

## **The Poorest and the Richest in a Growing Transition Economy**

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### Abstract

The aim of this paper is to analyze the changes of household inequalities in a European transition economy after more than a decade of the transition process. The analysis is based on the household budget survey data for 1994 - 2005 for Poland and for short period panels for Hungary. Income and saving mobility between different classes of households is examined for estimating the long term households' distribution with regard to income or saving rates. The additional way to describe economic stratification of households is the analysis of concentration of taxpayers' income. The paper indicates the tendency towards polarization of households with regard to income and saving rates. It leads to a conclusion that accumulation of assets by households and the households' wealth will be more unequally distributed in transition economies.

## **1. Introduction**

The income distribution of household incomes during transition from planned to the market economy is affected by a dynamic growth of the economy and rapid changes of the economic environment in which households act. The shock of transition to the liberal market economy from a system of patriarchal guidance by the state was a traumatic experience for many households in the post communist economies of Central and Eastern Europe. The speed of the first push of transition varied in particular economies of Central and Eastern Europe as well as their initial conditions (the initial level of GDP per capita, the saving and investment rates and the labour market situation). According to the neoclassical growth model reaching the equilibrium steady state of growth (the catching-up effect) is conditioned on these starting points for a change and the exogenously determined rates of population growth and the domestic saving rates. A nature of the systemic transition is such that the present development of the Central and East European countries depends not only on the initial conditions from before the transition but it is also a function of the economic situation after the first period of rapid changes in the transition economies (first years of the 1990s).

In most of the Central and East European economies the GDP per capita fell during the first years of transformation, unemployment rose and living conditions worsened for most households. Then, the process of differentiation of incomes and material and social status of households and individuals started, at a different pace in particular economies. The income and wealth inequalities increased in the first period after the transformation, till around mid-1990s, and then either were kept at the same level or continued to increase until now (WB 2000, WB 2002, WB 2005).

The aim of this paper is to analyze the process of changes of inequality in a transition economy together with the analysis of income mobility of individuals or households between different income groups. The research is based mostly on the original nationally representative data for households and individuals from household budget surveys. For measuring income inequality in different years the household budget survey data should form a true panel of the same sample of households. The true panels of household budget surveys in Central and East European countries are rather rare and short in time span (3-5 years). When such panels are available, the analysis of income mobility allows us to conclude also on the probability of the long term occurrence of inequality.

We use the nationally representative household budget surveys data for households and individuals in Poland for the years 1994-2005 (above 30 thousand households in one year and around 100 thousand persons surveyed each year) as well as some panel data sets (of 1-6

thousand households) of 3-5 years of duration for Poland and Hungary during the years 1987 and 2000.

For Poland the true panels of households were worked out from whole household budget survey samples in a way of selecting only those households that were surveyed continuously for 3 or 4 years and formed a nationally representative panel. The panels for Poland were obtained for years 1987-1990, 1991-1992, 1994-1996 and 1997-2000 by a group of researchers at Warsaw University cooperating within the Consortium of Households Panels for European Socio-economic Research (CHER) and the Luxembourg Income Study. Unfortunately, starting with 2001 household budget surveys for Poland it is not possible to obtain a true panel because a selected household is surveyed for one or maximum for two years only. For Hungary and some European Union countries the panel data for the 1990s come from the CHER database.

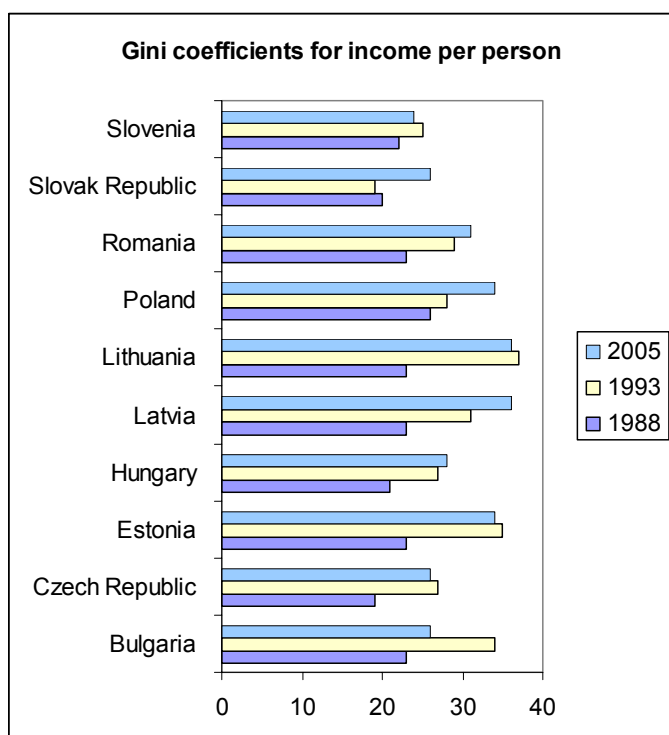
## **2. Overview of income inequalities in transition economies of Europe**

The overall picture of changes in income inequalities in the transition economies is mixed. The Gini coefficients for household incomes in Central and East European economies show the highest income inequalities measured by income per person in 2005 as compared to previous periods in Latvia, Lithuania, Estonia and Poland. In Lithuania, Estonia and Bulgaria the inequalities were the highest after the first transition period in 1994-1995. In Slovakia the inequalities are rising since 1993 and in Czech Republic they are kept at a level of mid-1990s (Figure 1).

The first period of transformation does not show a uniform trend of increasing income inequalities. Before the transition Poland was less a egalitarian country than Hungary or Czechoslovakia. The panel data show that during the first years of transition 1989-1992 the income inequality per person hardly grew in Poland while it increased in Hungary and was still at a relatively low level in Czech Republic in 1992. The exact numbers for Ginis differ slightly in calculations by different authors depending on the particular data source and breaks in data (Atkinson, Micklewright, 1992; Milanovic 1998; WB 2002). The income per capita Gini coefficient increased in Poland before the transition began (from 0.25 in 1987 to 0.27 in 1989) and stayed almost at the same level during the first three years of transition (it reached 0.275 in 1992, Wiśniewski, Grodner, 1997, 4). In Hungary Gini coefficient of income per person hardly increased during 1989-1990 while in Czech Republic it was still at a relatively low level of 0.23 in 1992 (Fleming and Micklewright 1999, 80).

