

INCOME OR EXPENDITURE?*

THEIR COMPETING ROLE TO CHARACTERIZE THE LIVING CONDITIONS OF HOUSEHOLDS

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The individual data bases of the Hungarian Household Budget Surveys are suited to examine the relation between the incomes and expenditures of the households, and to study which of the two variables characterizes better the living conditions of the households, can separate better the poor from the not poor and, respectively, the well-off households from the not well-off ones. In the study the authors try to answer these questions on the data bases of the HBS in 2001 and 2002. It is also examined whether there was any appreciable change in these topics between the two years considered. Authors conclude that, if possible, both variables are to be taken into account in a complex manner, because the really poor are those poor in both respects and the really wealthy are well-off both in income and expenditure.

KEYWORDS: Income; Expenditure; Inequality; Poverty.

Data on living conditions and especially on consumption patterns of households are, generally, provided by Household Budget Surveys (HBSs). In many countries HBS data on both incomes and expenditures are inquired, while in other countries households are asked to report their expenditures only. Hungary belongs to the former group of countries and its HBS is a continuous survey covering annually about 10 thousand households selected at random by a two and three stage stratified sampling design.

Using the individual data base of households co-operating in the 2001 and 2002 HBS in Hungary, authors investigated whether the *income* or *current expenditures* (disregarding investment type expenditures for production and business operational costs) are in closer relation with the real living conditions of the households, explain better the phenomena characterizing poverty as well as wealth in the Hungarian society today. The paper summarizes the main findings of the research. At this point it must be noted, however, that income data of the Hungarian HBS are, generally, less reliable than expenditure data and therefore income inequality is very probably somewhat underestimated.

* The study is a modified and extended version of the paper presented by the authors in 2003 at the 54th Session of the International Statistical Institute in Berlin.

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Table 2

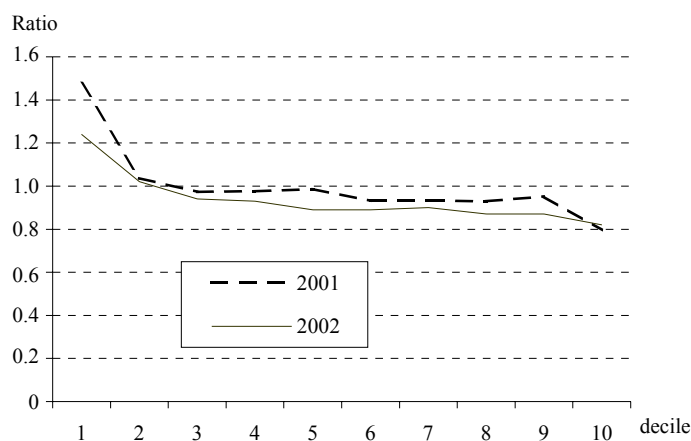
Share of income and expenditure deciles of persons, 2002

Income (quin- tiles)	Expenditure										Total
	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	
	quintiles										
1.	5.1	2.0	1.1	0.4	0.2	0.3	0.3	0.1	0.3	0.2	10.0
2.	2.2	2.2	1.9	1.3	0.8	0.6	0.4	0.3	0.3	0.1	10.0
3.	1.2	2.0	1.7	1.7	1.4	0.6	0.7	0.3	0.1	0.2	10.0
4.	0.6	1.2	1.6	1.6	1.7	1.4	0.8	0.6	0.4	0.1	10.0
5.	0.5	1.0	1.4	1.6	1.4	1.5	1.2	0.9	0.4	0.1	10.0
6.	0.3	0.6	0.9	1.3	1.7	1.5	1.4	1.3	0.7	0.2	10.0
7.	0.1	0.6	0.8	1.0	1.0	1.6	1.6	1.4	1.2	0.5	10.0
8.	0.1	0.3	0.4	0.4	1.0	1.1	1.7	2.2	2.0	0.8	10.0
9.	0.0	0.1	0.2	0.5	0.4	1.0	1.3	1.7	2.7	2.0	10.0
10.	0.0	0.0	0.0	0.1	0.2	0.4	0.5	1.1	1.9	5.7	10.0
Total	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	100.0

INCOME AND EXPENDITURE INEQUALITY

Theoretical considerations indicate that expenditures should be more equally distributed than incomes, because many low income households spend above their income by drawing down past savings and high income households generally save part of their income and therefore spend less than it. As can be seen from Figure 1 empirical data corroborate this experience: expenditures exceeded income by almost 50 percent in the first income decile in 2001 and by about 25 percent in 2002, but reach only 80 percent of income in the top income decile in both years. In the rest of the income deciles the ratio of expenditures to income is nearly one. Expenditures exceeded incomes somewhat more in 2001 than in 2002.

Figure 1. Ratio of expenditure to income by income deciles



Still, data clearly indicate that the inequality of expenditures significantly exceeds that of the incomes. This is demonstrated both by the Lorenz curve and the shares of income and expenditure deciles in Figures 2 and 3, as well as by the various inequality measures shown in Table 3.

