middle class': persons falling into the second to fourth quintile, and in particular the third quintile, are more likely to be receivers of a social insurance pension in all four countries. As noted above, this picture has become even more accentuated in Hungary between 1992 and 1995.

Unemployment benefits, although insurance based and earnings related show a much more 'targeted' feature: persons in households in the bottom quintile are twice as likely to receive these benefits than the average. This is particularly marked in the Czech and the Slovak Republic (although on a different level). In Hungary, between 1992 and 1995, all quintiles except the bottom one reduced slightly their recipient share.

The debate whether family allowances are 'targeted' enough and, moreover, whether they should be, is ongoing. Chart 7c suggests that the share of family allowances is higher on the bottom than on the top of the income distribution, especially so in the Czech and the Slovak Republic. As for means-tested benefits in Chart 7d, they appear to be concentrated towards the lower quintiles in all three countries for which data are available.

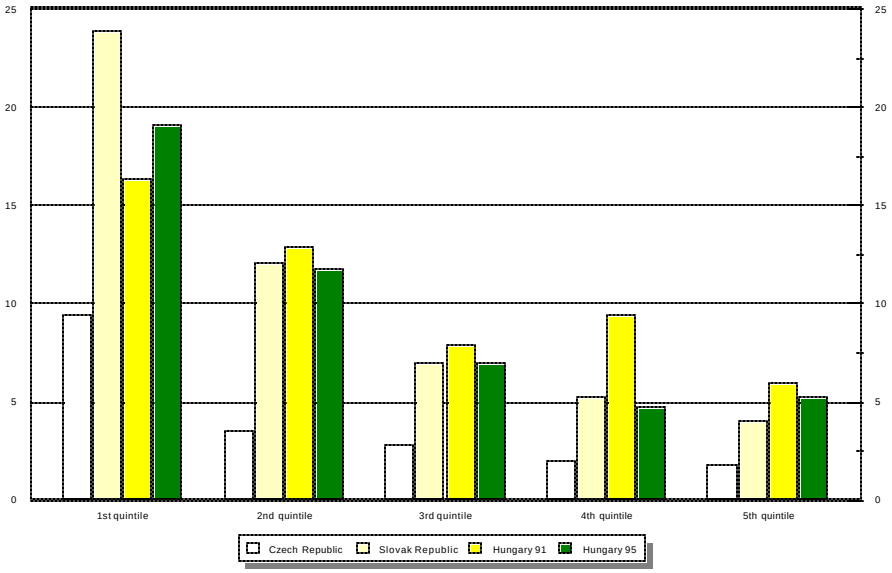
As a conclusion regarding these four social benefit programmes, one might say that pension benefits appear to be concentrated towards the 'middle class' whereas unemployment benefits, family allowances and means-tested benefits all have their highest share at the bottom of the income distribution. Hungary, where this picture was less marked in 1992, seems to approach it in 1995.

Chart 7a.
Pensions: share of recipients, by quintile



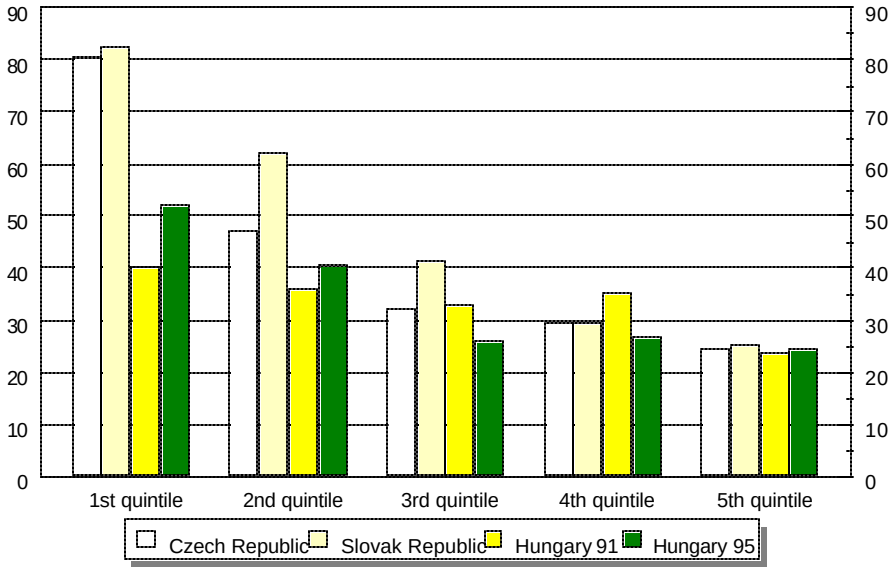
Source: authors' computations from LIS micro data

Chart 7b.
Unemployment benefits: share of recipients, by quintile



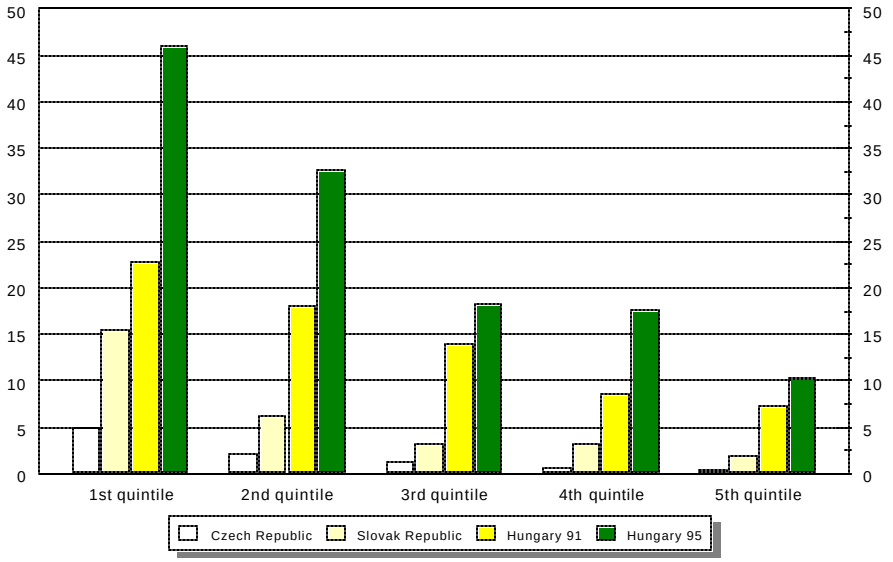
Source: authors' computations from LIS micro data

Chart 7c.
Family allowances: share of recipients, by quintile



Source: authors' computations from LIS micro data

Chart 7d.
Means-tested benefits: share of recipients, by quintile



Source: authors' computations from LIS micro data

4. THE IMPACT OF TRANSITION ON POVERTY AND INEQUALITIES

The impact of transition is going to be analysed here in two steps. First, poverty rates and incidence will be shown to illustrate the situation of the most vulnerable groups. Second, long-term trends in inequalities will be sketched.

4.1 Poverty in Hungary

National studies on poverty all agree that poverty increased and became more visible in Hungary in recent years. Data from the Hungarian Central Statistical Office (KSH) showed that the absolute number of people living under the subsistence poverty line in 1992 had risen by approximately 50% from its relatively stable level of 10% poverty rates in the 1980s. (KSH 1993) According to data from the Hungarian Household Panel poverty had grown to 22-25% in size by 1993, and further increased to about 30-35 percent by 1995 (Kolosi, Bedekovics and Szivós 1995). The World Bank estimates poverty around half of the total population in 1993, when considering the subsistence minimum as a bench-mark (World Bank 1996b). The literature on poverty in Hungary is growing fast.[8] As a summary of these studies, the following picture on the Hungarian poverty composition arises.

First and foremost, Roma families are very seriously affected by poverty. Their poverty rate is very high - when taking the upper bound of the lowest quintile as a threshold, 69% of all Roma households are poor and some 72% of those living in families in which the head-of-family is a Roma are poor (in 1992). A more refined analysis shows that the more restrictive the definition of poverty used is, the higher the percentage of Roma poor will be. Table 12 illustrates this by using three different relative poverty cut-offs: 50% of the median income, the lowest decile and the lowest quintile. Longitudinal analysis also proves that the Roma population has very little chance of escaping from poverty (see chapter 4.3).

Home location and education have a great influence on poverty. People with a lower-level education, and those living on lower segments of the settlement hierarchy (mostly in rural areas) are especially vulnerable to the risks of poverty. Those living in isolated farmhouses, or in homes where the head-of-family is poorly educated (has finished less than 8 primary school grades) are twice as likely as the average to be poor.

Labour markets also play an important role in the determination of poverty risks. Those living in households with an unemployed head run a risk of being poor at least twice as high as the average.

---

[8] An account of the composition of absolute poverty based on data from the Hungarian Household Panel was carried out by Tamás Kolosi (Kolosi, Bedekovics and Szivós, 1995), while the charting of the composition of relative poverty was initially carried out by Rudolf Andorka (Andorka 1992, Andorka and Spéder 1993a, 1993b). A more recent analysis took a detailed look at the composition of poverty using three different equivalence scales and four definitions of poverty. (Tóth, Andorka, Förster and Spéder, 1994; Andorka, Spéder and Tóth 1995; Andorka 1996) Based on different datasets, the World Bank also published estimates of the extent and composition of poverty in Hungary (World Bank 1996). Szivós (1995) published a comprehensive account on the profile of poverty, on the basis of the Hungarian Household Budget Survey. International comparisons are becoming available more recently (Ferge, Róbert, Sik and Albert 1995; Torrey, Smeeding and Bailey 1995; Ferge 1996; Andorka, Ferge and Tóth 1996; Förster 1997b).

Finally, demographic determinants of poverty are also very pronounced. Poverty rates are higher among households with at least three children, or if the head-of-household is under 40 years of age, or if he/she is raising the children alone. Differences between various household types are smaller for age categories between 40 and 60 years, but here also, single-parent families and families with three or more children were more likely to be poor. Finally, households headed by an older person (above 60 years of age) are greatly at risk of being impoverished if the elderly person lives alone.