Per household inequalities of income distribution even declined in Poland during the first year of transition (1990). The household income Gini coefficient fell from 0.33 in 1989 to 0.30 in 1990 and then stayed put at this level till 1992. In Hungary the household income Gini grew during 1989-1992 (Wiśniewski, Grodner, 1996, 4). These trends show that the last years of the planned economy (high inflation, acute shortages of goods and chaos) led to differentiation of incomes in transition economies that could be compared with the impact of the first three years of transformation. It is only after the first shock of market reforms (1990-1992) when unemployment, which was not an open unemployment under socialism, rose and the incomes of households started differentiating fast.

Figure 1. Income inequality in European transition economies 1998-2005



Source: World Bank, Milanovic, 1998, p. 41; for 2005 Eurostat; author's calculations for Poland 2005

\* Hungary, Poland, Slovenia 1987; Bulgaria, Romania 1989

\*\* Lithuania, 1994; Estonia, Latvia 1995; \*\*\* Bulgaria 2004.

The ratios of incomes or expenditures of the 9<sup>th</sup> decile to the 1<sup>st</sup> decile and of the 2<sup>nd</sup> to the 8<sup>th</sup> deciles of individuals ranked by income levels are much higher in transition economies of Central and East Europe than are such ratios in richer European economies. Before transition the ratio of income inequalities in centrally planned economies were similar or

lower than were the ratios in the European Union countries (Atkinson, Micklewright, 1992, 110).

Table 1. Inequality of individual expenditure distribution in 2000-2003

	Percentage share of expenditure				Quintile share ratio	
	Lowest 10%	Lowest 20%	Highest 20%	Highest 10%	Highest 10% to lowest 10%	Highest 20% to lowest 20%
Bulgaria	3.4	8.7	38.3	23.9	7.0	4.4
Croatia	3.4	8.3	39.6	24.5	7.2	4.8
Czech Republic*	4.3	10.3	35.9	22.4	5.2	3.5
Estonia	2.5	6.7	42.8	27.6	11.0	6.4
Hungary	4.0	9.5	36.5	22.2	5.6	3.8
Latvia	2.5	6.6	44.7	29.1	11.6	6.8
Lithuania	2.7	6.8	43.2	27.7	10.3	6.4
Macedonia, FYR	2.4	6.1	45.5	29.6	12.3	7.5
Poland	3.1	7.5	42.2	27.0	8.7	5.6
Romania	3.3	8.1	39.2	24.4	7.4	4.8
Russian Federation	2.4	6.1	46.6	30.6	12.8	7.6
Slovak Republic*	3.1	8.8	34.8	20.9	6.7	4.0
Slovenia	3.6	9.1	35.7	21.4	5.9	3.9
Ukraine	3.9	9.2	37.5	23.0	5.9	4.1

\*1996, Refers to income shares by percentiles of population, ranked by per capita income  
Source: World Bank, WDI, 2006.

Measured by expenditure ratio the inequalities increased fast (Table 1). After ten years of transition the highest to lowest decile expenditure share ratios were larger than 10 in some countries (the Baltic states and Russia) and the quintile expenditure share ratios were higher by one-two points than the 4.9 average quintile expenditure share ratio for European Union (25 countries). The exceptions are Czech Republic, Slovakia, Hungary and Slovenia where the quintile ratios are around 4.0. Besides Russia and Macedonia, in three Baltic states and Poland the expenditure share ratios of the richest 20% to the poorest 20% of persons in households were the highest in Central and Eastern Europe in 2002-2003.

During 2000-2005 the income inequality measured by quintile share ratios rose in three out of ten transition economies of Europe, namely in Lithuania, Latvia and Poland (Table 2). They are also highest in these economies and in Estonia. In other transition economies the inequalities of income of persons belonging to the top and to the bottom of the distribution seem to stabilize or increase only slightly.

Table 2.  
 Quintile share ratio of income per person (20% of highest income to 20% of lowest income)

	2000	2001	2002	2003	2004	2005
Bulgaria	3.7	3.8	3.8	3.6	4,0	:
Czech Republic	:	3.4	:	:	:	3.7
Estonia	6.3	6.1	6.1	5.9	7.2	5.9
Latvia	5.5	:	:	:	:	6.7
Lithuania	5.0	4.9	:	:	:	6.9
Hungary	3.3	3.1	3.0	3.3	:	4,0
Poland	4.7	4.7	:	:	:	6.6
Romania	4.5	4.6	4.7	4.6	4.8	4.9
Slovak Republic	:	:	:	:	:	3.9
Slovenia	3.2	3.1	3.1	3.1	:	3.4

Source: Eurostat estimates.

The present process of unequal distribution of persons and households in transition economies concerns more wealth accumulation than earned incomes only. Investment in housing, durables, human capital in a form of education and caring for health are the attributes of wealth besides earned income.

Saving from current income for accumulation of wealth depends on how permanent the current income is. According to theory saving are done mostly from the transitory part of income. But long term accumulation of wealth is only done when a permanent income is sufficiently high to provide for consumption in current period and allowing for investing in future consumption. In a transition economy the permanent income is still relatively short lived and very uncertain. Uncertainty makes the permanent income to be close to the transitory income. The permanent income uncertainty in a transition economy affects savings more than the uncertainty of transitory income (Liberda, Górecki, Pęczkowski, 2003, 2004).