Figure 2. Share of income and expenditure deciles of persons, 2002

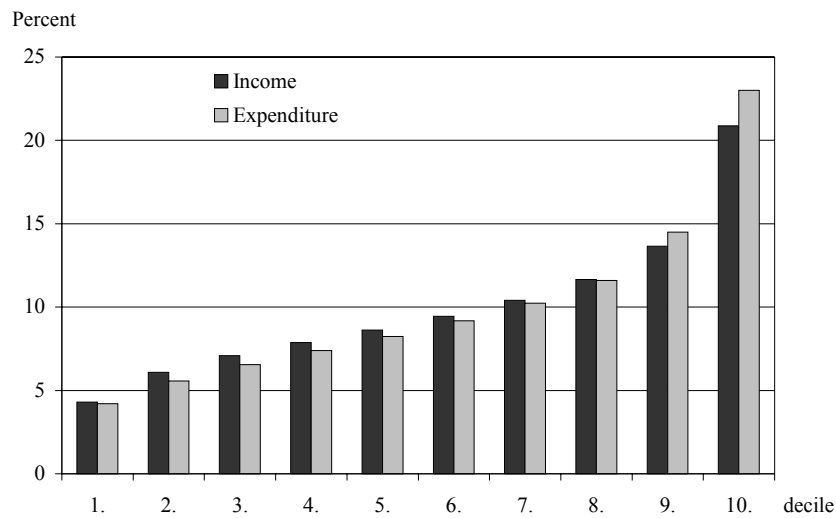
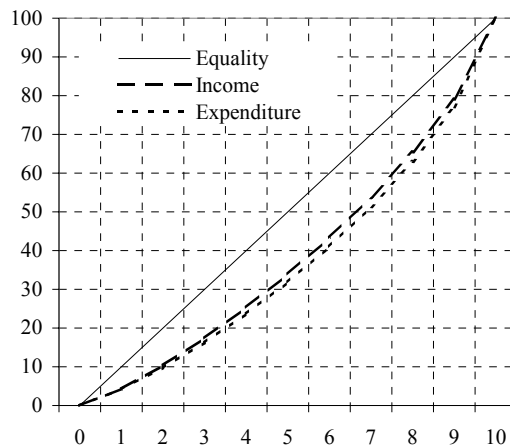


Figure 3. Lorenz curve of income and expenditure



There is especially significant difference in the shares of the top decile in 2002: share amounts to 23.8 percent in case of expenditures, as against the value of 20.9 percent for incomes. The inequality measures of expenditures (see Table 3) exceeded those of the incomes by 10-13 percent. In 2001 the differences were generally a bit smaller, only the coefficient of variation of the expenditures exceeded by more than 17 percent that of in-

comes. It is remarkable that while S10/S1 and the Gini coefficient indicate a slight decline in the inequality of incomes from 2001 to 2002, the coefficient of variation shows a definite increase in that inequality. In the case of expenditures all but one measures indicate a mild increase in the inequality between the two respective years.

Table 3

<i>Inequality of income and expenditure</i>				
Indicator	Income		Expenditure	
	2001	2002	2001	2002
	year			
Share of the 1 st decile (S1)	4.17	4.30	4.11	4.20
Share of the 10 th decile (S10)	21.11	20.87	22.72	23.81
S10/S1	5.07	4.84	5.53	5.49
Gini coefficient	0.2400	0.2335	0.2616	0.2635
Éltető-Frigyes measure	2.00	1.96	2.15	2.16
CV (percent)	50.94	54.08	59.81	61.19

It is interesting to note that the same phenomenon was found by *Ann Harding* and *Harry Greenwell* [2002] in connection with income and expenditures inequality of households in Australia.

We made some research to find out why expenditures distribute more unequally than incomes. One minor factor may be that the very rich people are, generally, not covered by the HBS, because they tend not to co-operate in the survey. But the main underlying cause seems to be connected with the nature of the expenditures. Not only the relative variance of the expenditures is markedly greater than that of the incomes but also the between deciles part of the variance of expenditures exceeds considerably that of the incomes: this part was 71 percent for expenditures, while it was only 67 percent in the case of incomes in 2002. We tried, in addition, to explain the logarithm of the summed squared deviations from the mean of both incomes and expenditures by means of a linear regression containing the following four explanatory variables:

1. educational attainment of the household head (measured by the number of classes completed)
2. age of the household head
3. whether the household belongs to the top decile or not
4. whether the household lives in Budapest or not.

It turned out that the above variables explain the logarithmic variability of incomes less than that of expenditures (adjusted R^2 s were 0.09 and 0.22, resp. in 2002) and the determining factor is, in both cases, variable 3; but while the value of the corresponding standardized β coefficient was only 0.286 in the case of incomes in 2002, it was much higher, 0.487 for the logarithmic variance of the expenditures.

