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Some Aspects of the Social Transition Processes in Hungary and East Germany - Income Inequality and Poverty

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Before the 90's both Hungary and East-Germany belonged to the socialist system, and nowadays both countries (we refer to East-Germany as a "country" with a separated society and economic system) aim to build a market economy based on private property.[1]

The two countries have always had similarities and differences in the functioning of the social and economic system, as well as in everyday life. Concerning the differences we can mention the economic reforms in the 60's, the spreading of informal and secondary activities, the experiences with different forms of socialist entrepreneureship, and the tax system introduced in the 80's in Hungary, and on the other hand the huge bureaucratically organised firms, the rude price control etc. in East Germany. But we should not forget the congruences: the dominance of state property, the social security system, monopolized economic branches etc. These were common features of socialist systems, and were responsible for functioning "socialistically".

The two countries used different principles in organizing the "old" system, but even nowadays they still apply different means and methods on the way to market economy. We should stress the crucial role of the West-German society and political system (government):

- firstly, the West-German society and social system was and is an **ideal** for the East-Germans, regarding the living standards and perhaps also the participation in political life;
- secondly, West-Germany was also an ideal in regard to the formal and informal institutions, and the structures of the political and social system ;
- thirdly, the interest of the economic actors was and is heterogenous, but we cannot deny the collapse of the East-German economy and, parallel to this, the huge financial transfer from the eastern part of the country.

I think it is obvious that the two societies are "suitable" for a comparative research, that may contribute to a deeper insight into the transformation processes. A panel analysis is one of the best means to follow the changes in a society, and to understand transformation.

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[1] I am grateful to G. Wagner (DIW, SOEP) and P. Krause (DIW,SOEP), giving me a lot support in this first comparision about the two countries, and seminar participants at the Annual Meeting of the European Society of Population Economics in Tilburg, 2 -4 June 1994. Parts of this paper have been done during my stay as a visiting research fellow at the Science Center Berlin (WZB). I thank Dan Schmidt for checking my English.

Naturally there are a lot of aspects of the transformation, but now we will only try to give an insight into the income inequality and income poverty.[2]

Before going into the analysis, we should briefly focus on macroeconomic circumstances of the two economies. In Hungary from 1989 to 1993 the GDP declined by about 18-20 per cent, the real per capita personal income of the population by about 10-12 per cent. It ought to be added that the extent of the decline is not exactly known, because the greater part of the grey and the hidden economy's contribution to the GDP and to the personal income is not measured by official statistics. Recently (Árvay, Vértes 1993) it was estimated that the real GDP, taking into account the hidden economy, might be 16 per cent higher than the official GDP. Although the hidden economy also existed in the socialist period, its contribution to the real GDP presumably inceased since the regime transition. If these estimations are correct, the decline of the GDP and of the real personal incomes was somewhat less than the above official statistical data suggest.

In East-Germany the GDP fell about 25-30 per cent between 1990 and 1992. (Krause,1994). Despite this decreasing macro output the incomes rose quite sharply in that period. For the two year period, the average (mean) increase in real household equivalent incomes was 16.7%, or 14,2% if households including commuters who work in the West are excluded (Headey, Krause, Habich, 1993).

Data and Method

For this comparison I use the data from the German Socio-Economic Panel (East-German subsample) and the Hungarian Household Panel.

The Hungarian Household Panel has been running since 1992. In the first wave, 2059 households and 4266 individuals living in the households and older than 16 years were interviewed. The Hungarian Household Panel has an additional Budapest sample, including 1037 households and 1959 individuals. The seccond wave took place in April-May 1993.

The German Socio-Economic Panel began in Weast Germany in 1984 with 13.919 respondents in 5921 households. After the revolution of 1989 it became possible to extend the panel to East-German territory. A sample of 4453 individuals in 2179 households were interviewed in June

[2] This study is a first step in the project of a comparative analysis of the Hungarian and the East-German case. P. Krause and B. Headey tried to conceptualise the two modes of transformation. R. Andorka compared the subjective indicators of the two societies (Headey, Krause, 1993.;Andorka,1993.)

1990. After this first wave, the other waves were always carried out in spring (mainly March-April). A particularly valuable aspect of the East-German sample is that the first wave was carried out when most features of the GDR social and economic system were still in place. The bureaucratic organized command economy, the old occupational system structure, the income distribution were for the most part unchanged.