Income from property and capital is becoming more important in transition economies. It will form a greater part of total household incomes in higher income groups following a process observed in the OECD economies during the last 50 years (Atkinson 2003). Similar processes are already taking place due to the fast growing financial markets (stock exchange, insurance, bonds) and real estate markets in transition economies of Europe. In addition, capital gains are either not taxed or were not taxed till recent years in the transition economies of Europe leading to faster accumulation of wealth by those investing in financial market.

### **3. Inequality between households and persons - how does it matter?**

There is a merit difference between the income or expenditure inequality measured per household or per person as well as per equivalence scale. The measures of inequality for households do not show the consumption level of each household member. It is probable that an individual living in a big household with relatively high income may consume below the average level of consumption. On the other side, a measure of inequality per household gives quite a good description of the household material status and the ability to save from income, including income from capital. Saving is done mostly at the level of the household.

The inequality measured per person in a household giving a better description of the consumption levels of household members may underestimate the investment possibilities of some larger households. For example, families with many children may belong either to very poor households or very rich families which do have children due to other reasons than high income (religion, nobility etc.). The average consumption level per person in a very rich family may be at a similar or lower level of consumption in a small middle income household. The saving ability of a large rich household is generally higher than is saving ability in a smaller middle income household.

The income and consumption per person in household is also highly affected by the social security transfers from the state which are bound to particular members of family. Some forms of transfers may not be visible in the reported consumption of household (different housing, health and social transfers) and the real financial situation as well as consumption of the household may be better than it is reported (Liberda 2007).

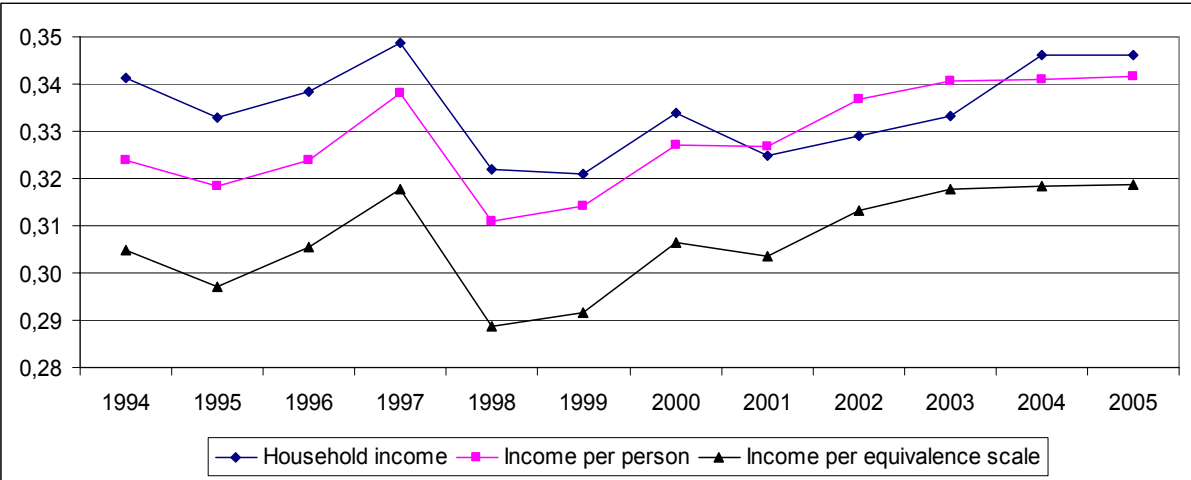
Using of equivalence scales allows accounting for economies of scale in consumption within the household. Equivalence scale gives generally lower inequality than an inequality measure per person or per household. However, the economies of scale in consumption within the household may be overestimated due to increasing costs of education expenditures for each child or for health and other care for older members of the family. The costs per person are also rising when working parents and children eat outside, use a lot of transportation and require more space in a house for their activities. Besides, the inequality measures per equivalence scale are affected to some extent by the equivalence scale used.

We have calculated values for Gini coefficients for years 1994-2005 in Poland for three income definitions: income per household, income per person and income per equivalence scale. The results of calculations are presented in Figure 2. Income category is the net disposable income after taxes and benefits as reported by households. Calculations are

done for the samples of more than 30 thousand households each year and above 100 thousand persons a year. We have excluded households which reported negative or zero incomes (mostly belonging to farmers or self-employed). Such households constitute ca. 0.5% of the whole sample each year. The negative numbers for income affect the mean income of the lower deciles of households and the mean of the whole sample. With negative savings those households would be accounted as those with the positive saving rates. Due to the exclusion negative incomes from the household budget data our results differ slightly from the calculations of other researchers (Pierella, Sasin and Verbeck 2004).

Measured for different income definitions, Gini coefficients show similar movements during the period of 12 years observed in Poland, with Gini values for equivalence scale being the lowest during the whole period. However measured income inequalities were growing throughout the period with two major exceptions. One exception is the year 1995 which was the third year of a recovery growth after a transition shock. The disposable income per capita grew in 1995 by almost 6% in relation to the previous year and it had affected the income distribution. The other fall of Gini coefficients in 1998 is mainly due to the change of the methodology of the Household Budget Surveys in Poland in 1998 (Figure 2).

Figure 2. Gini coefficients for 1994-2005 in Poland for different income definitions



Source: Author’s calculations based on Household Budget Surveys 1994-2005, Poland.

