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## Measuring and Analyzing Income Distribution and Income Inequality in Hungary based on Data from Personal Income Tax Returns

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MŰHELYTANULMÁNYOK

DISCUSSION PAPERS

MT-DP – 2010/11

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Hungary based on Data from Personal  
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ILONA KOVÁCS

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Measuring and Analyzing Income Distribution and Income Inequality  
in Hungary based on Data from Personal Income Tax Returns

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# **Measuring and Analyzing Income Distribution and Income Inequality in Hungary based on Data from Personal Income Tax Returns**

Ilona Kovács

## **Abstract**

This study surveys various views on income distribution and income inequality and presents alternative approaches to and analytical methods of measuring income inequality.

In contrast to traditional income distribution analyses, the author examines the development of income distribution and income inequality for a period between 1996 and 2004, following the change in the regime, based on personal income (consolidated income subject to general tax rates and total income including income subject to separate tax rates) declared to the Hungarian Tax and Financial Control Administration (APEH). A follow-up to this work based on similar data available up to the year 2007 is forthcoming.

Based on income surveys by the Hungarian Central Statistical Office (KSH), the ratio of the income of the top tenth of the population to the bottom tenth of the population doubled from 4.6 to 9.2 between 1987 and 1997. Analyses for years following 1996 (TÁRKI, Institute of Economics) show that income inequality did not increase considerably following that year; it essentially stagnated with nothing more than internal structural changes taking place. The results obtained based on data from personal income tax returns contradict these findings, as income inequality has further increased since, while the extent of income inequality itself was also considerably larger.

Based on her conclusions, the author formulates important economic policy recommendations. She sees taxation, inflation, demographic changes, and changes in the structure of ownership and the way privatization took place as the leading causes behind these changes in income distribution and income inequality which were extensive by international standards.

**Keywords:** income distribution, income inequalities

**JEL:** D310

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# **A hazai jövedelemeloszlás és jövedelemegyenlőtlenség mérése és elemzése személyi jövedelembevallási adatok alapján**

KOVÁCS ILONA

## **Összefoglaló**

A tanulmány bevezetőjében áttekinti a jövedelemeloszlásról és jövedelemegyenlőtlenségről vallott különböző nézeteket, bemutatja a jövedelemegyenlőtlenség mérésének alternatív megközelítési módjait, elemzési módszereit.

A hagyományos jövedelemeloszlási vizsgálatoktól eltérően a szerző az APEH-nek bevallott személyi jövedelmek (összevont és összesített jövedelmek) alapján vizsgálja a jövedelemeloszlás és a jövedelemegyenlőtlenség alakulását a rendszerváltozás után 1996 és 2001 között. A munka további folytatása előkészületben van a 2007-ig rendelkezésre álló hasonló típusú adatok alapján.

A KSH jövedelmi felmérései alapján 1987 és 1997 között megkétszereződött, 4,6-szeresről 9,2-szeresre nőtt a legfelső és legalsó népességtized jövedelmének aránya. Az 1996 utáni évekre készült vizsgálatok (TÁRKI, Közgazdaságtudományi Intézet) azt mutatják, hogy a jövedelemegyenlőtlenség ez idő után nem változott jelentős mértékben, növekedése lényegében megállt, legfeljebb belső struktúraváltozások mentek végbe. A személyi jövedelembevallási adatok alapján kapott eredmények ennek a megállapításnak ellent mondanak, a jövedelemegyenlőtlenség tovább nőtt, mi több, ezen adatok alapján lényegesen nagyobb a jövedelemegyenlőtlenség mértéke is.

A szerző következtetései alapján fontos gazdaságpolitikai ajánlásokat fogalmaz meg. A jövedelemeloszlás és jövedelemegyenlőtlenség nemzetközi mércével mérve nagymértékű változásának okait alapvetően az adózás, az infláció, a demográfiai változások, valamint a tulajdonosi átrétegződés és a privatizáció megvalósulásának mikéntjében látja.

**Tárgyszavak:** jövedelemeloszlás, jövedelemegyenlőtlenség

**JEL kód:** D310

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## **INTRODUCTION: VIEWS AND OPINIONS ABOUT INCOME DISTRIBUTION AND INCOME INEQUALITY**

Even the 19<sup>th</sup> century founders of classical economics, Adam Smith and David Ricardo, considered the issue of how income was distributed between the social classes of the period, that is, workers, capitalists, and landowners, as one of the most important questions concerning the economy. According to their theories, with the development and enrichment of society, landowners will become relatively richer at the expense of capitalists. Marx took a contrary stance with the view that parallel to economic growth, the rich will become relatively richer and the poor will become relatively poorer. But we could also add the hope of Alfred Marshall, that the rich would become relatively poorer and the poor would become relatively richer. And how should we relate to Pareto's conclusions, crystallized through his work in the field of income distribution, that income inequality is a perpetually existing social characteristic, the understanding of which and the causes of which are quite possibly beyond the limits of human understanding and influence? On the basis of the trends that have evolved within countries and globally during the last third of the 20<sup>th</sup> century and since the turn of the millennium, I share the opinions of Marx and Pareto.

Through his economic research at the beginning of the 20<sup>th</sup> century, Edwin Cannan (1914) sought answers to two burning questions: why is it that some societies are rich while others are poor, and why are certain individuals and families within a community below the average income level while others are above such a level. The thoughts of Cannan are just as relevant today as they were nearly a hundred years ago: we still cannot really answer such important questions, as to why within individual countries a considerable share of economic assets is concentrated in the hands of only a handful of people.

We can state without any exaggeration that income distribution is one of the most important areas of macroeconomics in every economy: it affects considerably both consumer demand and investment, and influences not in the least several areas of state activity. At the same time this effect is felt in the other direction as well: consumer demand influences income distribution, as both consumption and increasing investment generate an increase in demand for labor. How the wage ratio and the profit ratio (the ratio of wages and profits, respectively, to GDP) evolves in the long run is a fundamental issue.