Table 12.
Household specific poverty rates for certain high risk population groups, Hungary 1993

POVERTY DEFINITION	50% OF MEDIAN	LOWEST DECILE	LOWEST QUINTILE
education of head: less than primary	8.5	20.8	41.3
education of the head: primary	8.3	13.9	30.2
type of settlement: detached house	9.9	18.8	42.4
type of settlement: village	7.9	11.7	23.8
employment status of head: unemployed	16.2	24.8	41.0
household type: lone parent	14.3	22.5	34.2
household size: 5+ members	8.3	15.3	22.7
number of children: 3+ children	34.2	51.9	65.2
ethnicity of the head: Roma	38.9	54.2	69.8
all households	4.8	10.0	20.0

Note: households are ranked on the basis of their equivalent incomes (e=0.73)
Source: Tóth, Andorka, Förster and Spéder (1994)

Table 12 has used three different cut-off levels for income poverty: the lowest 20%, the lowest 10%, and below 50% of the median income. It should be noted, that for all specific population groups, the lower the level of income used as the poverty threshold, the more at risk these groups are. Table 13 summarises the picture of poverty risks in Hungary. This clearly indicates a sort of life cycle effect of poverty, the nature of which could be easily emphasised with the help of this simple classification.

Table 13.
Life cycle determinants of poverty

	YOUNG	MIDDLE AGE	ELDERLY
HIGH RISK GROUPS	lone parent, young couple with one child	broken up family, family with 3+ children	single elderly
LOW RISK GROUPS	single, couple with no child	two parents with less than three children, working household heads	couples

4.2 Hungarian poverty profile: temporary and long-term

Poverty will be perceived differently depending on whether it is permanent or temporary. From a social policy point of view, permanent poverty constitutes a more serious problem than temporary income falls. At the same time, temporary financial insecurity of households cannot be neglected in practical social policies.

Due to the longitudinal nature of the Hungarian Household Panel study, it is also possible to shed some light on the nature and characteristics of durability of poverty. „Durability" could be defined as the length and/or number of poverty spells. When analysing turnover among income deciles through 1992 and 1993, we found that around 41 and 44 per cent of the persons belonging in 1991/92 to the two bottom deciles (depending on the equivalence scale used) entered in 1992/93 higher deciles, and more than a quarter of them to the 4-10 deciles, i. e. to the deciles having at least a moderate income level (Table 11). These data suggest, that at least for part of the poor population the experience of poverty is temporary, and their relative income level was improved. However, it is also clear that "improving income level" should be understood as a relative improvement. It can happen, of course, that a person steps ahead without moving, if others, on average, step back.

Table 14.
Outflow of poor persons in Hungary from 1992 to 1993

Decile in 1992	Equivalence scale elasticity	Decile in 1993			Total
		1-2	3	4-10	
1	e = 1.0	64.7	9.1	26.2	100.0
	e = 0.73	61.1	10.1	28.8	100.0
	e = 0.55	62.5	4.2	33.3	100.0
2	e = 1.0	53.2	18.9	27.9	100.0
	e = 0.73	51.2	13.3	35.5	100.0
	e = 0.55	51.8	14.8	33.4	100.0

Source: Tóth et al, 1994

Table 15 analyses longer periods and repeated spells of poverty. When "duration" is defined as length of poverty by the number of poverty spells measured in years, it was found that:

i) Persons having a lower education have much less chance to leave poverty than persons having higher education. Persistent poverty was found to be rare among those having tertiary education.

ii) Chances of leaving poverty seem to be lower at both ends of the life cycle: children and the very elderly have less chance to leave poverty.

iii) 75 percent of the Roma population experienced at least one poverty spell though the years between 1992 and 1996. Virtually no members of this group could improve their relative positions.

Table 15.
Distribution of persons in various categories (as of 1996) by the number- of their poverty spells between 1992 and 1996 in Hungary

How many times were they were found to be poor between 1992 and 1996?						
	Never	once	2-3 times	4-5 times	total	N=
Settlement type						
Village	66,1	16,6	11,5	5,8	100	1619
Small town	78,5	12,4	4,8	4,2	100	1135
County capital	70,1	14,9	14,1	0,9	100	589
Budapest	86,8	9,7	2,0	1,5	100	760
Region						
Budapest	86,8	9,7	2,0	1,5	100	760
North-West	77,0	19,3	3,1	0,5	100	550
South-West	82,1	9,4	5,8	2,6	100	652
South-East	79,0	11,3	6,9	2,8	100	640
North-East	60,0	17,1	15,0	7,3	100	1501
Total	73,9	13,9	8,3	3,9	100	4103
Age						
6 -14	63,6	16,8	12,8	6,7	100	477
15 -19	66,9	16,8	11,5	4,9	100	389
20 -29	71,3	18,1	6,8	3,8	100	470
30 -39	72,9	16,2	7,1	3,8	100	577
40 -49	73,5	12,7	10,3	3,5	100	701
50 -59	82,7	7,9	6,5	2,9	100	505
60 -69	83,2	10,1	3,5	3,2	100	489
70 -	77,0	12,3	8,1	2,6	100	373
Education						
Less than primary	42,7	13,0	18,8	25,5	100	409
Primary (8 years)	49,9	18,5	20,0	11,6	100	974
Vocational	57,2	20,5	16,6	5,7	100	851
Secondary	73,4	15,9	9,5	1,2	100	802
Higher	91,9	6,9	1,0	0,2	100	383
Ethnicity						
Not Roma	79,0	12,8	6,2	2,0	100	3473
Roma	24,1	19,8	19,2	37,1	100	116
Gender						
Male	76,2	12,8	7,8	3,1	100	1606
Female	74,6	13,8	7,7	3,8	100	1817

Note: definition of poverty: below 50% of median equivalent income

Source: Andorka and Spéder 1997, on the basis of HHP

4.4 Comparing income poverty across Visegrad countries

This section puts the Hungarian poverty profile in a comparative context with the other three Visegrad countries: the Czech Republic, Poland and the Slovak Republic. Basis for the comparison were analyses of the standardised income micro data sets of the Luxembourg Income Study (LIS)[9]. It should be noted at the outset that the reference period for these comparisons is the year 1992, except for Hungary where it is April 1991 to March 1992. This is an early year of the transition process: real GDP in these four countries still stood at between 78 and 84 percent of the 1989 level (WIIW 1995; EBRD 1997). And GDP continued to fall for another one to two years, except for Poland where the growth started already in 1992. The results of the analyses of household incomes below have therefore to be interpreted with due care.

On the other hand, these data sets provide the only available source of harmonised income micro data for the same time period and therefore allows methodological choices[10] that ensure a reasonable comparability of data. A second data point available for Hungary (April 1994 to March 1995) allows to trace some changes for this country on a comparative basis. In addition, some summary results for the four Visegrad countries can be juxtaposed within a greater comparative context with the situation in 'traditional' OECD countries.

Whether defined in absolute or relative terms, income poverty increased during the first years of transition in all four Visegrad countries. Comparisons of levels, however, are heavily affected by the concept chosen. Following the arguments set out in Annex 1, a relative poverty concept for the poverty line will be used, namely a percentage of the disposable adjusted median income for each country. All incomes will be adjusted for the household size with E2, the 'revised OECD scale' (see Annex 2).

A first question is how reform economies in transition compare to other, 'traditional' OECD countries. The results indicate a quite diverse picture. Table 16 shows low income segments (persons in households below 40%, 50% and 60% of the median income, respectively) for a number of industrialised countries at the beginning of the 1990s. As for 'traditional' OECD countries, they can be grouped roughly into four regions: i) the Nordic and Continental European countries (with the exception of France) clearly have the lowest poverty rates, some 5-7 % at the 50%-level; ii) the Southern European countries together with France show rates around 10%; iii) the Anglo-Saxon countries have higher poverty rates, around 12-15 %; iv) and the United States have to be seen as a country grouping in its own with the highest poverty rate, apporaching 20%. The Central and Eastern European countries cannot be classified as a sparate region with regard to poverty, but fall into different groupings. It can be seen that the Czech and Slovak Republic record the lowest poverty rates across all countries and country groupings (lower than Scandinavian and Continental European ones) whereas the Polish and Hungarian poverty rates may be situated at the level of the Mediterrenean countries. The poverty estimates for Russia yield higher rates than those found for the United States.

9. A summary description of LIS and its methodology can be found in Atkinson et al. (1995).

10. In analysing the data, greatest care was taken to apply the standardised income concepts developped by the LIS team and to use appropriate observation units and equivalence scales for adjusting household incomes.