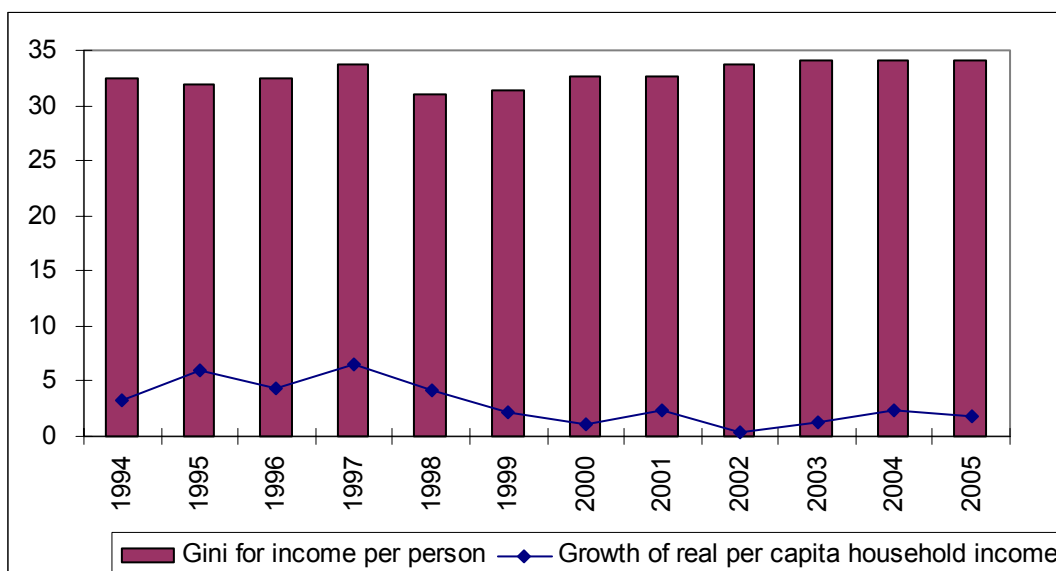
The methodology of Household Budget Survey in Poland was changed to adjust it to the COICOP/HBS standard (Classification of Individual Consumption by Purpose for Household Budget Surveys). The income data and (to a lower extent) the expenditure data for



1998 are affected by the change of methodology and therefore the results of income distribution for 1998 are not strictly comparable with previous years.

From the point o view of further analysis and in order to relate inequalities to saving the income inequalities per household are of interest. The Gini values for income per household and per person moved within brackets of 0.31 and 0.35 during the observed period. After 1999 they increase above the level of 0.32. In 2001 values of Gini for income per household and per person were almost equal. Then, for the next two years the income inequalities per person were higher than the inequalities per household. These were the years of the slowdown of the economy when the household income per capita hardly grew in real terms (Figure 3).

Figure 3. Gini coefficients for income per person in household in years 1994-2005 and rates of growth of per capita household income in 1994-2005 in Poland



Source: For Gini: author's calculations based on Household Budget Surveys 1994-2005; for growth of household incomes: National Accounts by Institutional Sectors and Sub-sectors 2000-2005, CSO, Warsaw, 2007; Statistical Yearbook of the Republic of Poland 2000, p. 552.

The relation between the growth of individual per capita household income and Gini inequality (Figure 3) is not linear. Inequality increased when a growth of income was higher in 1997 and in 2004 or it decreased when the rate of growth of income was lower but still high as in 2001. Other factors must also determine inequality during transition, like: unemployment that bursts during transition, tax systems, institutions, psychological strength to deal with a transition crisis etc. Impact of these factors on inequalities is not easy to measure. Polish society reacted well to a transformation challenge and adapted to a systemic

change at a cost of higher social differentiation. Individuals adopted strategies to cope with new demands by exploiting the deficiencies of the legal system and inefficiency of administration (Social Diagnosis, 2005, 13; Gucwa 2004).

The situation in which inequality among individuals is greater than inequality between households may be a sign of mal functioning of social policy focused on family. That was a case during the last slowdown of the Polish economy in 2000-2002 and soon after that. Then, in 2004 and 2005 the inequality among individuals stayed at the level of 2003 and the inequality between households increased again, together with faster growth of per capita household incomes.

It is assumed theoretically that the benefits system has a redistributive property and the personal income tax system works progressively. If the progressive income tax rates do not make the tax system work progressively it means that the poorer pay more taxes than the better-off in relation to their incomes. Such situation happened in Poland in the 1990s. The overall tax system was slightly regressive in 1994 and then reduced its regressiveness to become progressive in 2001 again. The social benefits system was highly regressive in Poland during most of the observed period from 1994 till 2000 (Aksman, 2005; Pierella, Sasin and Verbeck, 2004).

On the other side, the social benefit systems in European transition economies, especially in Hungary and Poland are the most redistributive ones in Europe. The high redistributive property of the social benefit systems in Hungary and in Poland is a consequence of a very high ratio of benefits to primary incomes. Such high relation of benefits to primary incomes is caused mainly by a relatively low level of income from property in primary incomes which is a feature of the transition countries (Aksman, 2005). This is changing after accession of the Central European economies to European Union in 2004 due to new profits from investment co-financed by European funds and from investing money transferred home from migrants to other EU countries.

The conclusion is that income inequality of households and persons is on rise during transition. The social benefit systems in transition economies, though highly redistributive due to a very high ratio of benefits to primary incomes, do not stop inequalities growing. Societies adapt to a systemic change at a cost of higher social differentiation.

#### **4. Rich and poor taxpayers**

The structure of personal income taxpayers may be another source of our knowledge on income inequality. Flat rate personal income tax system does not reduce income

inequalities. A Polish case shows that the progressive income tax system may not redistribute incomes well. Formally, the personal income tax system in Poland is strongly progressive with the income tax rates of 19%, 30% and 40% and low income tax brackets. The effective income tax rates at which taxes are finally paid were much lower due to tax benefits (mainly for housing) that were used at a higher scale by more wealthy taxpayers in the past and due to tax evasion at home and income flight abroad.