The science of economics cannot answer the all-important question as to what the determining factor is in comparing, evaluating, and rewarding by pecuniary means our performances: ability, knowledge, time spent acquiring skills, a degree, a high intelligence quotient, skill, artfulness, swindling, maybe political positioning? Perhaps I am not mistaken in considering that the economic theories which have attempted to answer these questions did not help much in clarifying the issue. These questions are basically matters of subjective opinion. Which theoretical school could explain why the work of an excellent heart surgeon, a world famous atomic physicist, an erudite literature or history professor is valued by society, under favorable circumstances, at half, a third or a tenth of the salary of a medium level bank manager? A number of questions concerning and rousing ordinary people await to be answered.

Among economists there is no **single answer** today even to the obvious question of what differences in income would be ideal, that is, what differences in income would not be irritating but at the same time would stimulate the economy. Opinions are divided regarding the extent to which governments should intervene (and whether they are willing to intervene) in order to decrease income inequality using the tools of income redistribution (transfers) and taxation. This in spite of the fact that, on the one hand, the relations among the factors of production, and on the other hand, the relations among the proprietors of such factors have changed radically within an incredibly short period of time in a historical perspective, and are changing continuously; resulting in changed and changing distributions of personal income.

Even though their profound effects on the functioning of the economy would warrant it and notwithstanding their importance, the topics of income distribution and income inequality did not receive in 20<sup>th</sup> century economic research the attention that would have reflected their weight. This was also established by Mr. Atkinson, professor of the London School of Economics, who spent long years studying and researching these topics (Atkinson, 1983). In essence, the interest economists had in the problems of income distribution revived from the seventies and reached its peak in the United States towards the late eighties, early nineties.

Although the past three decades have enriched the topic of income distribution by an entire library of literature, as it has arrived at the forefront of economists' interests, the economic policy-makers of many countries, including Hungary, have paid no heed to scientific findings and conclusions in this, or, we could add, other areas. Unfortunately economists stand for opposing views concerning many issues, furthermore, the opponents of those voicing certain opinions are quick to condemn those voicing such opinions as being politically biased.

Issues concerning developments in income distribution, the disproportionateness induced by income inequalities and their examination arose with elemental force in Hungary during the years when the change in regime took place and they continue to surface. I refer here to the most important works that were written on this topic: KSH [1990], PENNAR [1991],

ATKINSON-MICKLEWRIGHT [1992] KSH [1998], ATKINSON-RAINWATER - SMEEDING [1995], GALASI [1995], HAVASI-HORVÁTH –RÉDEY–SCHNELL[1998], MILANOVIC, B. [1998], OECD [1999], WORLD BANK [2000], SPÉDER [2002], TÓTH, ISTVÁN GYÖRGY [2002].

## **APPROACHES TO EXAMINING INCOME DISTRIBUTION AND ALTERNATIVE EXAMINATION METHODS**

Income distribution may be examined from two aspects at the macroeconomic level:

- On the one hand, income distribution may be examined according to the sources of income, that is, the relationship the persons who have earned the income have with the economy: income from work, from property, from capital, land rent, etc. This type of income distribution is called **functional income distribution**.
- On the other hand, the distribution of the population's income among tenths of the population (deciles) or fifths of the population (quintiles) may be examined, in particular with regard to differences of income between the bottom categories and the top categories. This type of examination, or **size distribution**, does not concentrate on the sources of income, rather it divides a population into groups according to the size of their income and examines differences in the incomes of population groups.

The classic thinkers considered analyses according to the first criterion primarily important, while today economists of the modern age place an emphasis on examining income distribution according to the second criterion, although it is still very important to know how the income of a nation is distributed according to its sources. In this study I also examine the subject from the aspect of size distribution.

The following alternative approaches to and analytical methods of measuring income inequality and income distribution are well known in international economic literature: the Lorenz curve, the Gini coefficient, the decile quotient, the Éltető-Frigyes index, the relative mean deviation or Robin Hood index, and information theory indices, such as the Theil index.



## **DEVELOPMENTS IN INCOME DISTRIBUTION AND INCOME INEQUALITY FROM THE BEGINNING OF THE NEW REGIME**

In the course of the 1990 legislative elections the intention and resolve to build a market economy and a democratic State based on the rule of law in Hungary were legitimized by the majority of the Hungarian population. At the time it was a widely held view that there could be no ideal, painless, costless transition to a market economy, but at the same time we hoped that if the political and economic reforms introduced in view of such a democratic transition would start to work rapidly, a rise in the well-being of the nation, evenly spreading to every social strata, would soon follow. However, this proved to be a vain hope and a distant illusion.

Goals, such as transforming the income centralization and income redistribution that prevailed before the change in the regime and introducing public finances reforms were set as early as toward the end of the eighties, in part at the instigation of international organizations (World Bank, IMF). However, from the beginning of the change in regime **a very severe, prolonged, and worsening transformational crisis developed in Hungary, as a result of which all economic indicators plunged, well below the 1980 level.** Between 1989 and 1996 GDP decreased by 18 percent, final consumption by 15 percent, and indicators of real income and real wages by 18-20 percent, in parallel with unprecedented (13 percent) unemployment and an inflationary rate between 20 and 35 percent. We could add mass poverty, the loss in value of pensions, the failure of the entire pension scheme, of education and health care. By 1994 GDP stopped falling and following a few years of stagnation the economy showed a 4-5 percent rise in 1997-1998.