In the analysis of income distribution and poverty I used equivalence income scales that take into consideration the age of the household members. Weights of Households members:

HH-head	1.00
HH-members:	
0-7 Years	0.50
8-14 Years	0.65
15-18 Years	0.90
19- Years (Adults)	0.80

One Parent Family, 0-7 Years, +0.05

Researching the income inequalities we used quintile shares of equivalent income and income classes and compared them to the mean equivalence income. In the poverty analysis, we use 40, 50 and 60% threshold of the mean equivalent income.

Analyses

A. Income inequality

In this preliminary report of data analysis, we will not discuss all hypothesis about the possible changes of the income inequality resulting from the system transformation. Our aim is a first-step comparison of the data; therefore, we will only mention some well-known assumptions. In the transformation processes of the two countries various processes took place, which affected presumably income inequalities. In Hungary even before the begining of the transformation, there was a "quasi"-market economy, which was relativly independent from the centrally organized economic system. This system, as described by Kolosi, counterbalanced the "inequality-results" of the bureaucratically organised socialist redistributive system. On the other hand, the "marketization" of the economy involved higher ineqality between those participating in the market organized part of the economy. Regarding the ongoing transformation, it can be characterized as a step-by-step mode of transformation. This step-by-step mode of transformation produced presumably more graduat shifts in inequaility. Kolosi and Robert assumed increasing inequality /Kolosi,Róbert,1992/. In the

case of East Germany, the socialist system functioned in its old fashioned form , and the inequality was basically the result of the bureaucratic social system. We did not have much information about the inequalities in this system, but we assumed that the income inequality was not very high. But the transformation processes was much more rapid than in Hungary. The collapse of the economy should have had a negative effect on the income distribution (equality), even the (West) German government pumped a huge amount of financial ressources in the social and economic system. (Headay-Krause,1993). So we assumed a somewhat higher equality in Germany resulting from the counterbalancing role of the (West) German government.

In order to understand this question we analysed both the quintile shares and income classes of equivalent income. Comparing the income distribution of the two societies Hungary seemd to be much more unequal than East Germany. In 1993 in Hungary, the sum of the equivalent income in the richest quintile was 4 times the lowest quintile. This number in East Germany is only a little bit higher than 3. (See Table 1) So all middle quintiles in East Germany have higher shares from the equivalent income.

Table 1: Quintile Shares of Equivalent Income in East Germany and Hungary,1990-1993.

	East Germany				Hungary	
	1990	1991	1992	1993	1992	1993
Q1	11.8	11.3	11.1	10.6	8.5	9.1
Q2	15.8	16.1	15.9	15.5	14.1	14.2
Q3	19.2	16.9	19.1	18.8	17.7	17.4
Q4	22.9	22.3	22.5	22.7	22.2	21.6
Q5	30.2	31.2	31.3	32.4	37.6	37.7

Sources: GSOEP, 1.-4.Wave in East Germany (Müller-Hauser-Frick-Wagner,1994)
HHP,1.-2. Wave in Hungary, Author's calculation

Focussing on the countries separately, we recognize different directions of development. In East Germany, we experienced an increasing inequality, declining share of the lowest and increasing share of the highest quintle. In contrast we see stability in Hungary, or more precisely, a sign of a different pattern: The share of the lowest quintile increased to some extent, on the other hand it was not the share of the highest but of the second highest quintile that degressed. Knowing that we only have data covering only about two years, and it would be misleading to generalize from these two snapshots, we assume that in Hungary the middle, upper-middle income classes "financed" the stability of the lower income classes. /Kolosi,1993/ Naturally, we should take into consideration that these developments occured in different macroeconomic circumstances. In East Germany we experienced increasing, in Hungary decreasing, (or stable) real wages. So perhaps in East Germany, the increasing inequality was not perceived by the poorer social groups with as much dissatisfiction as the redistribution in Hungary favouring the poorer.

Taking into consideration the income classes, we get the same results. There is increasing relative income poverty in East Germany; however, fewer people are becoming poor in former East Germany than in Hungary (See Table 2). The decrease of the middle income classes is the other side of this process. It is interesting at this point to draw into the analysis the income distribution of the West-German society.