Table 3. Personal Income Tax structure in Poland: number of taxpayers, taxable personal income and taxes paid (1997 - 2006)

	1997	2003	2006	1997	2003	2006	1997	2003	2006	2006
Personal Income Tax (PIT) rates	19% tax rate			30% tax rate			40% tax rate			19% - flat rate (only for some self-employed and for capital gains)
Number of taxpayers in % of total number	94.6	94.7	93.3	4.4	4.1	5.5	1.0	1.1	1.1	1% of the total number of taxpayers (three PIT groups and a flat tax rate group)
Personal Income in % of total income	77	76	75	12	13	16	11	10	9	14% of total taxable income (of three PIT groups and a flat tax rate group)
Personal Income Tax paid (% of total PIT)	67	51	56	13	19	22	20	30	22	23% of total taxes (paid by three PIT groups and a flat tax rate group)

Source: Author's calculations based on data from Ministry of Finance, Poland, Personal Income Tax, [www.stat.gov.pl](http://www.stat.gov.pl)

The personal income taxation data show a high concentration of incomes in higher income tax brackets. The structure of taxes paid is highly skewed. Since the introduction of the personal income tax in 1992 till 2003 taxpayers of the highest personal income tax rate bracket (PIT) in Poland constitute only 1% of the total number of taxpayers. Till 2003 they

had at their disposal 10-11% of total taxable household income. The middle income tax bracket group, accounting for 4% of taxpayers, got hold of 12-13% of total incomes. The lowest income group comprising 95% of all taxpayers held 75% of all incomes (Table 3).

From mid-1990s till 2003 a progressive tax system worked in a way of slowing down the process of concentration of incomes and redistributing a growing share of incomes in a form of taxes from the richer to poorer individuals. Personal income taxes paid by the richest 1% of taxpayers grew from 1/5 to almost 1/3 of the total tax bill during that period. Instead, a share of total taxes paid by the lowest income group fell from two thirds to a half.

Changes of tax system since 2004 went into direction of reducing the progressive feature of a system by allowing for a flat tax rate for some groups of self-employed (and for capital gains). A flat personal income tax rate is equal to the corporate flat income tax rate of 19%. This change created a privileged group of high income persons who form another 1% of taxpayers with incomes greater than are incomes of the group paying the highest personal income tax rate. This flat tax rate group paid in 2006 almost one fourth of the total personal tax and held 14% of all taxable personal incomes.

Such not coherent (since 2004) personal income tax system reveals and supports the inequalities of income distribution. Another feature of this distribution is a small share of the middle income group that is not growing in relation to the top income group. Middle income group comprises 4%-5% of the total number of taxpayers. Its share in total income hardly grew during 15 years. In 2006 middle income group held 16% of the total PIT income (without flat rate taxpayers' income) but about 14% of total taxable income (a sum of three PIT taxable incomes and a flat rate income) which is at similar level as it was before.

Concluding, data in Table 4 show not only the high concentration of taxpayers' income but also a very limited mobility of taxpayers to move upward the tax income brackets during the transition period in Poland. Progressive tax systems do not reduce income inequality substantially. The flat rate tax systems are neutral to income inequality.

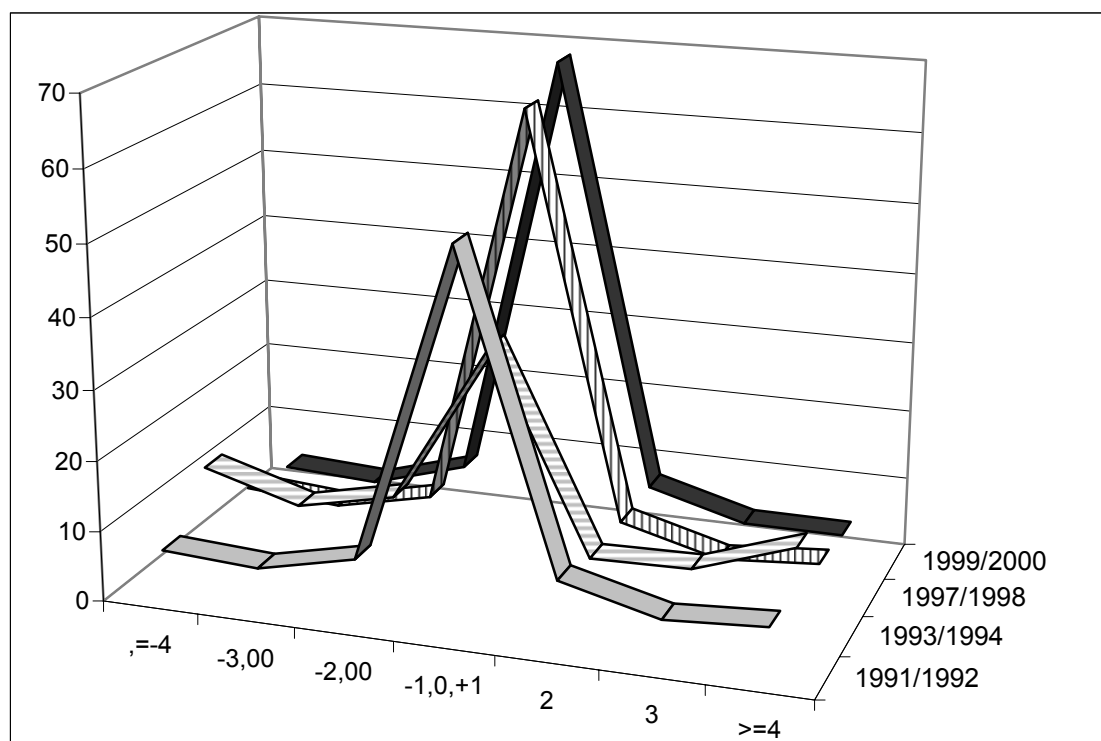
## **5. Income inequality, income mobility and saving mobility**

Distribution of income depends on the growth rates of incomes of individuals and different groups of households. During this process some households or persons move up the income scale and other either stay at their previous positions or fall down in relation to their past income level or in relation to the mean income. The income mobility of different categories of people can show directions of possible changes of income inequality in the long term.

During transition the income mobility was fast in European countries. In Poland and in Hungary the mobility between deciles of income of working persons was higher during the period of 1987-1996 than it was in France and Germany during the same period (Górecki 2000). The highest income mobility was observed in groups of young people below 29 years old with either primary or tertiary education. Wiśniewski and Grodner (1996, 21) show that just before transition and during the first year of transition in Poland (1987-1990) 40% of households were mobile: 24% went up the income ladder and 16% of households fell down. In the remaining group of not mobile households 35% stayed at the level of low income while 25% of households kept the position of relatively high incomes.