Economic analyses published in Hungary (FÖRSTER, M. F. –TÓTH I. GY. [1997], GALASI [1995], HAVASI–HORVÁTH–RÉDEY–SCHNELL [1998], KAPITÁNY–MOLNÁR [2000] KOVÁCS–GÁL [2002]) were based either on surveys conducted by KSH on household statistics or research by TÁRKI, and clearly showed that the largest increase in income inequality was attained during the most critical crisis years of the economy, from 1989 through 1993, with inequality continuing to grow, albeit at a lesser rate, until 1997.

According to income surveys conducted by KSH, the ratio of the income of the top decile to that of the bottom decile doubled from 4.6 to 9.2 between 1987 and 1997. In an international context such an increase in inequality is considered radical. The source of growing rich was privatization, and its basis was the vast information advantage which the right people at the right time and place had.

The poor became poorer and the rich richer, while the relative income of the middle classes declined, furthermore, this process unfortunately took place when incomes to be distributed also diminished considerably. We could say that a radical increase in income inequality became an inherent consequence of the crisis. Sensible economic consideration and social justice would have dictated bearing the burdens of the severe, prolonged and worsening crisis developing in Hungary from the beginning of the change in regime proportionately, if not progressively. However, the processes ensuing relative to income distribution after 1990 do not in the least support such an expectation.

Analyses for years following 1996 (TÁRKI, Institute of Economics) show that income inequality did not increase considerably following 1996, it essentially stagnated with nothing more than internal structural changes taking place.

By contrast, results were published in sociological surveys and public opinion polls where the people asked not only found their situation to be much worse than what the above mentioned indicators would warrant, but they also perceived social inequalities to be greater and to be growing. (ANDORKA [1996], FÖRSTER-TÓTH [1997]). This contradiction may be explained by several complex causes, but it is not certain that it could be explained in a satisfactory way. Although they are not experts in income distribution, people are aware of social realities and can judge quite well their absolute and relative situation. Then again, at its best, representative surveying could and can only present a view of the income situation of those included in the sample, and not of the actual and true income distribution of the population. Due to their deficiencies (in the sample, those with lower incomes are overrepresented, the well-to-do are underrepresented, while the very rich and very poor are excluded from the outset), surveys of household statistics, under the current social conditions, are increasingly departing from reality. This trend is reinforced by the fact that **the incomes of the rich who are at the top of the income ladder but are not represented in the sample, are not only high, but during the years following the change in regime until 2000, their incomes increased at a faster pace than the incomes of those having less.** In my opinion, the extent of income inequality in Hungary is considerably greater than what is shown by the indicators, even if the different measurements confirm and support each other.

I base this statement on data from the personal income tax returns of all citizens for the period between 1996 and 2001, as processed by APEH Szti. The number of those who filed income tax returns in 1996 was 4.2 million and 4.5 million in 2001.

The subject of this analysis is **total income** which is the sum of **consolidated incomes**, as included in the tax returns, and **separately taxed incomes (subject to withholding tax)**, as also added in the tax returns. Total income includes elements for evening out income inequalities somewhat, such as family allowances, maternity allowances, scholarships, etc., which need to be declared, but which are not taxed. As those declaring the above listed incomes happen to fill up the first decile, this is not suited for comparison with incomes of higher deciles. However, ratios of the incomes of the 10<sup>th</sup> and, for instance, the 3<sup>rd</sup> decile, are informative about the development of inequalities in total incomes, the concentration of declared incomes in the top decile, and the distribution of annual increases in declared income according to income brackets (see Tables 1 and 2 and the graphs presented). It needs to be emphasized that it is not income inequality in an entire society that is being examined, but **the distribution of incomes of a population that has declared personal income, which could provide a relevant frame of reference to decision makers for changing tax rates.**

*Table 1*

**Distribution of total incomes according to population groups, 1996-2001**

(%)

	1996	1997	1998	1999	2000	2001
<b>Deciles</b>						
(3 <sup>rd</sup> +4 <sup>th</sup> +5 <sup>th</sup> +6 <sup>th</sup> )	22.0	21.8	21.3	20.9	20.7	21.6
(7 <sup>th</sup> +8 <sup>th</sup> +9 <sup>th</sup> )	37.6	36.6	36.5	36.4	23.6	35.4
10 <sup>th</sup>	38.1	38.0	38.6	39.3	40.2	39.5
Top 5 percent	27.0	27.0	27.4	27.9	28.9	28.1

Source: Calculated on the basis of data published by APEH Sztadi

Table 2

**Incomes subject to separate tax rates as a percentage of total incomes**

	1996	1997	1998	1999	2000	2001
<b>Total</b>	7,45	7,71	6,92	8,87	10,21	9,26
<b>1<sup>st</sup> Decile</b>	2,89	6,46	5,41	7,39	7,44	9,51
<b>2<sup>nd</sup></b>	1,81	3,25	2,76	3,75	3,44	3,29
<b>3<sup>rd</sup></b>	0,89	1,68	0,85	1,47	1,43	1,40
<b>4<sup>th</sup></b>	1,00	2,39	1,48	3,27	2,88	1,48
<b>5<sup>th</sup></b>	1,05	2,41	1,47	2,96	2,93	2,43
<b>6<sup>th</sup></b>	1,16	2,07	1,33	2,79	2,60	2,50
<b>7<sup>th</sup></b>	1,36	2,03	1,43	2,69	2,71	2,53
<b>8<sup>th</sup></b>	1,83	2,18	1,70	2,94	2,95	2,92
<b>9<sup>th</sup></b>	2,89	3,10	2,56	4,23	4,59	4,39
<b>10<sup>th</sup></b>	16,71	16,19	15,00	17,53	20,53	18,83
<b>Bottom 5% of 1<sup>st</sup> decile.....</b>	1,83	7,69	5,43	7,92	7,39	7,27
<b>Top 5% of 10<sup>th</sup> decile.....</b>	21,60	20,66	19,26	21,76	25,42	23,33