Table 2: Distribution of Persons between Income Classes of the Equivalent Income Mean

	East - Germany				Hungary		West - Germany
	1990	1991	1992	1993	1992	1993	1992
-0.50	3.4	4.4	5.9	7.3	11.7	10.6	10.1
0.5 -0.75	21.6	17.9	18.7	20.9	23.5	24.7	25.3
0.75-1.00	29.2	34.8	31.3	30.3	26.7	28.5	25.2
1.00-1.25	25.2	22.3	23.5	21.9	16.7	16.6	16.9
1.25-1.50	12.7	12.1	11.7	11.1	8.8	7.1	9.7
1.50-2.00	6.8	6.4	6.7	6.6	7.9	7.5	9.0
2.00-	1.1	2.2	2.3	2.4	4.9	5.1	4.0

Sources: GSOEP, 1.-4.Wave in East Germany; 8.Wave in West-Germany (Müller-Hauser-Frick-Wagner,1994)
HHP,1.-2. Wave in Hungary, Author's calculation

The Hugarian distribution shows similarities not with the East but with the West German pattern. We should have mark the differences beyond the similarities. In Hungary the representation of persons in the highest (2.00-) and third lowest (0.75-1.00) income classes are higher than in West-Germany. On the other hand, in West Germany in the second (1.00-2.00) and third (1.25-1.50) highest income classes the representation is higher. So in West Germany, the upper-middle income classes are broader. Therefore the inequality in Hungary seemd to be higher than not only in the East German but also in the West German society. If we want to undersatnd the real social problems of the countries, we should keep in mind that although the two countries have nearly the same income inequality pattern, but they are at quite different levels of economic development. This gives different chances to the lower income classes in managing their everyday livelihood.

Unfortunately, in the case of Hungary we have no panel data about the year(s) before the transformation as in the East-German case. To understand the whole development in Hungary we should turn to other sources in order to refer briefly to the changes in the income distribution before the transformation. The Hungarian Statistical Office (CSO) has data about the pre-transition time only, so we should know that the data regarding the pre-transition and transition time originate from differently constructed surveys. (See Table 3!) So, the numbers indicating rapidly increasing inequality between 1987 and 1992 should be handled carefully. But we think that they do indicate a

real increase. We can see an increase in the inequality even in the 80's itself. Therefore, processes in Hungary presumably cannot be fully accounted for by the transformation. The marketization of the Hungarian economy in the 80's resulted in increasing income inequality. It remains to be analyzed in the future whether the change under the transformation can be understood as a continuing process of the pre-transition period, or as a result of significantly different processes originating in the transition.

Table 3: Decile distribution of household income, per cent

Decile	1962	1967	1972	1977	1982	1987	1992	1993
1	3.9	4.0	4.5	4.9	4.9	4.5	3.9	4.1
2	5.6	6.0	5.9	6.3	6.4	6.0	5.6	5.7
3	6.5	7.1	7.0	7.3	7.3	6.9	6.5	6.6
4	7.6	8.0	7.9	8.1	8.1	7.7	7.2	7.3
5	8.6	8.9	8.8	8.9	8.8	8.5	8.0	8.0
6	9.7	9.9	9.8	9.8	9.6	9.4	8.8	8.9
7	11.1	10.9	10.8	10.8	10.7	10.5	9.8	9.9
8	12.3	12.2	12.1	12.0	11.9	11.8	11.6	11.4
9	14.6	14.0	14.0	13.7	13.7	13.8	14.3	14.1
10	20.2	18.9	19.7	18.6	18.6	20.9	24.3	24.0
Ratio of 10/1 decile	5.2	4.7	4.9	4.1	3.8	4.6	6.2	5.9

Source: Household income surveys of the Central Statistical Office and Hungarian Household Panel Survey 1992, 1993

B. Income mobility

What kind of micro-social shifts occured behind the slow changes in the macrosocial income distribution reported above? Did the stability of the social and income groups on the micro level resulted in the macro-social patterns shown above or could we experience intensiv changes on the level of households? What kind of directions of income mobility can be identified on the micro-level? Only the panel analysis method gives us the chance to analyse the many different kinds of "little" shifts producing the macro-social changes. In Table 4 we can see the different transitions between the income classes. The table shows in which income class people belonging to a given income class in 1991 are placed in 1992 (outflow income mobility).