Later in the 1990s more persons were moving down than moving up, leading to more inequality. The group that did not move outside of the two closed deciles was kept large, from 55% to 70% of all persons in households in Poland (Gucwa 2007). Only in 1997-2000 was mobility again similar on both sides of the income scale: in each decile group the probability of advancing and degradation was almost the same (Figure 4).

Figure 4. Income mobility of individuals between deciles of income (ranked by income per person) in Poland in 1991-2000



Source: Gućwa E., 2007, Changes of Level of Living and its Social Determinants (in Polish, in print).

Mobility of households from and to relative poverty, measured by a position to average income, increased during 1990s in most of the European transition economies. In Hungary, Slovakia and Czech Republic shares of population below average income increased to 43% of the total in 2000 from a level of 15% in 1988. The average income households accounted for around half of the total and those above the average income fell by half to 6-9% of the total of population in 2000. In Romania, Russia and Bulgaria mobility to the group below the average income was more intensive and the relative poor were in majority in these economies in 2000 (2/3, 3/4 and 4/5 respectively, Szelenyi, 2001)

In Hungary mobility of households during 5 years of 1992-1996 was more pronounced than in Poland. More than half of the population in the middle three quintiles changed quintile between years and moved to one of the neighboring quintiles. Measured over time, mobility has gone down. After five years under study more people stayed in the same income groups than had done so at the beginning of the period. Inequality of households' income rose moderately (Galasi, 1998).

Kolosi and Robert (2005, 51) bring data for vertical mobility by income deciles from 2001 to 2003. The report indicates that over the period the very lowest and the highest deciles saw the largest absolute increase of per capita income in relation to average growth. The ratio of the highest to the lowest deciles rose again at the end of the period in 2003. A vertical differentiation of the Hungarian society took place. According to Kolosi and Robert (2005, 56) a social stratification of the Hungarian society in 2003 after more than a decade of transition was the following: elite consists of 3% of the adult population, upper middle class 8%, middle class 31%, working class 38% and the deprived 20%.

Classes of social stratification are obtained by valuing not only household income but also housing conditions and the individual's financial situation and material status (covering savings, properties, durables, cars, computers and holidays). The two top classes are composed of owners of businesses, top managers, white-collar workers, self-employed, professionals. The deprived are mostly unskilled and agricultural workers from the lowest three deciles of the social status scale and from lower deciles of income.

According to Social Diagnosis (2005, 242) survey in Poland during the period 2000-2005 mobility from poverty was more than twice faster (16% of all households) than falling below the poverty line (7%) leading to a net decrease of relative poverty by 9 percentage points. In 2005 less than one fourth of Polish households were reported below the poverty line. There are mainly unemployed, families with many children, small farmers and other households living in the country side.

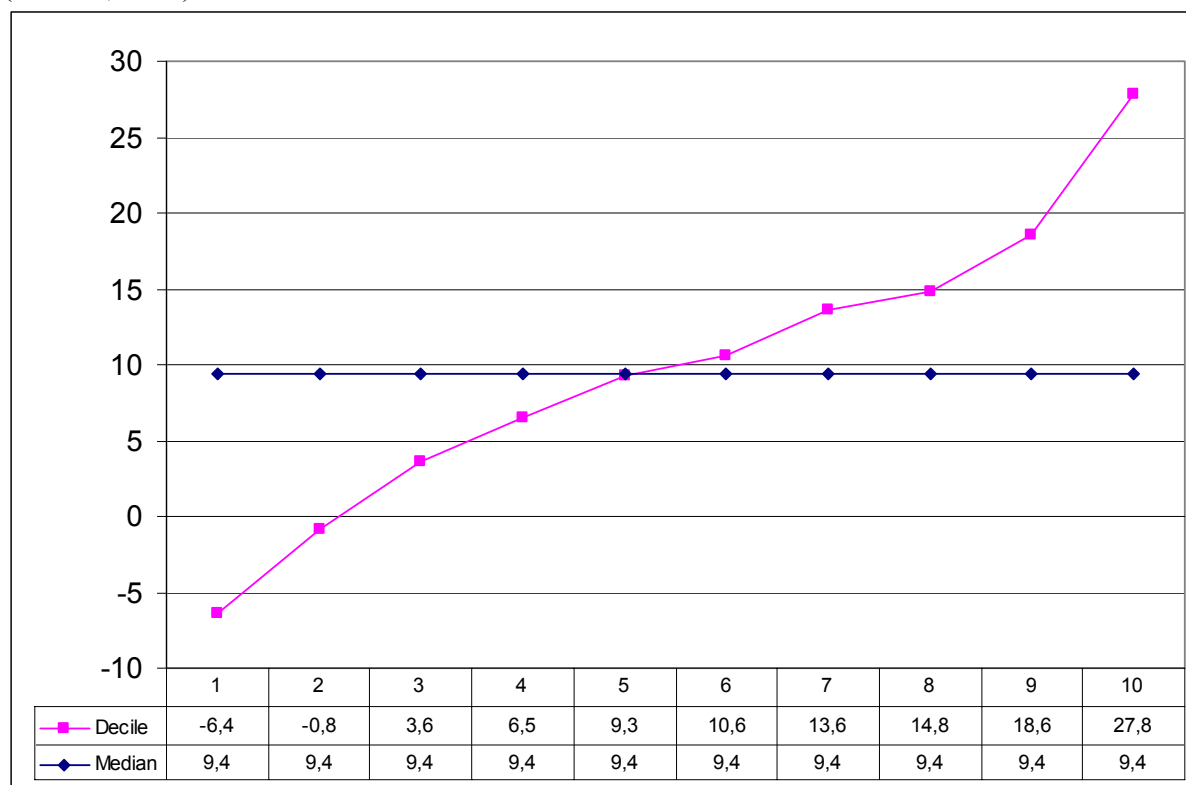
A process of forming a new economic and social middle class is relatively slow in Poland yet. The middle class develops less from the bottom of income distribution but rather from the relatively rich persons from a top of income distribution when their incomes stabilize at such high level and are accumulated in material wealth. Data describing wealth accumulation are not easily accessible. The survey data may give some information on the level of saving from current income at the household level as well as a split of these savings between different investment (real estate, shares, bonds, insurance etc.). However these data are heavily underreported and underestimated as well as unbalanced when aggregated across the groups of household. The macroeconomic data on financial investment of household are also often unbalanced.