Source: Calculated on the basis of data published by APEH Sztadi

Figure 1

**Distribution of incomes according to deciles**

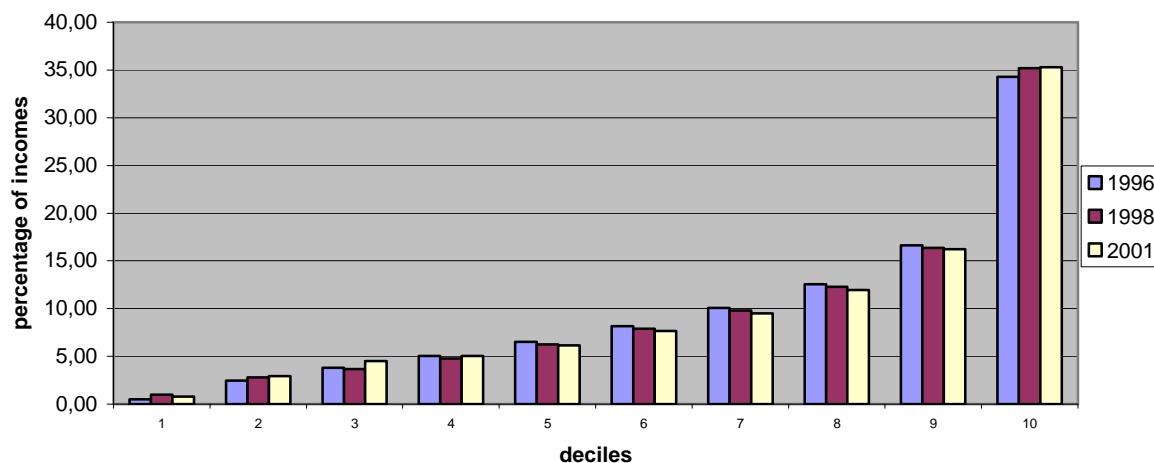


Figure 2

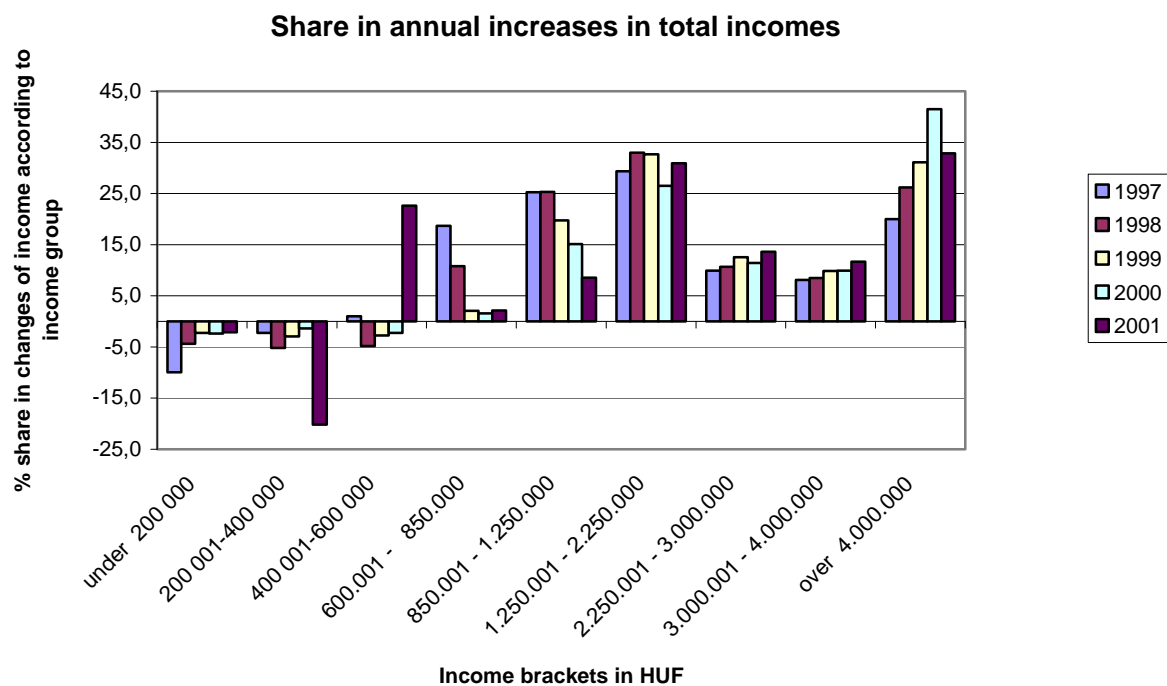


Figure 3

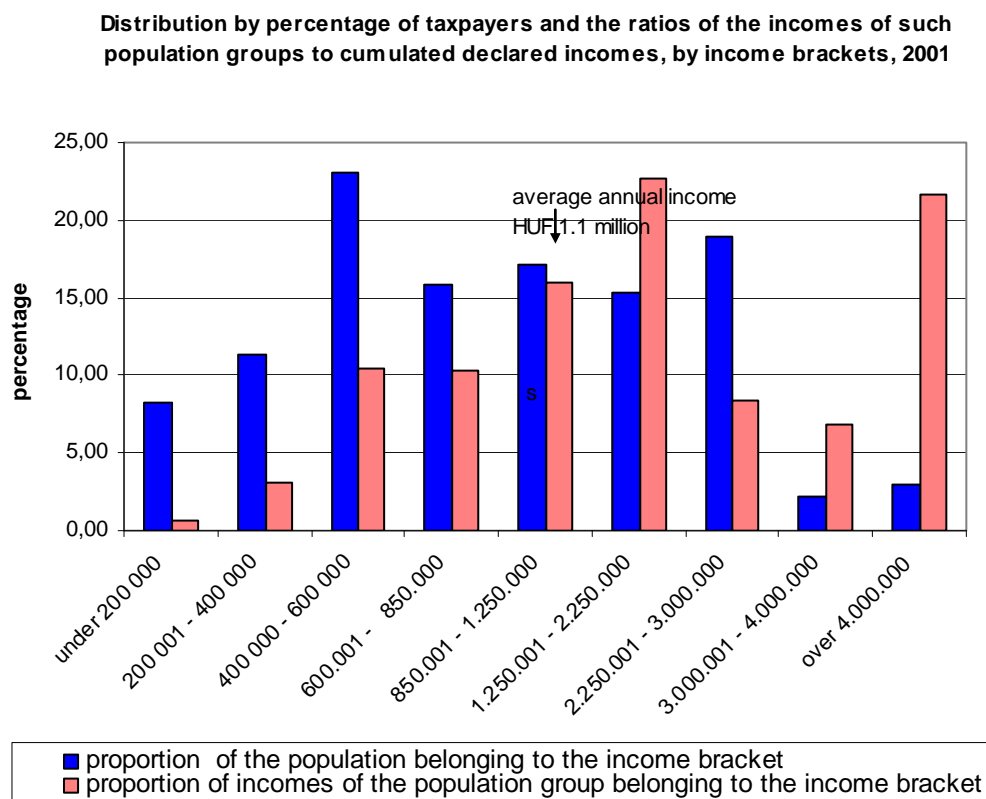


Figure 4