Table 16.
Persons in households with low incomes, percent of total population:
22 industrial countries, early 1990s

	PERCENT OF MEDIAN INCOME		
	40 %	50 %	60 %
Nordic countries			
Denmark 1992	4.1	7.1	14.2
Finland 1991	2.6	5.8	11.2
Norway 1991	2.4	6.1	12.1
Sweden 1992	3.8	6.3	11.1
Continental Europe			
Austria 1989	2.6	6.7	12.2
Belgium 1992	2.7	5.5	11.4
France 1989	5.5	9.4	15.9
Germany 1989	3.4	5.8	11.7
Luxembourg 1991	0.8	4.2	12.1
Netherlands 1991	4.2	6.7	11.8
Southern Europe			
Italy 1991	5.1	10.7	19.2
Spain 1990	5.6	10.5	17.9
Anglo-Saxon countries			
Australia 1990	6.2	12.0	19.4
Canada 1991	6.8	11.4	17.1
Ireland 1989	4.5	11.7	19.9
United Kingdom 1991	6.9	14.6	23.0
United States 1991	11.8	18.0	24.2
Central and Eastern Europe			
Czech Republic 1992	0.8	2.1	6.0
Hungary 1991/92	5.2	8.6	14.7
Poland 1992	5.0	9.9	16.3
Russia 1992	13.1	19.7	26.4
Slovak Republic 1992	0.7	2.0	5.8

Source: LIS micro data; own calculations
Note: Income concept used: disposable household income, adjusted for household size with an equivalence elasticity e=0.55. (see Annex 2)

But such comparisons should be treated with care, and can only be illustrative for the diversity of poverty patterns across transition countries. It can indeed be argued, as it is shown in Annex 1., that some notion of absolute poverty (reflecting actual living minima) should be taken into account. For the analysis in table 18 and chart 8 below, a poverty threshold of 60% of the median will therefore be applied. The reason is that this percentage corresponds more closely to the ('absolute') subsistence minima which are calculated by various authorities in the four Visegrad countries, and, at the same time, still allow meaningful cross-country comparison of poverty. Sculz (1996) for example estimates bilateral PPPs for the four Visegrad countries, especially adapted to the population at risk[11] and calculates -- on the basis of the same LIS data source -- absolute poverty thresholds which correspond to the Polish social minimum 1990. Juxtaposing these absolute thresholds with relative low-income bands in the countries one can see that they amount to 53% of the average income in the two 'richer' Visegrad countries (Czech Republic, Hungary) and to about 62% in the Slovak Republic and in Poland (calculated from Szulc 1996: 4, table 1). It therefore seems reasonable to draw the threshold for poverty comparisons within the Visegrad country group at 60% of the median income.

To put our poverty estimates for the Visegrad countries into a context with estimates from alternative sources, these are shown together as an overview in Table 15. Columns (1) through (4) show *relative* poverty rates as defined above. When defined in a relative way, poverty concerns approximately one out of fifteen persons in the Czech and the Slovak Republics, and between a fifth and a sixth of the population in Hungary and Poland[12]. Columns (5) through (7) summarise the results for *absolute* income poverty estimates. They show no clear picture: the numbers are either lower (in particular in the Czech and Slovak Republics), or else substantially higher (in particular in Poland), depending which absolute poverty threshold has been applied.

11 The PPPs (in Polish zlotys) were in 1992: for 1 Czech crown: 662,15; for one Hungarian Forint: 189,58; and for one Slowak crown: 650,06.

12. The estimates in the first two columns are slightly higher than the ones shown in columns (3) and (4) mainly because -- like in most countries' income distributions -- the average income is higher than the median income due to a few very high incomes in the distribution.

Table 17.
Relative and absolute poverty estimates for the Visegrad countries, 1992

	relative poverty rates				absolute poverty rates		
	50%	60%	50%	60%	comparative		country-specific
	of median income		of average income		studies		studies
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Czech Republic	2.0	6.0	2.1	8.0	2.6	3.5	4.0
Hungary	8.6*	14.7*	10.8*	20.0*	13.6	14.9	15.0 - 26.7
Poland	9.9	16.3	12.0	20.0	25.9	43.6**	14.4 - 26.2 - [illegible]**
Slovak Republic	2.0	5.8	2.4	6.2	7.8	4.7	2.6 - 14.7

* 1991/92; ** 1993

Sources for columns:

(1)-(2) authors' calculations from LIS micro data

(3)-(4) Szulc (1996), based on LIS micro data

(5) Szulc (1996), based on LIS micro data; refers to the Polish social minimum, applied to other countries with the help of PPPs

(6) Vecernik (1996: 109), based on SOCO survey (*social costs of transformation*)

(7)a Czech Republic: Vecernik (1993: 61); refers to subsistence minimum

(7)b Hungary: OECD (1995: 31); both numbers refer to the subsistence minimum, the first calculated by the CSO (microsimulation model), the second one from the Hungarian household panel.

(7)c Poland: World Bank (1995: 12); the first number refers to the minimum pension, the second one to the minimum wage, the third one to the social minimum

(7)d Slovak Republic: OECD (1996: 117); first number refers to minimum pension, second one to minimum wage

Comparing poverty *rates*, i.e. the incidence of poverty alone may be misleading. To capture further important dimensions of poverty, additional indicators have to be analysed. This is done in Table 18 which presents measures for the intensity of poverty (poverty gap) and its distribution (Gini coefficient of the poor population). Two composite measures are shown: a simple poverty index and the Sen-index which takes into account all three elements of poverty[13]. It can be seen that not only the incidence of poverty is higher in Hungary and Poland than in the Czech and Slovak Republics, but also its intensity: the average income of the poor lies about one fourth below the poverty line in the first pair of countries, but less than one sixth in the latter. In addition, the incomes are distributed more unequally in Hungary and Poland than in the Czech and Slovak Republics; this is true for both the total population and the poor population. Taken together, this means that the situation of the poor population can be described as more severe: the Sen-index in these countries amounts to more than one third of the poverty rate, whilst it is less than a quarter in the two Republics of former Czechoslovakia[14].

The availability of a second data set for Hungary allows to undertake an interesting comparison for this country over three years: the incidence of poverty -- in general used as the sole poverty indicator in

13. The calculation follows Sen 1976. For a methodological discussion of these measures and an empirical application to a range of OECD countries, see Förster 1993.

14 The closer the Sen-index gets to the poverty rate in a particular country, the more severe is the situation of the poor in that country (see Pattanaik and Sengupta 1995).

public debate -- has remained stable in this period, even slightly decreasing. At the same time, however, the average income of the poor population has decreased from about three quarters to almost two thirds of the poverty line. In addition, we observe a clear increase in income inequality: concerning the total population up to a value of the Gini coefficient that are typically recorded in countries like the United Kingdom, Ireland, Australia and Switzerland (Smeeding and Gottschalk 1995: 10). Inequality among the poor population has increased, too. This means that despite a slight decrease in the poverty rate, overall poverty as measured by the Sen-index is higher in Hungary in 1995 than in 1992, but also higher than in Poland or the other two Visegrad countries in 1992.

Table 18.
Poverty indicators for Visegrad countries

	poverty rate	poverty gap	poverty indicator	Gini	$Gini_q$	Sen-index
Czech Republic 1992	6.0	15.0	0.90	0.2047	0.1081	1.45
Hungary 1991/92	14.7	26.7	3.93	0.2812	0.1674	5.73
Hungary 1994/95	14.2	31.1	4.42	0.3233	0.1824	6.20
Poland 1992	16.3	26.0	4.24	0.2914	0.1496	6.05
Slovak Republic 1992	5.8	15.4	0.89	0.1868	0.1098	1.43
Average 1992	10.7	20.8	2.49	0.2410	0.1337	3.67

Source: LIS micro data basis; own calculations
Poverty rate: number of persons in households with incomes below 60% of median income in percent of total population; all incomes adjusted for household size (e=0.55).
Poverty gap: difference between average income of the poor and the poverty line, as a percentage of that line
Poverty indicator: poverty rate * poverty gap / 100.
$Gini_q$ = Gini-coefficient of the poor population.
Sen-index = (PR * (PG + (1-PG) * G_q)

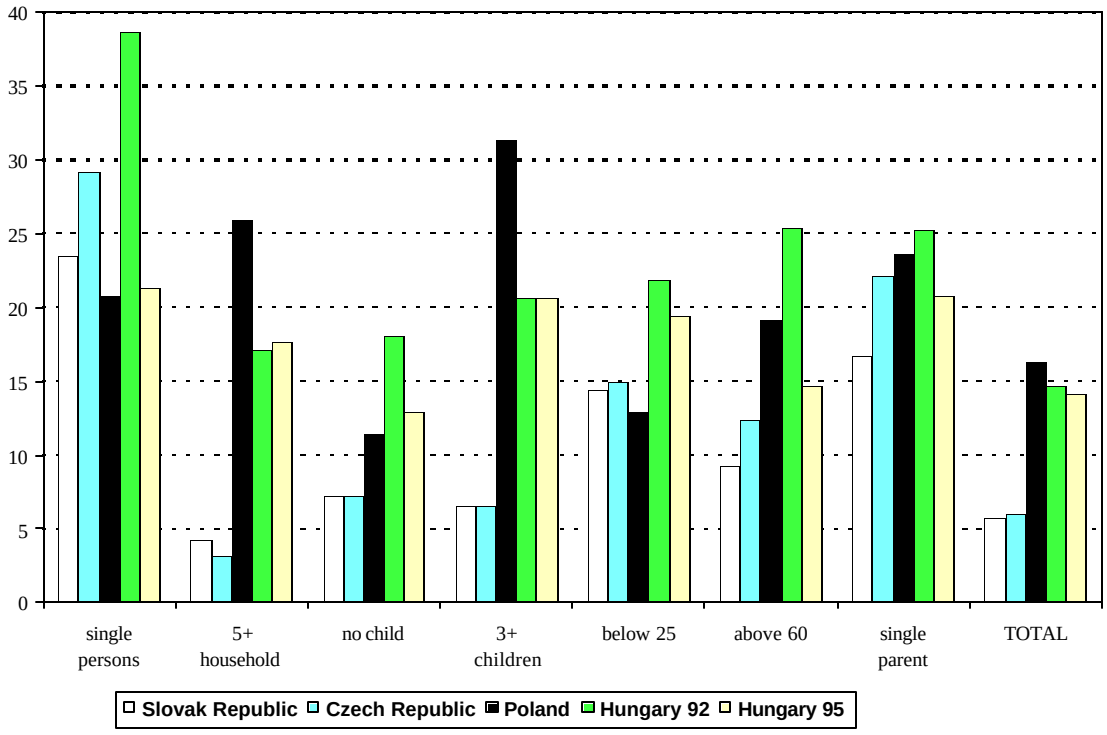
Which are the socio-demographic groups facing the highest risk of poverty in the four Visegrad countries? Does cross-country comparison identify the same or similar groups, and how does this risk compare with the total population? Chart 8 looks at some specific groups: single persons, persons in large households, persons without children and those living with many, single parents, young and elderly. Summarising, we could detect the following country-specific patterns:

The same population groups are at risk in the Czech and the Slovak Republics: single persons and elderly (this concerns to a big part the same group: pensioners), younger persons, and in particular single parents: those have a poverty rate four times as high as the total population in the Czech Republic and three times as high in the Slovak. At the same time, persons in large families and those with many children do not face an above-average poverty risk in these countries. In Poland, on the other hand, it is especially larger households that face the highest risk of poverty: almost a third of persons living with many children and more than a fourth living with more than four other persons are poor. Childless persons and the young

have poverty rates below the country average. Single persons have by far the highest poverty risk in Hungary 1992: their poverty rate amounts to almost 40%. Between 1992 and 1995, the poverty rates for single persons and persons above age 60 declined substantially. Also younger households and households with no children face a lower poverty risk in 1995, whereas the rate for large households remained the same.