There is also no reliable data on the split of physical persons investing directly at financial markets. Observing a very high excess demand revealed for shares at the primary share markets in Poland we can deduce that the distribution of individual investors is highly unequal. On the other side, investing through investment funds is increasingly done by a growing group of smaller investors coming from middle income or even poorer households. Study on saving behavior of households at different income levels surprisingly shows that households report positive savings even if they value their income as hardly sufficient for living and if their income is really low (Liberda 2007). In terms of averages low income households report negative savings which means that they either took credits or they have to finance consumption from accumulated savings or from transfers, which were not reported in surveys.

People with higher income in Poland save much more than is the average rate of saving. The top quintile group of households saves more than one fourth of their income, three times the average. The lowest quintile group reports negative average savings. Also a third decile had often negative saving in the past. The household average saving rates were at a level of around 6% till 2000 and only after 2001 they start growing to 9% of household income (Figure 5).

With such saving profiles a major part of total private households' savings comes from the fifth top quintile income group. In 2005 households from the top decile group created almost 60% of all positive household savings and the top quintile accounted for 3/4 of all positive savings this year. In 2000, which was a year of slow down of the economy, the saving curve was even more skewed. The top decile accumulated almost three fourth of household savings, and the top quintile created more than 80% of the total household savings. Ten years earlier in 1995 the saving distribution was as skewed as in 2005.

Figure 5: Households' saving rate by decile groups of disposable income in 2005 in Poland (median, in %)



Source: author's calculations based on Household Budget Surveys 2005, CSO, Warsaw.

With such saving profiles a major part of total private households' savings comes from the fifth top quintile income group. In 2005 households from the top decile group created almost 60% of all positive household savings and the top quintile accounted for 3/4 of all positive savings this year. In 2000, which was a year of slow down of the economy, the saving curve was even more skewed. The top decile accumulated almost three fourth of household savings, and the top quintile created more than 80% of the total household savings. Ten years earlier in 1995 the saving distribution was as skewed as in 2005.

The analysis of the household mobility between different classes of households ranked by saving rates allows for estimating the long term ergodic households' distribution with regard to saving rates. It was done by applying Markov mobility matrices to the household budget panel data of 3001 Polish households surveyed in the same month during four consecutive years 1997-2000, for which last true panel of Polish households is available (Table 4, Liberda, Pęczkowski 2005).

The results (Table 4) show that during four consecutive years (1997-2000) more than one third of households with very low negative saving rates had not left their class, but around



one fifth jumped into the group of highest saving rates. In a class of households with highest saving rates of above 20% of the household disposable income half of the households kept these high saving rates and around one fifth of this group reported negative savings after a year.

Table 4: Households' mobility matrices subject to the saving rates, 1997-2000, Poland (households ranked by saving rates)

		Saving rates 1998					Total
		<-20%	-20% - -5%	-5% - 5%	5% - 20%	20%+	
Saving rates 1997	<-20%	37	15	11	15	23	100.0
	-20% - -5%	26	16	18	20	19	100.0
	-5% - 5%	23	16	16	22	22	100.0
	5% - 20%	15	13	19	24	30	100.0
	20%+	12	8	10	19	51	100.0
Total		21	13	14	20	33	100.0

		Saving rates 1999					Total
		<-20%	-20% - -5%	-5% - 5%	5% - 20%	20%+	
Saving rates 1998	<-20%	36	15	11	20	18	100.0
	-20% - -5%	25	21	15	21	19	100.0
	-5% - 5%	19	18	15	26	23	100.0
	5% - 20%	16	10	15	27	32	100.0
	20%+	12	7	10	20	53	100.0
Total		20	13	13	22	33	100.0

		Saving rates 2000					Total
		<-20%	-20% - -5%	-5% - 5%	5% - 20%	20%+	
Saving rates 1999	<-20%	38	14	13	17	18	100.0
	-20% - -5%	26	18	15	21	19	100.0
	-5% - 5%	17	17	16	27	23	100.0
	5% - 20%	15	14	14	30	28	100.0
	20%+	19	9	10	23	48	100.0
Total		20	13	13	24	31	100.0

Source: Liberda, Pęczkowski, 2005, based on 3001 households' panel from Household Budget Surveys 1997-2000, CSO, Warsaw.

The analysis of saving mobility serves as a basis to deduce on the probability of a household to fall into one of the saving rates groups. The long term probability of falling into the lowest saving rate group was around 0.2. The highest (0.3) was the probability to get into a group that saved more than 20% of the household disposable income.

There is then a clear tendency towards polarization of households with regard to saving rates. Such polarization indicates that the accumulation of assets by households is

highly unequal. The wealth of households in transition economies will be more and more unequally distributed between individuals and households that build up their human capital and material well-being after a collapse of the communist system.

In a comparative and cross section analysis of households' income and saving we focused on a group that can constitute a possible winner group of the transition in both economic and social dimension. This is a group that fulfils jointly four criteria:

1. Earned income - above average income
2. Age - between 25 and 55 years
3. Education - secondary and above secondary
4. Place of living - in big towns (above 200 thousand inhabitants).

The focus group accounted for 6% of earning persons in Poland in 2000 and its size increased to 8.4% in 2005 (a growth index of 1.4 during 5 years). The group is characterized by the following features:

- Persons from the focus group earned two times more than is the average income of the earning individual and they are highly represented in the highest income deciles groups.
- The income per person in the households of the members of the focus group is higher by 70% than is the average household income per person.
- Households of members of the focus group save 3 times more than is the average household saving.