Distribution by percentage of the total incomes of taxpayers, according to income category, 1996-2001

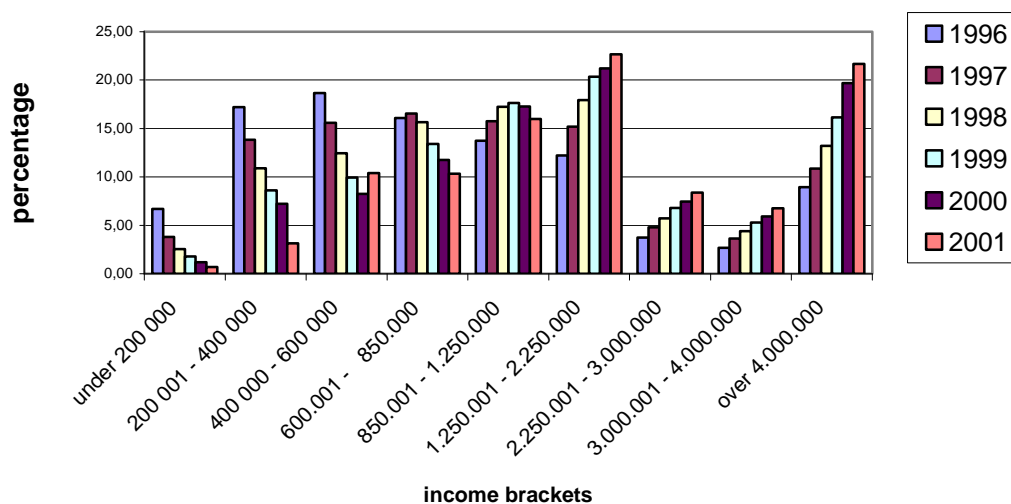


Figure 5

The Lorenz curve of the distribution of total incomes

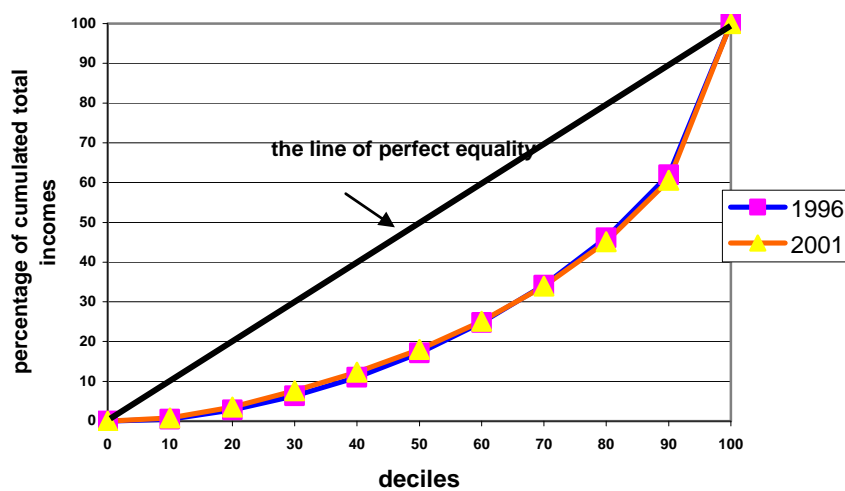
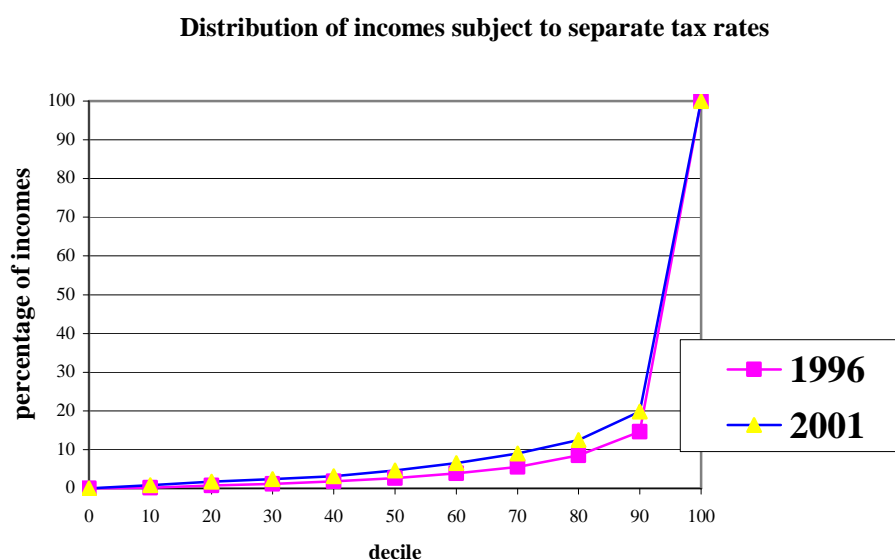