We can conclude that it are different socio-demographic groups that face poverty risks in the different countries of the Visegrad group. Only single parents have a poverty rate above the average in all four countries: between 17% and 25%. This corresponds, *grosso modo,* to the rates recorded in most of the Western European countries for this group. To some extent, these differences in poverty patterns across the Visegrad country group can be traced back to our earlier findings on social spending priorities in chapter 3.1: Poland, with the highest relative share of pension spending, shows a relatively low poverty risk for this population. And the Czech Republic, with the highest relative share of spending on family and maternity benefits, shows below-average poverty rates for households with many children.

Chart 8 .
Poverty rates for specific population groups, Visegrad countries 1992



Source: LIS micro data; own calculations
Poverty rate: number of persons in households with incomes below 60% of median income; all income adjusted for household size (e=0.55).

4.5 Hungarian income inequalities in a long-term and comparative perspective

Long-term time series data on income inequalities (sketched roughly by decile shares of the two outermost income deciles and of the two middle income deciles in Chart 9) highlight some important trends.

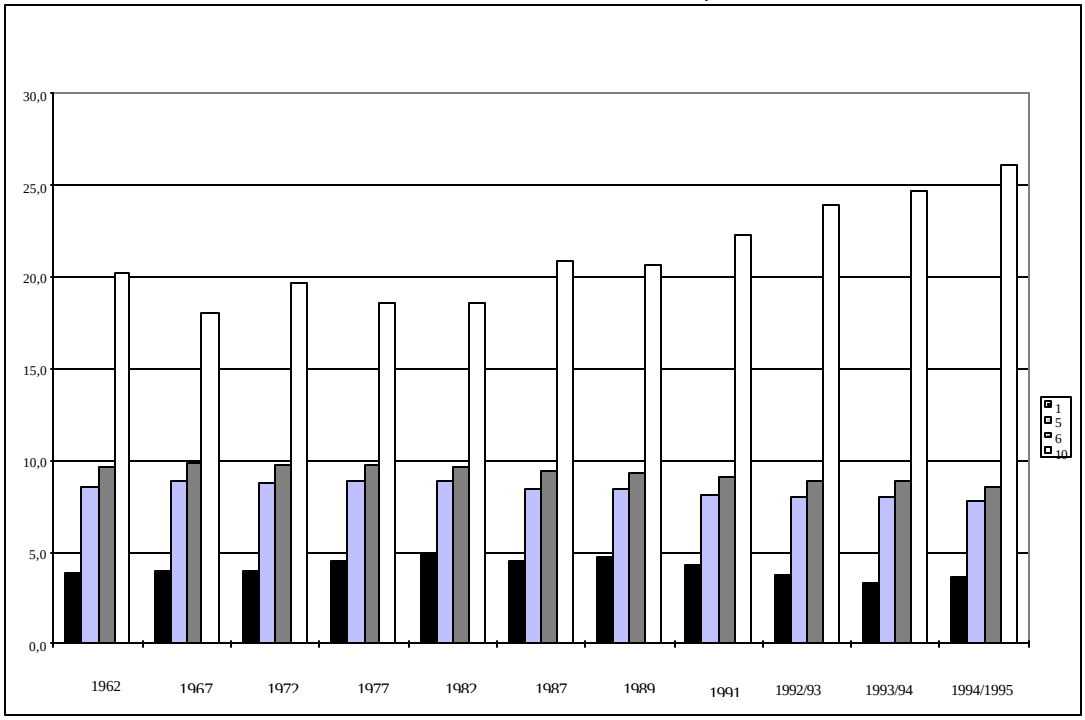
The first is that inequalities in Hungary started to grow much earlier than the generally perceived date of the systemic change. This „ideal" date (which certainly was very important in the history of other Central and Eastern European countries) may not even existed in the case of Hungary. Inequalities started to increase in the beginning of the eighties, when liberalisation of economic activities (introducing more market like elements into the operations of the economic system) characterised the economic policies.

The second important feature is that the growth of inequalities certainly accelerated around the turn of the decade. This was the time when inequality measures indicated the most dramatic changes.

The third important message shown in the chart is the permanent deterioration of the situation of the middle classes. The relative share of the fifth and sixth decile decreased almost all over the period. The fourth conclusion concerns the last few years. It seems from these data that the really turbulent changes are over: most recent movements in inequalities resemble some sort of fine tuning rather than fundamental changes (Sik and Tóth, 1997).

Chart 9.

SHARES OF SELECTED INCOME DECILES, 1962-1995

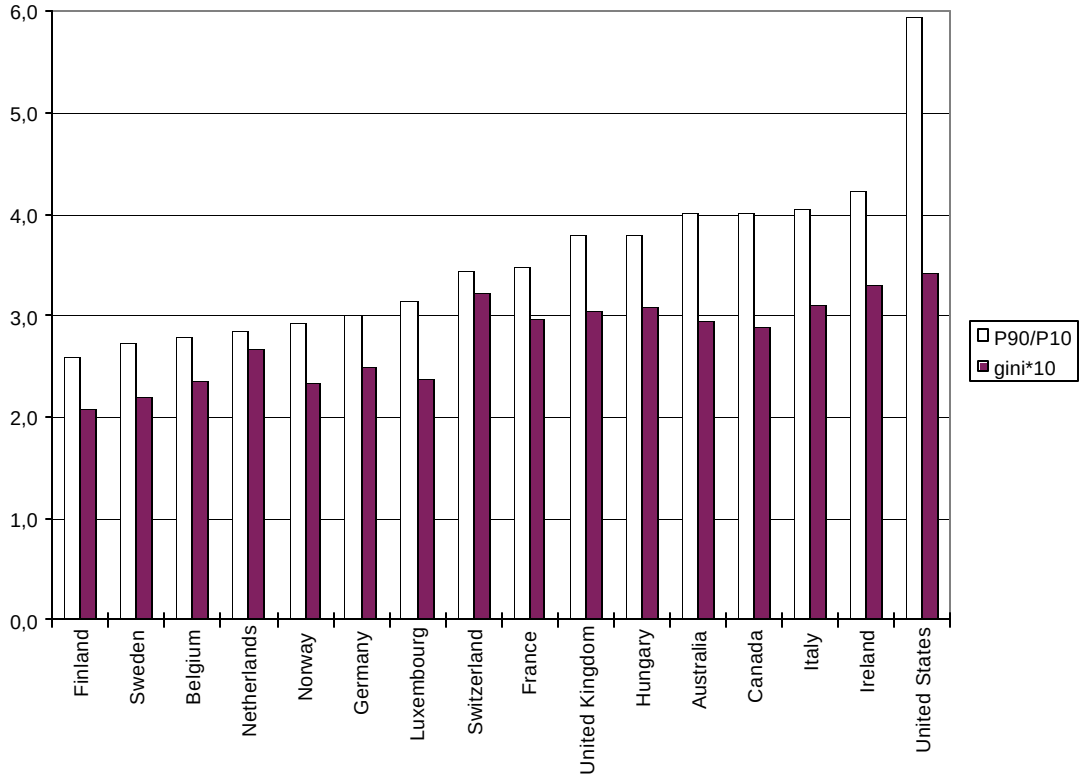


Source: 1962-1987, KSH income surveys
1989-1991, KSH microsimulation
1992-1995, Hungarian Household Panel

Extending the analysis from a national to an international perspective is always a difficult undertaking; in case of income inequality comparisons the problems are even more exacerbated. Historical traditions, differences in survey methodology and the data used and many other factors may hinder the relevance and accuracy of comparisons. However, since an excellent attempt was made most recently to assess the extent and relative ranks of inequalities between countries (Atkinson, Rainwater and Smeeding 1995), it is hard to resist the temptation to put Hungary into the data series of OECD countries. This comparison can even show where Hungary arrives in the family of the OECD countries, when 'joining the Club'.

Chart 10 juxtaposes results from Atkinson et al. 1995 with those derived from the HHP. It suggests, that Hungarian income inequalities may have been very similar to those of the welfare states during the eighties. With the process of the transition, inequalities had grown and put Hungary into the group of the less equal countries: in the middle of the nineties the level of Hungarian inequalities is already somewhere around the UK and French level. However, there is one thing which differentiates Hungary from these countries, and this is the distance between the highest and lowest social groups. Furthermore, if the distance between middle classes and of the uppermost five per cent is measured, Hungary belongs to the least equal countries in the OECD, at least as far as those countries concerned for which we had reliable data.

Chart 10.
Summary measures of inequality in OECD countries: percentile ratios and Gini coefficients, around 1990



Source: Atkinson, Rainwater and Smeeding, 1995 and HHP, IV. wave, Note: Ginis and percentile cutpoints are calculated for person equivalent incomes, e=0.5

When moving to comparisons between Hungary and the other Central and Eastern European countries, it should be underlined that the measurement of inequalities in CEE countries is even more difficult than it is in Western Europe. The nature of the turbulent changes, the extent of the black economy, relative shortage of reliable data, different role of money in social relationships and methodological differences in available surveys are all hindering any serious comparisons. Nevertheless, most recently two international organisations (EBRD and IBRD) made some attempts to assess the development in the transition countries. These reviews also attempted to show differences in extent and structure of inequalities.