The above features of the focus group hardly changed during the observed period (2000-2005). The last feature, namely saving, supports the existence of the focus group itself. The focus group can serve as a benchmark of a successful transition outcome.

The opposite group of those who did not succeed in absolute or relative terms is more diversified than a success group. It can be treated as a population below poverty line which was at a level of 23% of the total population in 2005. But income as a poverty indicator should also be treated with caution. Not all persons that officially fall below the poverty line are really the absolute losers of the transition. Many of them, especially older people, possess assets (mainly flats or real estate) acquired during the previous system at a negligible or no cost. Many earn in the grey economy or get unjustified social benefits.

However, most of the deprived from the transition are real poor persons, with no income or very low income, unemployed, living more in villages and very small towns than in big cities, households with many children, more women than men, low educated. Not all these characteristics must be observed by a person being below the poverty line. But in most cases all the above criteria are fulfilled.

To conclude, the above specification of a focus group of probable winners of the transition process does not predict that other social strata did not gain from the system change. The criteria of selecting a focus group were formulated on a basis of income, taxes and saving distribution of Polish households. The group of deprived people is easier to be identified by applying the poverty line concept.

## **6. Conclusions**

- The aim of this paper was to analyze changes of inequality in a transition economy together with the analysis of income mobility of individuals or households between different income groups.
- The transformation process led to increasing income and social inequalities in all transition European countries. This process was less acute for households in Hungary, Czech and Slovakia. In Lithuania, Latvia, Estonia and Poland inequalities increased more.
- Inequalities increased in household and individual incomes during the first half of transformation (7-8 years) till 1996-1997. Since 1998 the relative stabilization of inequality level is observed in Hungary and a temporary fall of inequalities in Poland in 1999-2001, correlated with the slowdown of the Polish economy during that period.
- The return increase of inequalities since 2002 started at the bottom level of economic activity and continued till 2005 together with higher growth rate of the economy.
- The additional way to describe economic stratification of households was the analysis of concentration of taxpayers' income.
- The income and saving mobility between different classes of households (ranked by income or saving rates) allows for estimating the long term ergodic households' distribution with regard to income or saving rates.
- The tendency towards polarization of households with regard to saving rates signals that accumulation of assets by households is highly unequal and the wealth of households in transition economies will be more and more unequally distributed.

## **7. References**

- Atkinson A., J. Micklewright, 1992, *Economic Transformation in Eastern Europe and the Distribution of Income*, Cambridge University Press.
- Atkinson A., 2003, *Income Inequality in OECD Countries: Data and Explanations*, CESifo, 2003, 49, 4.

- Aksman E., 2005, Redistributive Effects of Social Benefits in Poland vs Analogous Effects in Other European Countries, Proceedings of a conference on *Comparative Economic Analysis of Households` Behavior (Old and New EU Members)*, Warsaw University.
- European Commission, Report on Social Inclusion 2005, Luxembourg.
- Fleming J., J. Micklewright 2000, Income Distribution, Economic Systems and Transition, in: *Handbook of Income Distribution*, pp. 849-908, Elsevier.
- Galasi P. (1998), Income Inequality and Mobility in Hungary 1992-96, *Innocenti Occasional Papers*, Economic and Social Policy Series No. 64.
- Górecki B., 2000, Dynamika zarobków w krajach przechodzących transformację i w krajach Unii Europejskiej, *Ekonomista* No. 5, 635-645.
- Growth, Poverty and Inequality, 2005, World Bank.
- Gucwa E., 2007, Changes of Level of Living and its Social Determinants (in Polish, in print)
- Gucwa E., 2004, The Emerging Polish Capitalism Endures on the Basis of Individual Factors, IAREP/SABE Conference, Philadelphia.
- Household Budget Surveys, 1994-2005, Central Statistical Office, Warsaw.
- Kolosi T., P. Robert 2005, Key Processes of Structural Transformation and Mobility in Hungarian Society since the Fall of Communism, in *Social Report 2004*, Budapest, TARKI, 47-71.
- Liberda B., 2007, Income Preferences and Household Saving, *Gospodarka Narodowa*, No. 9; and IAREP/SABE Conference, Paris 2006.
- Liberda B., M. Pęczkowski, 2005, Saving Mobility of Polish Households, Proceedings of a conference on *Comparative Economic Analysis of Households` Behavior (Old and New EU Members)*, Warsaw University, 2005, Warsaw.
- Liberda B., B. Górecki, M. Pęczkowski 2004, Saving from Permanent and Transitory Income: the Case of Polish Households, *Ekonomia*, No. 14, 7-22; and IARIW 28<sup>th</sup> General Conference, Cork, 2004.
- Liberda B., B. Górecki, M. Pęczkowski 2003, Uncertainty of Households Income in the European Union Countries and Poland, *EMERGO*, No. 4(38), 2-15.
- Milanovic B., 1998, Income, Inequality and Poverty during the Transition from Planned to Market Economy, World Bank.
- Making Transition Work for Everyone, 2000, World Bank.
- Pierella P., M. Sasin, J. Verbeek (2004), Economic Growth, Income Distribution and Poverty in Poland during Transition, World Bank Policy Research Working Paper 3467.

- Social Diagnosis 2005, eds. J. Czapiński, T. Panek, in Polish, *Diagnoza Społeczna 2005*, Wyższa Szkoła Finansów i Zarządzania w Warszawie.
- Szelenyi I., 2001, Poverty under Post-communist Capitalism – the Effect of Class and Ethnicity in Cross-national Comparison, Center for Comparative Research Department of Sociology, Yale University.
- Transition, The First Ten Years, 2002, World Bank.
- Wiśniewski M., Grodner A., 1996, Changes in Income Distribution in Poland Between 1987-1992, PACO Project paper, No. 20.