Figure 6



## FINDINGS, CONCLUSIONS

- **The majority of taxpayers declaring income** belong in the low income categories. The per capita annual total income was HUF 480 thousand in 1996, HUF 706 thousand in 1998, HUF 944 thousand in 2000 and HUF 1.1 million in 2001; the proportion of those declaring incomes below average fluctuated slightly in their respective years between 70.8 percent and 69.3 percent, while the proportion of total incomes imputed to them varied between 33.7 percent and 32.7 percent. The mode, or the income occurring the most frequently, falls well below the average. **The annual average total income per taxpayer declaring income was taxed at an unreasonably high tax rate** (considered from the aspect of tax brackets) **of 40% in 1996, at 35%, 39%, 30%, 30% in the following years respectively, and at the highest tax rate, 40%, in 2001.** It is unfair both from an economical and a moral perspective for the state to tax average incomes at the highest tax rate!
- In 1996 38% of total incomes were concentrated in the hands of the top 10% of taxpayers declaring income (430 thousand persons), 27% in the hands of the top 5% of taxpayers declaring income (215 thousand persons), while the third decile possessed 3.5% of total incomes. When following these trends until 2001, an increase in the concentration of incomes is to be noted, reaching its peak at 40.2% in 2000, with 28.9% in the hands of

the top 5%. We can speak of a minimal decrease in concentration in 2001, when the top decile disposed of 39% of total incomes and the top 5% of 28% of total incomes.

- The conclusion may be drawn from the distribution of total incomes by decile that while the incomes of the tenth decile were 10.7 times that of the third decile in 1996, this ratio increased to 11.8 in 2000, then decreased to 9.6 in 2001. Thus, according to an income inequality analysis based on personal income tax returns, the increase in the degree of inequality did not stop in 1996, this happened only in 2001.
- In the years following the change in regime a severely adverse phenomenon evolved: as the richest people could no longer become richer at the expense of taxpayers declaring the lowest incomes (the distance between these strata could not be further strained), incomes flowed upwards from the middle, fifth-eighth deciles, while these strata declined, which is also an explanation as to why the proportion of strata having low incomes is so high within the population. György Molnár and Zsuzsa Kapitány, senior research fellows at the Institute of Economics, have shown that the intensity of upward mobility from the middle classes has come to a standstill to a considerable extent following 1996.
- Analysis of the data has clearly demonstrated that taxation did not fulfill its role of reducing income inequalities at all during the period examined, as the distribution of total incomes following taxation is identical to the distribution of incomes before taxation (see the figure depicting the Lorenz curve). 80-90% of incomes subject to withholding tax, essentially capital gains, are concentrated in the hands of the top 5-10% of taxpayers, and they are only taxed at a 20% tax rate. It directly follows from this that the role of the tax system is nothing more than the implementation of the governments' fiscal objectives, as well as being a tool for supporting the rich.
- The governments withdrew so spectacularly from the role of decreasing inequality, throwing away the tools of income redistribution, that even the most militant advocates of the "Friedmanist" monetarist school could not have hoped for better. A much quoted prediction by Marx was refuted by economics textbooks for decades, as it was not supported by any historical or statistical analyses in either Europe or America for a long time. Between 1977 and 1992, when income inequality in the United States increased to such an extent that the rich became richer and the poor poorer, several American economists, including Paul Krugman, professor at MIT, concluded that as a consequence, it was America that became poorer. The 1992 Economic Report of the President, although it attempted to downplay this issue compared to its weight, reported income inequality for 1988 unequalled during the previous four decades. In precise numbers this meant that while in 1973 the income of those belonging to the top 20% was 11 times the income of those belonging to the bottom 20%, by 1989 this indicator of inequality rose to 13.2. Measures aimed at and resulting in reducing income inequality were introduced: the tax



rates of the strata with high incomes were raised. If a prominent advocate of neoliberal economic policy decided to take such a step, perhaps we can believe in the ideas of trend-setting American economists.

## **THE CAUSES OF INCREASING INCOME INEQUALITY AND THE RELATIONSHIP BETWEEN INCOME DISTRIBUTION AND TAXATION**

Analyzing income distribution should play a crucial and essential role when establishing tax brackets and tax rates within the personal income tax scheme. In my opinion the personal income tax scheme is inadequate in several aspects. Each year between 1996 and 2001 income distribution would have necessitated modifications of both the tax brackets and tax rates, and in particular, ensuring the functioning of the redistributive role of the tax scheme would have been warranted. Here is a summary of the facts supporting this statement:

- The fact that each year average incomes were taxed by very high tax rates and specifically by the highest tax rate in 2001 is in itself unacceptable and at the same time it is a source of social tensions; it is a unique phenomenon in an international context. In this the fiscal approach of the state and the intent to increase budget revenue to an ever growing extent are manifest.
- Income categories subject to the highest tax rate make up a very wide tax bracket. In 1996 the lowest income in this tax bracket was HUF 918 thousand and the highest income was HUF 2.2 billion, while they ranged from HUF 1 million to HUF 2 billion in 2001. This tax bracket essentially represents the tenth decile, consequently, **within this decile the highest income is a thousand times greater than the lowest income, while in all the other deciles this ratio ranges between 1.2 and 1.5.** Within the highest tax bracket incomes slightly higher than the annual average income are mixed together with annual incomes of tens of millions, several hundred millions, and even billions. This is unjustified from an economic perspective and unfair and immoral from the perspective of fair tax burden sharing by society.
- When calculating for 2001 the ratio of tax obligations to total incomes by tax brackets, the following results were obtained: under an annual income of 400 thousand this ratio is 8.5%, between 1 and 2 million it is 30-33%, between 2 and 4 million it is 33.8-34.1% and **above 4 million, for those who possess 22% (HUF 1.07 trillion) of the cumulated annual incomes declared, it is 28.1%. In other words, the richest were the most favored, as they could take their pick from a treasure chest of tax benefits to reduce their tax payments.**