There is no debate that inequalities increased significantly in the transition economies. It is also widely accepted that there has been a dramatic increase in some of the countries, while others produced much smaller increase in income inequalities. However, as argued above, comparisons of levels of income inequalities in the Visegrad countries have to be seen in the frame of long-term developments, well beyond the start of economic transition. The period of the 1970s until the early 1980s was characterised by a steady decline in income disparities in all four countries[15] (Atkinson and Micklewright, 1992; Spéder 1996; Vecernik, 1996). Income inequalities started to rise in Hungary and in Poland at a modest but significant path from the early to the mid-1980s, whereas they remained fairly stable at a low level in Czechoslovakia. Since the late 1980s, the income distribution widened steeply in all four countries. The sharpest increase was recorded by Poland and Hungary for the period following 1989. There is some evidence from national studies (Sik and Tóth 1997 for Hungary; OECD 1997 for Poland) that inequality levels may have stabilised towards the mid 1990s. In the Czech Republic the increase in income dispersion following 1989 was somewhat less dramatic but continues into the mid 1990s (Vecernik 1996).

A comparison of levels of income inequality across the four Visegrad countries can be attempted for the years 1992 and 1994. In the following, the harmonised LIS data sets and the SOCO survey (Social Consequences of the Economic Transformation) are analysed for the comparisons. Table 19 summarises the most important results derived from these data sources. In both parts of the table, various summary measures of inequality for disposable household incomes adjusted for household size are presented.

[15] Until 1991, the estimates refer to former Czechoslovakia.

Table 19.
Various income inequality measures for Visegrad countries, 1992 and 1994

	P10	P90	P90/P10	GINI	MLD	SCV	ATK
	LIS data, 1992						
Czech Republic	66	154	2.31	0.2047	7.19	23.01	3.72
Hungary, 1991/92	54	182	3.36	0.2812	14.09	37.84	6.80
Hungary, 1994/95	52	211	4.06	0.3188	17.30	56.81	8.52
Poland	51	191	3.73	0.2914	14.66	36.89	7.02
Slovakia	67	149	2.22	0.1868	5.97	15.94	3.01
	SOCO data, 1994						
Czech Republic	60	185	3.10	0.249	n.a.	n.a.	n.a.
Hungary	57	175	3.05	0.279	n.a.	n.a.	n.a.
Poland	39	189	4.90	0.352	n.a.	n.a.	n.a.
Slovakia	61	167	2.73	0.230	n.a.	n.a.	n.a.

Source: Andorka, Ferge and Tóth 1996; Sprout 1995, Table 1 and Figure 1; authors' computations from SOCO survey and LIS micro data base.
Notes: Income concept used is disposable household income, adjusted for household size. Negative and zero incomes were excluded.
P10 = Relative income of individuals in the bottom decile as a percent of national median.
P90 = Relative income of individuals in the top decile as a percent of national median.
P90/P10 = ratio of top to bottom decile, or decile ratio.
MLD = mean log deviation * 100
SCV = squared coefficient of variation * 100
ATK = Atkinson index (with a=0.5) * 100

The conclusions were that the rank order of these countries with regard to income inequality is fairly stable towards different measures and datasets, for 1992 and 1994. It can be described as follows: Poland, Hungary, Czech Republic, Slovakia, in a decreasing order[16]. Only the SCV measure calculated from the LIS data shows Hungary more unequal than Poland; and the percentile ratio calculated from the SOCO data shows Hungary more equal than the Czech Republic (due to a very low P90 value). In general, the values for income dispersion are lowest for the Slovak Republic, and highest for Poland.

16. This is consistent with other findings. Andorka, Ferge and Tóth (1996) presented the rank order of five CEE countries according to their level of income inequality obtained by the different methods and data-sets. Out of ten measurements, Hungary was shown to be the least unequal only in one case. In the remaining cases, Hungary appeared less unequal than Poland, but more unequal than Czech Republic, the Eastern part of Germany and Slovakia.

5. CONCLUSIONS AND FURTHER RESEARCH

We made an attempt to trace similarities and differences in patterns of poverty and inequalities in Hungary and in other members of the Visegrad group. We put strong emphasis on the two important determinant factors of income structure and income inequalities: labour markets and social policies.

An important conclusion was that the drastic fall in employment rates in the first four to five years of transition, coupled with growing earning differentials among the population which remained employed, has lead to a new polarisation: important division lines were drawn between those being able to stay in the labour market and those who were driven out. These trends were also translated into weaker income positions of various household groups. In Hungary, this trend seemed to be more pronounced than in the other three Visegrad countries, due to a particularly high drop in activity and employment rates.

Both income inequality and income poverty increased significantly in Hungary, as well as in the countries of the Visegrad group as a whole. But the socio-demographic characteristics of the most vulnerable groups are not the same across the country group. Only single parents have a poverty rate above average in all four countries. It was possible to analyse poverty in Hungary with a dynamic perspective: persistent poverty in the first half of the 90s concerned mainly four population groups: persons with low education; the very young; the very elderly; and foremost, the Roma population. Comparing levels of relative poverty and disposable income inequality, it was found that Hungary and Poland record higher levels than the Czech and the Slovak Republic.

Another important conclusion was that social policies did play an equalising role in each of the countries observed. However, since the dates of the available comparative datasets are relatively old and all of them reflect the income effects pre-reform welfare states, we do not know much about the post-reform effects of social policies. Even in the case of Hungary, where post-reform datasets are already available, information on the full-fledged effects of the reforms are still to be waited for.

The next task, therefore, would be to collect a second round of datasets that would reflect a later date. It is important to note here that these datasets should be made fully comparable to make sophisticated analyses possible. Some comparability problems arise even in the framework of LIS. Among these problems, the most important is the treatment of taxes. Some of the microdata sets contain information on gross and net incomes also, while in other datasets net incomes are available only. This problem can be overcome through a matching process. TARKI made such type of experiments already with the Hungarian data sets. Information from three different data sets (taxes from the tax records, consumption from the CSO HBS and incomes and demographic information from the HHP) were combined through a statistical multiple matching procedure. The resulting database (the first version of which was finished in 1995 and the second version finished in the Fall of 1997) will make micro-simulation of tax and transfers reforms in Hungary possible. (TARKI 1995a; TARKI 1995b)

Further and more detailed analysis of the incidence of social transfers will be a must in the future. Our cross-country comparisons about the incidence of various transfers is still very rough. Reasons for making it

more sophisticated are manifold. First, it is clear that the structure of social policies differs widely in the observed countries. The relative preferences for macro spending on various programs differ from each other. This may be due to differing demographic patterns different levels of program generosity or varying rules for eligibility.

Another step of the further analysis will be to investigate in more detail the recent trends in income inequality, and their driving forces, in the countries of the Visegrad group. The changes in income distribution might have been affected by changing demography (household, age structure) or labour market structures, or by changes in income components per se. Such an analysis would make use of inequality index decomposition methods, such as proposed by Jenkins (1995) or Jäntti (1996).

Also, there is a more general, methodological reason for making the incidence analysis more sophisticated. In our analysis (and in most of the literature on the incidence of social transfers) decile or quintile distributions are shown where the ranking of all households is made, on the basis of total household or equalised incomes. However, this method may not always be appropriate. Different types of transfers should be analysed in the context of their own aims, and different criteria may be appropriate to be used for evaluating heir distributional effects. For evaluating the „targeting" of family allowances, for example, ranking the active age households based on their incomes net of family allowances may be more appropriate. Similarly, distributional effects of social assistance payments may better be evaluated on the bases of a ranking of all households, pre-assistance incomes, while for unemployment benefits a different procedure would again be appropriate. This approach was tried already for Hungary (Tóth, 1996). Applying this procedure in cross country comparisons will certainly be an interesting and promising exercise.

ANNEX 1. INTERNATIONAL COMPARISONS OF POVERTY : SOME CONCEPTUAL ISSUES

Many country-specific analyses of household incomes in transitional economies find not only an increase in income inequalities in the last four to five years, but also a growth of poverty rates. These poverty rates are usually calculated on the basis of absolute country-specific thresholds, for example:

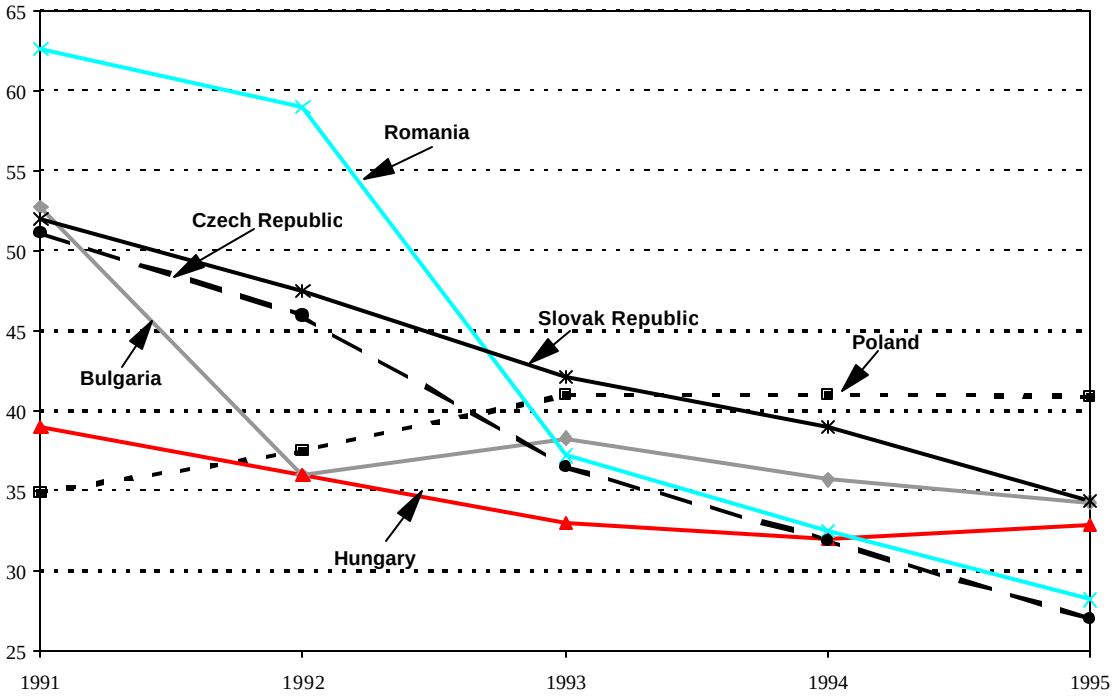
- World bank (1996) for Hungary: minimum pension and subsistence minimum
- World Bank (1995) for Poland: minimum wage, minimum pension and social minimum
- Zamfir (1995) for Romania: living minimum and subsistence minimum
- OECD (1996) for the Slovak Republic: social pension and minimum wage
- Vecernik (1996) for the Czech Republic: living minimum (presenting, however, additional relative and subjective poverty indicators)