Table 4: Persons outflow mobility between income classes in Hungary and in East Germany 1991-1992 (in % the income position in 1991)*

Income classes in **1991**	Income classes in **1992** -.50	0.50 -0.75	0.75 -1.00	1.00 -1.25	1.25 -1.50	1.50 2.00	2.00-
Hungary							
-0.5	**44.6**	26.3	14.9	6.3	-	-	-
0.50-0.75	13.7	**49.7**	25.5	6.2	-	-	-
0.75-1.00	3.9	26.5	**45.2**	17.1	3.1	2.1	-
1.00-1.25	-	9.6	34.4	**33.6**	11.0	8.9	-
1.25-1.50	-	7.8	16.5	27.9	**20.9**	15.4	9.5
1.50-2.00	-	-	14.1	17.7	17.9	**35.6**	13.6
2.00-	-	-	-	-	-	15.6	**43.6**
East Germany							
-0.5	**39.5**	35.5	16.2	-	-	-	-
0.50-0.75	13.0	**47.5**	27.7	8.0	2.7	-	-
0.75-1.00	2.6	20.9	**47.0**	23.9	4.7	-	-
1.00-1.25	-	8.5	30.1	**41.9**	14.0	4.1	-
1.25-1.50	-	5.0	12.9	31.4	**30.6**	17.1	-
1.50-2.00	-	-	-	10.9	29.6	**42.1**	8.7
2.00-	-	-	-	-	-	(29.5)	**47.4**

Sources: GSOEP, 2-3.Wave in East Germany
HHP,1-2. Wave in Hungary, Author's calculation
* If cells' containance is under 25, the percentages are not reported.

Looking the table we can find enormous income mobility on the micro level resulting in slow macrosocial change. In both countries, more than half of the society changed their relative income position in one year. Looking at the diagonal, we can see in both countries that the mobility was more intensive in the upper income classes. Comparing the two countries, we identify a stronger mobility in Hungary, especially in the higher income classes. In East Germany it is only in the lowest income class that the mobility is higher than in Hungary. Not only the intensity is higher in Hungary but the distance of the mobility, too. Table 5. summarizes the persons income class transitions, where the persons changed their position by more than one class.

Table 5: Persons changed their income position in Hungary and East Germany by more than one class, percentages according to the 1991 income classes

Income classes in 1991	Hungary	East Germany
-0.50	29.1	25.0
0.50-0.75	11.1	11.8
0.75-1.00	11.2	8.2
1.00-1.25	21.0	14.0
1.25-1.50	36.0	20.9
1.50-2.00	32.9	19.6
2.00-	40.8	23.1

In general, in all categories more Hungarians changed (improved and deteriorated) their income position considerably (by more than one classes). Therefore, in Hungary the intensity is higher, and at the same time the shifts are more intense than in East Germany.

Regarding the direction of the shifts, we cannot identify such marked differences. Although the above data indicate that in Hungary it was "easier" both to fall out and to climb up from the middle and upper-middle income classes,and, it was "easier" to fall out from the highest income class whereas in East Germany it was easier to escape from the lowest category. The question about the social-economic character of the social groups who changed or kept their income position is the task of further research. So is the precise identification and generalization of the character of the shifts.

C. Income poverty

As mentioned in the introduction, we used different percentages of the mean equivalent income as thresholds to define the poor population. Using the relative income concept (Krause, 1994), we found higher poverty in Hungary.

Table 6: Relative Income Poverty in East-Germany and Hungary+

	East - Germany				Hungary	
	1990	1991	1992	1993	1991	1992
40%-threshold	0.8	2.4	2.3	3.0	7.0	6.0
50%-threshold	5.5	4.3	6.1	6.3	11.7	10.5
60%-threshold	8.6	9.4	10.8	11.8	19.8	18.2

+ Poverty thresholds in percentages of the mean equivalent income
Sources: GSOEP, 1.-4.Wave in East Germany (Krause,1994)
HHP,1.,2. Wave in Hungary, Author' calculation

The changes in the extent of poverty, in accordance with the above is of a different nature in the two countries. In East Germany, we see an almost continuing increase of the poor population in all categories. In Hungary we find a stability, or a little tightening of the poor population, naturally on a much higher level than in East Germany.[3]

Looking at the reported shifts regarding the income mobility on micro level between 1991 and 1992, we should assume changes in the poor population. Table 7 shows that poverty is Janus-faced. Unfortunately we have data only for the Hungarian case.