Analysts have emphasized many times that the current problems of the economy can be traced to wage outflows far exceeding the rate of growth of GDP in the years 2001 and 2002, when primarily lower salaries in the public sector were raised without any increase in performance to support such raises. However, it should be pointed out that **this raise in wages made up for back pay that accumulated in the course of many years**, which was due to an incredible disproportionateness that had developed, on the one hand, between the public sector and the private sector, and on the other hand, between the salaries of public servants and government officials, and which did not reflect differences in performance. Who would think that the income concentration that evolved in a matter of 6-8 years and the incomes of several hundred million or several billion forints generated could be attributed to an increase in productivity? Why is it that the sources of the current troubles are not seen primarily in that the billions missing from the budget had remained with the richest, who were ultimately taxed at a lower tax rate than what proportional burden sharing would have warranted? These immense incomes did not turn into growth stimulating investments. I disagree by far with arguments according to which taxes need to be reduced because such reductions promote increases in investment. Data from tax returns from 1996 through 2001 refute such claims, as at least HUF 500 billion that the richest retained through tax benefits, and which stayed in their pockets, did not generate economic growth stimulating investments.

In my opinion, the larger income inequality is in a given society, the more differentiated tax rates need to be applied, linking these rates to economically relevant tax brackets. By the mid-90's the governments should have developed an economic policy that would not have given the opportunities provided by tax benefits to the richest, whereby they were ultimately taxed by a tax rate even lower than the tax rate average incomes were subject to. For this reason I consider changing the tax system to having a single tax rate as decidedly mistaken and detrimental.

In light of the above, it may be firmly stated that the hundred millionaires and billionaires whose incomes are subject to a 40% tax rate received the largest tax benefits. The budget revenue foregone because of a reduction in personal income tax rates largely remained in the hands of the rich who, having benefited from various tax advantages, were already taxed far below their tax bracket's tax rate.

We could ask the question: why should governments worry about the fate of the rich? In my opinion, politicians who are guarding the privileges of the rich, while the country is characterized by massive impoverishment, are on a false route. It is no longer an overstatement to say that fear and anger, hatred of the rich, growing poverty, polarization of incomes and standards of living all strongly divide the population. People have lost their faith in politics, politicians, governments, and they are dissatisfied with the course of economic and social change.

Economists hold opposing views on the most basic issues. According to a few colleagues who hold liberal views, it is not a problem that such great income inequalities have developed in Hungary because Hungary has just attained the level characteristic of Western developed countries. According to their arguments, these inequalities are not great at all, as they are truly large in countries such as India, Tunisia, Russia, and Ukraine. Perhaps, while Hungary is on her way to Europe, it's not Tunisia and India which should serve as her role models!

From an economic perspective, why is the extent of income inequality which has developed rapidly in the course of a few years, problematic? Because it has surpassed the level where it would be a healthy, stimulating force for the functioning of an economy. If governments do not recognize that the immense proportions of poverty which have evolved in this society run counter to the efficient functioning of the economy, then they will have to face the exceedingly high proportion of poor people threatening the long term growth potential of the country and hindering the growth of productivity, while stagnating incomes will entail the stagnating or decreasing purchasing power of consumers.

In 1987, when income distribution was not nearly as unequal as it is today, the introduction of a progressive personal income tax system was a natural economic decision. This personal income tax system, after being eroded beyond recognition during the nineties, has to a considerable extent contributed to social injustice, increasing income inequality, and an intolerable social situation where the poor have become poorer and the rich even richer, where the number of the poor has increased considerably, where the middle classes have declined and where upward mobility became minimal.

The tax brackets and tax rates should have been and should be adjusted in accordance with the rate of inflation and taking into consideration the role of redistribution of the tax system. Therefore, modifications of the tax system should be based on analyses of income distribution. The data from personal income tax returns of the previous year provide a convenient basis for analyzing income distribution. Such analyses were not carried out, as this can be proven by the fact that income distribution would have warranted a modification of both the tax brackets and the tax rates in each year between 1996 and 2001. Just as governments have not paid attention to developments in income distribution and income inequality during the past 15 years, they did not pay attention to the "servicing" of the tax system either. The government and finance politicians did not consider monitoring the development of income inequality and income distribution as essential, even though income distribution tables derived from tax returns could have drawn their attention to the intolerable and unacceptable situation where 65% of taxpayers and the average income itself were taxed at the highest tax rate, which should not have happened! Moreover, it appears that they took painstaking care that the upper limit of the 18% tax bracket should only be raised according to the planned inflation rate.

That is, the tax system is progressive up to the level of average income, and from there it is completely linear. The mode, or the income which occurs the most frequently, falls well below the average. Although, by shifting the tax brackets upward, it could be achieved that the average income would not be taxed at the highest tax rate, it would still not change the disproportionateness of incomes, where 65% of cumulated incomes is above the average, in the hands of 30% of taxpayers, and 35% is below the average in the hands of 70% of taxpayers.