Some of the results of these poverty analyses are shown in column (7) of table 17 in the text. For country-specific investigation, the use of such absolute, by experts or social programmes defined poverty concepts appears useful and reasonable, especially in periods of overall decline of real GDP. But how to compare across countries in an objective way, when the absolute income thresholds are defined on a national level? Applying for instance legal thresholds such as the minimum pension or the minimum wage (or a percentage of these) for a poverty line hides the different country-specific political objectives that are expressed in these thresholds. Chart A1.1 shows the development of the minimum wage in percent of average gross wage in the past five years in six reform economies. The differences in objectives can clearly be traced: in one part of the countries (Bulgaria, Hungary and, in particular, Poland) policy aims to keep the real value of the minimum wage stable, whilst in the other group (Czech and Slovak Republics and, in particular, Romania), policy reforms lead to a continuos decline of the minimum wage relative to the average wage. poverty comparisons on the basis of such legal income thresholds are therefore biased.

The solution to adapt one specific threshold (say, 60% of the Slovak minimum pension) by converting it to the other countries currencies still remains arbitrary because of a one-country-specific perspective -- let alone the difference in purchasing power. Overall average wealth indicators like GDP per capita yield different rank orderings among the Visegrad countries depending on the use of exchange rates or purchasing power parities (PPPs). This is shown in Table A1 which shows GDP per capita indexes with regard to Austria in 1993: using nominal exchange rates, Hungary ranks before the Czech Republic, and Poland before the Slovak Republic. Taking into account the differences in purchasing power, the inverse becomes true.

The alternative to absolute poverty indicators is the use of relative ones: in many cross-country comparisons (e.g. OECD, Eurostat, ILO, LIS), poverty is defined with the help of the economic distance concept, defining the population having incomes below a certain fraction (e.g. 50%, 60% or 66% of the median or average income) of the respective country. This concept takes into account the different levels of well-being within and across societies and is independent of a specific country's (arbitrary) definition of basic needs.

Chart A1
Minimum wages in six reform countries,
Percentage of gross average wage, 1991-1995



Source: EC (1995), Employment Observatory Central and Eastern Europe No. 8

Table A1.1
GDP per capita index 1993 (Austria = 100)

COUNTRY	USING NOMINAL EXCHANGE RATE	USING PPPS
Hungary	16	31
Czech Republic	13	44
Poland	10	24
Slovak Republic	9	30

Source: European Comparison Programme, published in World Bank 1996c

ANNEX 2. COMPARING HOUSEHOLDS OF DIFFERENT SIZES: THE EQUIVALENCE ISSUE

The poverty comparisons are done on the basis of disposable incomes of households, and, therefore, adjustments have to be made to correct for economies of scale in more-person households. Usually, this is done with the help of equivalence scales and elasticities (for a detailed discussion of this issue, see for example Buhmann et al. 1988, Förster 1993, Atkinson et al. 1995). Table A2.1 lists three typical equivalence scales often used by the researcher community as well as examples for scales specifically being used in Hungary.

Table A2.1
Equivalence scales and corresponding elasticities

	assumed need					
House-hold size	E1[1]	E2[2]	E3[3]	HHP poll data[4]	HHP con-sump.data[5]	Hung. subs. minimum[6]
1	1.00	1.00	1.00	1.00	1.00	1.00
2	1.26	1.50	1.70	1.44	1.75	1.80
3	1.44	1.88	2.20	2.00	2.27	2.51
4	1.58	2.18	2.70	2.25	2.67	3.16
5	1.70	2.40	3.20	2.67	2.75	3.76
6	1.81	2.63	3.70			4.31
elasticity	0.33	0.55	0.73	0.59	0.70	0.75

Notes:
elasticity $e = \ln(N)/\ln(S)$, where N = economic need
S = household size
$0 <= e <= 1$

[1] scales derived through self-assessment via household surveys ('subjective scales').
[2] scales inherent in many Western OECD countries' social assistance programmes ('programme-based scales'); also 'revised OECD scale' (OECD 1995, Eurostat 1994).
[3] statistical scale: also 'classical OECD scale', since used in OECD (1982).
[4,5] estimates derived from the Hungarian household panel (1994); poll data: through opinion; consumption data: through actual consumption behaviour.
[6] subsistence minimum for active persons (1994).

It should be noted that the international researchers community has been using increasingly 'flatter' equivalence scales: whilst E3 was considered the standard for household income and poverty comparisons in the 70s and 80s, it is E2 which is more often applied for international comparisons in recent years. This takes into account the reality of social programmes in Western OECD member countries. At the same time, it can be shown that most social assistance programmes in transition countries imply substantially

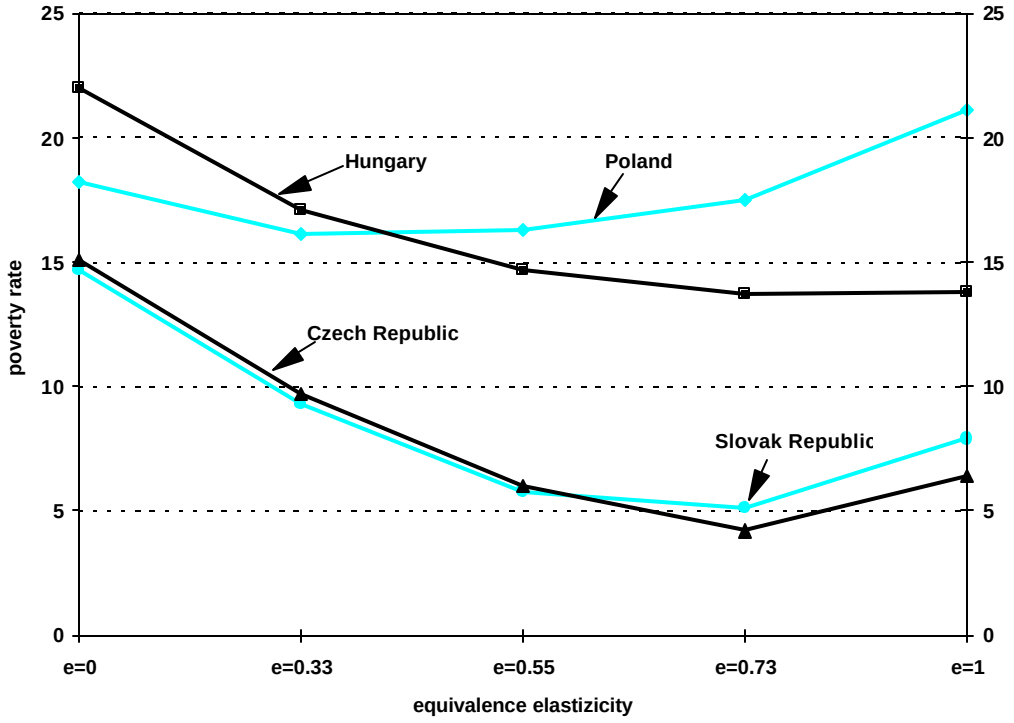
higher equivalence elasticities, for example 0.75 in Hungary (table 2), or 0.81 in Romania (law on income support, 1995).

For cross-country comparisons of poverty one has to look at the arithmetic effects of different equivalence scales. Chart A2.2 traces a sensitivity analysis for poverty rates with regard to different elasticities for the Visegrad countries for the year 1992. The "u-shaped" form found for other OECD countries (Förster 1993: 19f) also holds in the case of these four countries. Two pairs of countries can clearly be distinguished: Hungary and Poland on the one hand, which have higher poverty rates for any equivalence scale applied; and the Czech and Slovak Republics on the other hand with lower rates. Within these two pairs, we observe changes in the rank ordering according to the scale used. For our analysis, the segment between e=0.55 and e=0.73 is of particular interest because most of the poverty studies already undertaken for the Visegrad countries chose between one of the two scales[17]. For e=0.55, there is practically no difference in the poverty rates between the Czech and the Slovak Republic (ca. 6% rate), and relatively little between Hungary and Poland (15-16% rate). When moving to e=0.73, however, the poverty rate is higher in the Slovak than in the Czech Republic, and significantly higher in Poland than in Hungary.

Chart A2.2

Poverty rates for different equivalence scales, Visegrad countries 1992

[17] OECD (1996, for the Slovak Republic) and Toth et al. (1994, for Hungary), for instance, use e=0.75, whereas Smeeding and Gottschalk (1995) and Sculz (1996) applie lower elasticities (between 0.5 and 0.6).



Source: LIS micro data base, own calculations. Poverty rate: Percentage of persons in households with disposable income below 60% of the median income.