[3] It is clear that in the further comparison we should take into considereation the purchasing power of the different currencies, and their change too. (eg. Krause, 1994)

Table 7: Persons distribution between poverty and not poverty useing different poverty thresholds

Thresholds / Poverty positions	40%	50%	60%
Not poor in both year	90.2	83.7	72.7
Poor in 1991, not poor in 1991	4.2	6.3	9.7
Poor in both year	2.4	5.1	10.1
Not poor in 1992, poor in 1993	3.2	4.9	7.5

Source: HHP,1.-2.wawes, Author's calculation

Based on the different thesholds used, nearly half of the persons living in poverty were no longer income poor in 1992. On the other hand, ca. fourty percent of the poor in 1992 were not poor in 1991 yet. It means that the poor population can be divided into two groups: temporarily poor and permanently poor. (Andorka,Spéder,1994) Naturally the data of future waves will give us knowledge about the nature of poverty, but this first analysis indicates the mentioned double character of Hungarian poverty as it is also found in the international reaserch.

Summary

We will not summarize our result because our work is a kind of preliminary analysis for the project of a comparison concerning the effects of the system transformation in Hungary and East Germany. In this first analysis, the two countries seemed to have considerable differences, and somtimes Hungary seemed to be more similar to the Western part of Germany. Sometimes East Germany seemed to develope in the direction of the Hungarian case. On the other hand, we see enormous income mobility on the micro level in both countries. The mobility of the persons (and of households) between income classes were much more intensive in East Germany than in West Germany in the focused time (Headey, Krause, Habich 1993); thus our analysis indicates that the experienced shifts between the income classes in Hungary and East Germany belong presumably to the nature of the societies in transition. Another task for the future is to find out which social groups are actually behind the income position shifts shown above. We will have to ask, which groups were

able to improve their position and which had to accept the relative worsening of their income situation.

Literature

Andorka Rudolf, Spéder Zsolt (1994): Poverty in Hungary, Some results of the first two waves of the Hungarian Household Panel Survey in 1992-1993, Paper presented on the workshop "Poverty in Europe" Arbeitskreis Bevölkerungökonomie, Frankfurt

Árvai,J.,Vértes,A.(1993):A magánszektor és a rejtett gazdaság súly a súlya Magyarországon /1980-1992/. Budapest, Gazdaságkutató Rt.

Headey,B.,Krause,P.,Habich.(1990): The Duration and Extent of Poverty - Is Germany a Two-Thirds Society? WZB-Paper P90-103, Wissenschaftszentrum Berlin für Sozialforschung

Headey,B.,Krause,P.,Habich.(1993): East Germany: Rising Incomes, Unchanged Inequality and the Impact of the Redistributiv Goverment 1990-1992, DIW Discussionpaper No.72.

Headey,B.,Krause,P.(1993): Economic and Political Imperatives in System Transformation: Hungary and East Germany 1990-1992, First Draft Manuskript

Krause, P.,(1994): Armut im Wohlstand: Betroffenheit und Folgen, DIW Diskussionspapier No.88.

Kolosi,T.(1987): Tagolt társadalom. Gondolat, Budapest

Kolosi,T.,Róbert,P.(1992) A rendszerváltás társadalmi hatásai, in: Andorka, R., Kolosi, T., Vukovics, Gy.: Társadalmi Riport 1992.

Müller,K.,Hauser,R.,Frick,J.,Wagner,G.(1994): Zur Entwicklung der Einkommensverteilung und der Einkommenszufriedenheit in den neuen und alten Bundesländer in den Jahren 1990 bis 1993. (Manuskript)

Spéder, Zs.(1993) Formális, informális és rejtett gazdaság a háztartások és a nemzatgazdasági folyamatok perspektívájából, in.: Sik Endre, Tóth István György, szerk. (1993): Egy év után... Jelentés a Magyar Háztartás Panel II. hullámának eredményeiröl BKE Szociológia -TÁRKI

Van den Bosch, K., Callan, T., Estivill, J., Hausman, P., Jeandidier, B., Muffels, R., and Yfantopoulos, J.(1993): A comparision of poverty in seven European countries and regions using subjective and relative measures. Journal of Population Economics, 6:235-259.p.