Not a single representative of any party in Parliament has proposed examining the development of income distribution, and making decisions concerning the modification and remodeling of the tax system according to conclusions drawn from such examinations. The tax system is upside-down. The limit of the first tax bracket should be drawn somewhat below average income, as it is in many OECD countries, and as one progresses up the income ladder, tax rates should be applied in an ever more differentiated manner, in order to ensure that the progressive nature of the tax system prevail. The decision makers of economic policy have completely given up the principle of progressiveness. In my opinion, neither the tax brackets, nor the tax rates were established based on economic arguments, rather, they were established based on decisions made in line with political interests. Naturally, what percentage the highest tax rate should be over a certain number of millions of Forints of annual income could be debated, but progressivity with differentiated tax rates must be beyond question!

The political changes and the establishment of a democratic rule of law were necessary, but are not sufficient in themselves, as they represent a particularly high value only if they are combined with good solutions and good responses given to great economic challenges. The shoulders of a majority becoming increasingly poorer are laden with heavy burdens, while a disproportionate share of incomes is concentrated in the hands of a thin stratum. Under such circumstances it would be difficult to explain to people that the changes are taking place for them. The problem of increasing poverty cannot be ignored, and the immense costs involved with such poverty cannot be gotten away with, if macroeconomics is to become a perpetual enemy of not very skilled labor and the poor. Misery and poverty are a burden on everyone, on those who have to bear it, but also on society. Democratic institutions favor those with larger incomes, as they have more and more subtle means of asserting their interests. Nevertheless, governments need to recognize in time that the economic vulnerability of the masses enduring social injustices should not also turn into political defenselessness in the long run, whereby the fundamental principles of a democratic society would be infringed.

With the onset of a democracy that was hoped for and that was believed in, for the past twenty years, however, the new regime has not been about bringing, as soon as possible, relative prosperity to the majority in society, rather, it was about the opposite: it created socially irritating, glaring, absolute prosperity for a tiny minority. It was about realizing and concentrating as much profit as possible in line with personal interests in the short run, and

politicians and economic politicians on the opposite sides of the political spectrum, but not necessarily with opposing interests – simply put, the governments – duly assisted to this while they appeared to be intent on giving each other a hard time.

## BIBLIOGRAPHY

- Andorka, Rudolf [1996]: Elégedetlenség (Discontent). Published: Sik-Tóth (ed., 1996): Társadalmi páternosztér 1992–1995 (Social elevator, 1992–1995). Jelentés a Magyar Háztartás Panel 4. hullámának eredményeiről (Report on the results of the 4th wave of the Hungarian household panel). BKE, TÁRKI, KSH, Budapest
- Atkinson, A. B.– L. Rainwater–T. M. Smeeding [1995]: Income distribution in the OECD countries. OECD Social Policy Studies No. 18., Paris.
- Atkinson, A.–J. Micklewright [1992]: Economic Transformation in Eastern Europe and the Distribution of Income. Cambridge University Press, Cambridge.
- Cannan, E. [1914]: Wealth, Staples Press, London.
- Förster, M. F.–Tóth, István György [1997]: Szegénység és egyenlőtlenségek Magyarországon és a többi visegrádi országban (Poverty and inequality in Hungary and the other Visegrád countries). TÁRKI Társadalompolitikai Tanulmányok (TÁRKI Studies in Social Science), No. 1., TÁRKI, Budapest, p. 58
- Galasi, Péter [1995]: A jövedelemegyenlőtlenségek változása Magyarországon 1987, 1992–1994 (Changes in income inequality in Hungary, 1987, 1992–1994). Institute of World Economics of the Hungarian Academy of Sciences, Budapest, p. 60.
- Havasi, Éva–Horváth, Ádámné–Rédey, Mária–Schnell, Lászlóné [1998]: A mai magyar háztartások jövedelemeloszlása (Income distribution of today's Hungarian households). Statisztikai Szemle (Statistical Review), March, pp. 221–237.
- Kapitány, Zsuzsa–Molnár, György [2000]: Inequality and mobility analysis by the Hungarian Rotation Panel 1993–1998. MTA KTK Műhelytanulmányok (Discussion papers) MT-DP. 2002/4. MTA KTK, Budapest.
- Kovács, Balázs–Gál, Róbert Iván [2002]: Adóteher-elosztás és korosztályi elszámolás. Számítások végzése a magyarországi jövedelem- és adóteher-eloszlásra vonatkozóan. (Tax burden distribution and generational accounting. Calculations concerning income and tax burden distribution in Hungary) Budapest: TÁRKI, manuscript.
- KRUGMAN, P.R. [1992]: „Like it or not, the income gap yawns” The Wall Street Journal, 21 May 1992.
- KSH [1990]: Jövedelem-eloszlás Magyarországon. Az 1988. évi felmérés adatai. (Income distribution in Hungary. Data from the 1988 survey) KSH, Budapest.
- KSH [1998]: Jövedelem-eloszlás Magyarországon. (Income distribution in Hungary) 1995, KSH, Budapest.
- Milanovic, B. [1998]: Income inequality and poverty during the transition from planned to market economy. The World Bank, Washington D.C.
- OECD [1999]: Trends in income distribution and poverty in the OECD area. OECD, Paris.
- PENNAR, K. [1991] „The rich are richer – and America may be the poorer”, Business Week, 8 November 1991.
- Sen, A. [1973]: On Economic Inequality. Clarendon Press, Oxford, p. 118.
- Spéder, Zsolt [2002]: A szegénység változó arcai. Tények és értelmezések. (The changing faces of poverty. Facts and interpretations) Budapest, Andorka Rudolf Társadalomtudományi Társaság–Századvég Kiadó (Rudolf Andorka Social Science Society – Századvég Publishing).
- Tóth, István György [2002]: Jövedelem-eloszlás a kilencvenes években. (Income distribution in the nineties) Published: Kolosi, Tóth and Vukovich, ed., 2002. pp. 20–41.
- World Bank [2000]: Making transition work for everyone: Poverty and inequality in Europe and Central Asia. The World Bank, Washington D.C.

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