ANNEX 3. DATA SOURCES USED AND QUOTED

LUXEMBOURG INCOME STUDY (LIS) DATABASE

The Luxembourg Income Study (LIS) is an ongoing project to produce comparable income distribution data for a range of over 25 industrial countries. The original micro data surveys produced in the home countries may not have been designed to be used for international comparison. However, the LIS staff has made serious efforts to produce a variable structure for each of the deposited microdata files to improve their comparability. This data-set contains files also for some of the Central and Eastern European countries and some preliminary computations have already been completed. (For the use of LIS data on OECD countries see Atkinson, Rainwater and Smeeding 1995).

SOCO DATABASE

The data used in this paper stem from one constituent part (Part A) of the database derived from the project on the Social Consequences of Transition (the so-called SOCO project) initiated and sponsored by the Institut für die Wissenschaften vom Menschen located in Vienna. Part A of the database consists of a collection of already available data on social and economic trends in five countries (Czech Republic, former East Germany, Hungary, Poland and Slovakia). It contains a set of comparative tables including statistical and sociological data on labour market, household income and expenditure, and poverty in CEE countries. This database was produced by national experts from the above countries, under the auspices of the SOCO project. This part of the SOCO project was directed by Jiri Vecernik from the Institute of Sociology of the Czech Academy of Sciences. In what follows we refer to it as the SOCO Database.

SOCO SURVEY

The SOCO survey is a cross- country survey executed also (as Part B) within the framework of the SOCO project. The survey was planned to be an international comparative exercise. Perfect comparability is of course almost unachievable, but the national teams designed the survey with this objective in mind. The survey - referred to hereafter as the SOCO survey - was conducted in early 1995. The questionnaire was administered to 1000 randomly selected households by country. (The countries were identical with those in Part A.) The project was directed by Zsuzsa Ferge from the Department of Social Policy of Eötvös Loránd University, Budapest. A draft international report with the title Social Costs of Transition was produced by Zsuzsa Ferge, Endre Sik, Peter Robert and Fruzsina Albert in (Ferge et al, 1995) and some papers have been published in Hungarian and English journals. Since the SOCO Survey was not designed to be an income survey, it has many limitations in this respect to which we return in the text.

HUNGARIAN HOUSEHOLD PANEL

The Hungarian Household Panel Study (HHPS) started at the initiative of Rudolf Andorka, rector of the Budapest University of Economics and Tamás Kolosi, now president of the Social Research Informatics Centre (TÁRKI). The project, headed by István György Tóth, director of TÁRKI, started with

a 2600 households nationally representative sample, with detailed questions on labour market positions, incomes, housing situation and attitudes of the respondent households. This longitudinal survey (a joint exercise of the Budapest University of Economics, department of Sociology and TÁRKI), follows the original sample using year by year the same methodology, similarly to other panel studies in Europe (GSOEP, BHPS, PSELL and others), and in the US (for instance the PSID). The results derived from the HHPS are first published in working paper series (Sik-Tóth, 1993a,1993b, 1996, Tóth, 1994) and later they are used in a great number of Hungarian and English publications. Some further information on HHPS can be found in Tóth, 1995.

TÁRKI REFORM SURVEY

This survey was carried out by TÁRKI within the framework of the research called "The effects of public sector reform on the income distribution of households" (later we call it "REFORM" research), sponsored by the Ministry of Finances. This survey covered a sample of 10000 households, and was carried out in June, 1995. It was not designed either to serve as an income survey. However, the size of the sample and the methodology for acquiring income data makes it a good data source for control.

ANNEX 4. GLOSSARY OF METHODOLOGICAL TERMS

TYPES OF INCOMES

The income aggregates described below refer to the definitions applied to the micro data from the HHPS. Greatest care has been taken to adapt those as close as possible to the definitions used in the LIS project. These definitions are described at length in Atkinson et al. 1995, and are themselves based on the UN Guidelines on Statistics of the Distribution of Income, Consumption and Accumulation of Households (1977), currently under revision.

Total incomes of households include personal incomes of household members on the one hand, and incomes of the household that cannot be allocated to individual members on the other. The questionnaire of the panel asks for net personal incomes. Respondents are asked to tell the amount of various income types what they "take home in the envelope". Therefore, taxes do not appear in the raw data file of the HHP. The net incomes, however, are asked in a very detailed way. Detailed blocks of questions explore the net personal income by income types for each household members above 16 years of age. Regular monthly incomes (incomes from the main job, social security benefits, social aids) are listed for every month of the past year and respondents are asked to tell whether they received any income of the type concerned for the given month and, if yes, how much. As for irregular incomes only the frequency and the annual sum is recorded. The household questionnaire (which is filled in by the person most competent in matters concerning the whole household) examines the incomes received by the household as a whole. The computed composite income variables aggregate all these types together. Household incomes like revenues from small scale agriculture are, however gross, but, since there are exceptionally large tax allowances to these types of incomes, this fact may not cause really significant biases.

Major groups of income types:
market incomes: earnings+cash property incomes
earnings: regular and occasional personal incomes from main jobs (wages, overtime, fringe benefits, cost allowances, etc./, second jobs and household incomes from agricultural small scale production
cash property incomes: profits and dividends
social insurance benefits: earnings related social benefits
pensions: old age, disability and other pensions
sick pay
unemployment insurance benefits
maternity benefits: maternity allowance and maternity fee
public social transfers: means tested benefits and demogrants
unemployment assistance
retraining allowance
family allowance
scholarships
social assistance benefits: regular and occasional social assistance payments

private inter-household transfers
other household incomes
DECILES

Deciles are based on per capita or equivalent household total incomes. This is allocated to each persons. When persons are in deciles, the ranking is also based on household adjusted incomes, but the number of persons in a decile obviously depends upon the demographic structure of households in that decile.

INCOME COMPOSITION

Income composition is the share of certain types of incomes in total annual household incomes.
For the computation of the income composition, we used the following method.
Let us suppose we have three households. There are six persons in these three units (1,2,3), (4,5) (6).

Let the weights be the followings:
1st person: 1
2nd and others: 0.6.

	market	social	total
person 1.	x1	y1	t1=x1+y1
person 2.	x1	y2	t2=x2+y2
person 3.	x1	y3	t3=x3+y3
person 4.	x1	y4	t4=x4+y4
person 5.	x1	y5	t5=x5+y5
person 6.	x1	y6	t6=x6+y6

The shares of market incomes therefore, will be:

$$\text{marketshare} = \frac{((x1+x2+x3)/2.2)+((x4+x5)/1.6)+x6/1}{((t1+t2+t3)/2.2)+((t4+t5)/1.6)+t6/1}$$

The sum of shares of the major income types adds up to 100.

DECILE SHARES

Decile share is defined as the share of certain types of incomes in the total incomes of that type received by the different deciles. Cumulative decile shares are decile shares cumulated across deciles up to a certain population decile.

INCOME RECIPIENT HOUSEHOLDS

A household is defined as recipient of a certain type of income if in the time period covered somebody in the household received any amount of that type of income. Since households may receive incomes from different sources, sub-categories may and do overlap.

GINI

One possible summary statistical measure for the concentration of incomes is the Gini coefficient. This coefficient ranges from a value of zero (perfect equality, when each members receive the same amount) to one (perfect inequality, when all the incomes are concentrated in the hands of the single wealthiest person in the population). An easy interpretation of the Gini coefficients can be given by the graphical representation of Lorenz curves. If cumulative population shares and their cumulative income shares are presented as Lorenz curves, the Ginis are defined as the areas between these curves and the line of perfect equality (45º), expressed as a percentage of the whole area of the triangle. Ginis above 0.4-0.5 signify relatively high inequalities, while Ginis around 0.2 percent are considered to portray a relatively equalised income distribution.

PERCENTILE RATIO

The percentile ratio 90/10 is the ratio of the lowest income in the highest decile compared to the highest income of the lowest decile. This measure is better than the decile ratio (the ratio of the averages of the two extreme deciles) inasmuch as it leaves out the possible impact of some outliers.

BIBLIOGRAPHY

Andorka, Rudolf (1992): Szegénység (Poverty), in.: Sik And Tóth (ed., 1992)

Andorka, Rudolf and Zsolt Spéder (1993a): "Szegénység" (Poverty), in: Sik and Tóth (ed., 1993), pp. 47-59.

Andorka, Rudolf and Zsolt Spéder (1993b): "Poverty in Hungary. Some results of the first two waves of the Hungarian Household Panel Study", Berlin, October, 1993, p.24. mimeo

Andorka, Rudolf, Zsolt Spéder and István György Tóth (1995): Developments in Poverty and inequalities in Hungary, 1992-1994. Budapest: TÁRKI

Andorka, Rudolf, Zsuzsa Ferge and István György Tóth (1996): "Is Hungary really the least unequal? (A discussion of data on income inequalities and poverty in Central and Eastern European countries)" Research note on the data presented in the World Development Report 1996, TÁRKI, Budapest, October, 1996

Andorka, Rudolf (1996): "Szegénység". in Andorka, R. (1996): Merre tart a magyar társadalom? Antológia Kiadó, Lakitelek, 1996.

Andorka, Rudolf and Zsolt Spéder (1997): Szegénység. in.: Sik and Tóth (ed., 1997)

Atkinson, Anthony and John Micklewright (1992): "Economic transformation in Eastern Europe and the distribution of income". Cambridge: Cambridge U.P

Atkinson, Anthony, Lee Rainwater and Timothy M. Smeeding (1995): "Income distribution in the OECD countries". Paris: OECD Social Policy Studies No. 18

Boeri, Tito (1994): "Labour Market Flows and the Persistence of Unemployment in Central and Eastern Europe." In: OECD 1994.

Buhmann, Brigitte, Lee Rainwater, Günther Schmaus and Timothy Smeeding (1988), "Equivalence Scales, Well-Being, Inequality, und Poverty: Sensitivity Estimates Across Ten Countries using the LIS Database". Review of Income und Wealth 34 (June 1988), pp. 115-142.

Cichon, Michael (ed, 1995): "Social protection in the Visegrad countries", ILO-CCET Report No 13. ILO-CEET Budapest, 172 p.

Csaba, Erika (1995): "Some characteristics of long-term unemployment on the basis of CSO Labour Force Survey data". Paper presented at the Technical Workshop on Policies for the Long-term Unemployed in Hungary. OECD-Hungarian Ministry of Labour, Budapest.

EBRD (1996), "Transition report, 1996". EBRD, London, 1996

EBRD (1997), "Economics of Transition", Vol.5, No.2, Oxford University Press

EC (1995), "Employment Observatory Central and Eastern Europe" Employment Trends and Developments No. 8, Alphametrics Bruxelles 1995.

Ferge, Zsuzsa, Péter Róbert, Endre Sik and Fruzsina Albert (1995): "Social Costs of Transition. International Report". Vienna: Institute for Human Sciences, Mimeo.

Ferge, Zsuzsa (1996): "Major Problems and Crisis Phenomena of the Hungarian Society and the Central European Region". Paper prepared for the Conference on the New Dialogue between Central Europe and Japan, Budapest, 16-18th September, 1996

Förster, Michael F. (1993), "*Comparing Poverty in 13 OECD Countries - Traditional and Synthetic Approaches*". Luxembourg Income Study Working Paper No. 100. Luxembourg 1993.

Förster, Michael F. (1994), "The effects of net transfers on low incomes among non-elderly families", *OECD Economic Studies No. 22*, pp. 181-221.

Förster, Michael and István Tóth (1995), "Income poverty and households' income composition in Hungary". In: Ringen and Wallace (eds.): "Social Reform in East-Entral Europe: New Trends in Transition. Prague Papers on Social Responses to Transformations, Volume III", pp.123-166. Prague 1995

Förster, Michael (1997a): The household situation of the unemployed. Luxembourg Employment Study Working Paper No. 6

Förster (1997b), "Meranie a porovnávanie chudoby v medzinárodných súvislostiach", in: "Transformácia sociálneho zabezpecenia a trhu práce - výzvy sociálnej politike na Slovensku", pp. 73-83. Conference on Social Policy Challenges in Slovakia, September 1996, Conference volume. Bratislava 1997.

Förster, Michael and Istvan György Tóth (1997), "Poverty, inequalities and sopcial policies in the Visegrad countries", in EBRD (1997): 505-510

Jäntti, Markus (1996), "Inequality in five countries in the 80's: the role of demographic shifts, markets and government policies". LIS Working Paper No. 146

Jenkins, Stephen (1995), "Accounting for Inequlity Trends: Decomposition Analyses for the UK, 1971-1986". Economica (1995) 62, pp 29-63.

Kolosi, Tamás, István Bedekovics and Péter Szivós (1995): "Munkaerõpiac és jövedelmek" (Labour market and incomes) in: Sik - Tóth (ed., 1995) pp.8-17.

Kolosi, Tamás , István Bedekovics and Endre Sik (1997): "Munkaerôpiac és jövedelmek" (Labour market and incomes) in:Sik and Tóth.1997

Köllõ, János (1993): "Tulajdoni átalakulás és munkaerõpiac Magyarországon." Közgazdasági Szemle 9, pp.801-814.

Kornai, János (1993): "Transzformációs visszaesés. Egy általános jelenség vizsgálata a magyar fejlôdés példáján" (Transformational recession A study of a general phenomenon on the Hungarian case) Közgazdasági Szemle 1993/7-8: 569-599.

KSH, 1990.: Jövedelemeloszlás Magyarországon. Az 1998. évi jövedelemi felmérés adatai. Budapest, KSH.

KSH (1993a): "A létminimum alatt élõ népesség összetétele", Budapest, 1993

KSH (1995a): "Kereseti arányok a nemzetgazdaságban 1994". Budapest, KSH

KSH (1995b): "Labour Force Survey 1994. Annual Report". Budapest, KSH

Micklewright, John and Gyula Nagy (1994): "How does the Hungarian unemployment insurance system really work?" EUI Working Paper. ECO No. 94/11. European University Institute, Florence

OECD (1982), "The OECD List of Social Indicators". OECD 1982

OECD, (1993): "The labour market in Poland OECD", Paris, 145 p.

OECD (1994): "Unemployment in Transition Countries: Transient or Persistent?" Paris: OECD CCET Proceedings

OECD (1995), "Social and Labour Market Policies in Hungary". Paris 1995.

OECD (1996), “Labour Market and Social Policies in the Slovak Republic”. Paris 1996.

OECD (1997a), "Short-term Economic Indicators for Transition Economies". Paris 1998.

OECD (1997b), "Economic Survey: Poland". Paris 1997

Pattanaik, P.K. und Sengupta, M. (1995), "An Alternative Axiomatization of Sen's Poverty Measure", Review of Income and Wealth, 41/1, March 1995, pp. 73-80.

PHARE Consensus Programe (1996): Country Policy Papers Czech Republic, Hungary, Poland, Slovak Republic,Slovenia. December 1996, HTTP://ourworld.compuserve.com/homepages/consensus/projects

Scarpetta, Stefano and Raymond Torres (1995): "The policy challenge of persistent unemployment in Hungary: lessons from experience." Paper presented at the Technical Workshop on Policies for the Long-term Unemployed in Hungary. OECD-Hungarian Ministry of Labour, Budapest

Sen, A. (1976), "Poverty: an ordinal approach to measurement", Econometrica 44, pp. 219-231

Sik, Endre and István György Tóth (1992): Jelentés a Magyar Háztartás Panel I. hullámának eredményeirõl. Budapest: BKE-TÁRKI. (A report on the results of the I. wave of the Hungarian Household Panel)

Sik, Endre and István György Tóth, (eds., 1993): "Egy év után ... Jelentés a Magyar Háztartás Panel II. hullámának eredményei alapján" (A year after ... A report on the results of the I wave of the Hungarian Household Panel) Magyar Háztartás Panel Mûhelytanulmányok **3**. szám BKE, Szociológia Tanszék - Társadalomkutatási Informatikai Egyesülés, Budapest, 1993. december

Sik, Endre and István György Tóth (1997): "Az ajtók záródnak?! Jelentés a MHP 5. hullámának eredményeirõl." (The doors are closing?! Report on the results of the 5th wave of the Hungarian Household Panel, HHP. Working Papers No. 8.)

Smeeding, Timothy und Peter Gottschalk (1995), “The International Evidence on Income Distribution in Modern Economies: Where Do We Stand?”. LIS Working Paper No. 137.

Spéder, Zsolt (1996), "Wenn man mit dem Einkommen nicht auskommt - Unfreiwillige Änderungen des Konsumverhaltens ungarischer Haushahlte während der Transformation", in: Glatzer (1996, ed.), "Lebensverhältnisse in Osteuropa: Prekäre Entwicklungen und neue Konturen", pp. 159-176.

Sprout, Ron (1995): "Poverty and Getting By in Russia. LIS/AID/US Census Buro Conference on Economic Hardship and Social Protection in Central and Eastern Europe". Luxembourg, July, 1995. Mimeo.

Szivós, Péter (1995): "Profile of Poverty in 1993". Mimeo.

Szulc, A. (1996), "Economic Transition and Poverty: The Case of the Vysehrad Countries". LIS Working Paper No. 138.

TÁRKI-GKI (1994): "A magánszektor fejlõdése Magyarországon. Összefoglaló kutatási beszámoló az Állami Vagyonügynökség számára". (Development of Private Sector in Hungary. Final research paper for the State Property Agency.) Budapest, 1994.

TÁRKI (1995a), "Microsimulation database documentation" Budapest: TÁRKI, mimeo, edited by Tamás Rudas

TÁRKI (1995b), ”Az ADÓTÁR mikroszimulációs modell leirása” (Description of the ADÓTÁR microsimulatrion model) prepared by Zoltán Miski and István György Tóth

Timár, János (1995): A foglalkoztatás és munkanélküliség sajátosságai a posztszocialista országokban. Közgazdasági Szemle, 1994/7-8. sz. pp. 633-647.

Tóth, István Györgyn, Rudolf Andorka, Michael F. Förster and Zsolt Spéder (1994): "Poverty inequalities and the incidence of social transfers in Hungary, 1992-93". Paper prepared for the World Bank Budapest Office, TÁRKI, Budapest, June, 1994

Tóth, István György (1994): "A jóléti rendszer az átmenet idõszakában" (The Welfare System in the Period of Transition) in: Közgazdasági Szemle April, 1994. pp.313-341.

Tóth, István György (1996): "The role of welfare programs in alleviating poverty in Hungary, 1992-1993". International Review of Comparative Public Policy Vol. 7. Pp. 125-145. Washington: JAI Press Inc

Tóth, István György (1997): "A háztartások jövedelmi szerkezete: a munkaerõpiac és a szociálpolitika szerepe" in: Sik Endre and Tóth István György (1997, ed)

Tóth, István György (forthcoming): "Employment and unemployment in Hungary", Mannheimer Zentrum für Europaische Sozialforschnung (MZES).

Torrey, Barbara B., Timothy M. Smeeding, and Debra Bailey (1995), "Rowing Between Scylla and Charybdis: Income Transitions in Central European Households". LIS Working Paper No. 132

UNICEF (1997): "Children at risk in Central and Eastern Europe", UNICEF ICDC Regional Monitoring Report No 4

Vecernik, Jiri (1996): "Markets and People. The Czech Reform experience in a comparative perspective". Avebury. Publ. Aldershot, 1996.

WIIW (Wiener Institut für Internationale Wirtschaftsvergleiche) (1995), “Handbook of Statistics: Countries in Transition 1995”. Vienna 1995.

World Bank (1995), “Understanding Poverty in Poland”. Washington 1995.

World Bank (1996a): "From plan to market. World Development Report 1996". Published for the World Bank. Oxford: Oxford University Press. p.241.

World Bank (1996b): "Hungary: Poverty and Social Transfers". A World Bank Country Study. Washington DC. p.85.

World Bank (1996c), "Transition. Newsletter about reforming economies". Vol 7, Number 3-4.