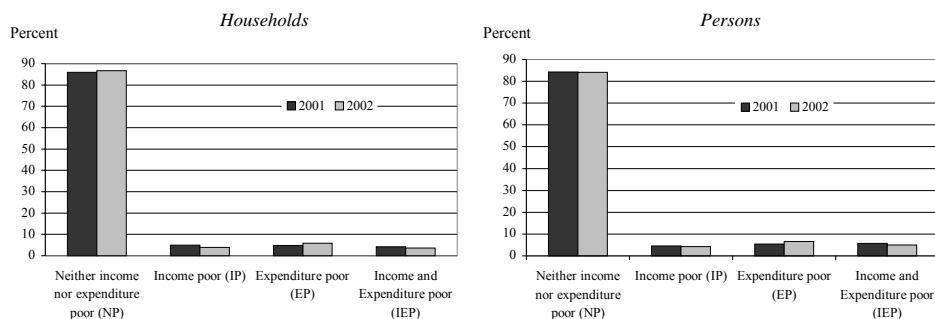
It can be concluded that by simple and easily definable variables the expenditures of households can be less explained than that of their incomes. As it was pointed out, earlier variability of expenditures are only partially determined by current income. Moreover

they seem to be affected to a greater extent by less easily measurable variables (e.g. traditional attitudes towards saving, accustomed spending patterns, environmental effects, etc.) than incomes. In addition, in recent years consumption does not any more restrained by lack of supply, people can buy anything they want (frequently what they do not really want), if possessing the required financial sources. All these contribute to the greater variability and inequality of expenditures than of incomes, at least in today Hungary.

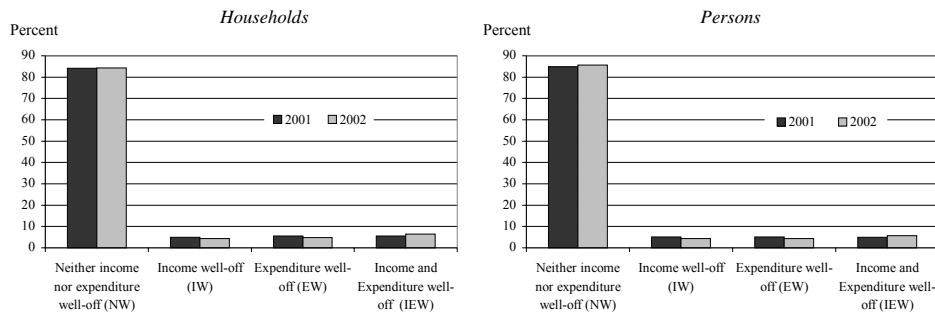
INCOME AND EXPENDITURE POVERTY AND WEALTH

According to the definition of poverty threshold given in the introductory part, 9.2 percent of the Hungarian population could be considered as income poor and 11.6 percent as expenditure poor in 2002. However, one of our most important findings shows that the income poor and the expenditure poor are not the same sets of households. The common part is not a major share: less than 48 percent of those belonging to the income poor was at the same time expenditure poor and about 38 percent of the expenditure poor was also income poor in 2002. As a consequence, only 5.0 percent of the society – 3.6 percent of the households – can be considered as poor from both aspects. Similar statements can be made about the well-off households: only 5.7 percent of the population – 6.4 percent of the households – can be considered as well-off from both aspects.

Figure 4. Percent of poor and non-poor households and persons, 2001 and 2002



Figures 5. Percent of well-off and not well-off households and persons, 2001 and 2002



CHARACTERISTICS OF POOR AND WELL-OFF HOUSEHOLDS

A deeper analysis shows that there are significant differences not only in the proportions but also in a number of important characteristics among the three sets of the poor (income poor, expenditure poor and the poor from both aspects). Moreover, in respect of certain characteristics considerable changes have occurred between 2001 and 2002, especially within the income and double poor. Most of the data indicate that expenditure poverty is more stable, while the structure and characteristics of income poor households can considerably change from one year to the next one. However, this latter phenomenon may follow – at least in part – from the already mentioned fact that income data of the HBS are less reliable than expenditure data. Among the differences in characteristics it is worth mentioning that e.g. while the proportion of large families with at least three children were 8-9 and 10 percent among the income and expenditure poor households in both years, it was more than 22 percent in 2001 and 27 percent in 2002 among households poor from both aspects (large families amount to 4 percent of all households in Hungary). Looking at it from the other side it is remarkable that childless families amount to only 30-31 percent of households poor from both aspects, while to about 55 percent of expenditure poor households. There was a remarkable change in this respect among the income poor households from 2001 to 2002: the proportion of childless households decreased from 60 percent to 44 percent.

This change is only one symptom of the changes in the structure of the income poor households. In a similar manner the proportion of one member households also decreased from 34 percent to 23 percent, that of households consisting only of old persons from 33 percent to 17 percent. At the same time the percentage of young households increased from 5 percent to 8 percent and that of households with unemployed member(s) from 14 percent to 23 percent. In this latter aspect the double poor households are especially at a disadvantage: among them in nearly every second household there was at least one unemployed person in 2002. More detailed data can be found in Table 4 below.

It is surprising to see the large difference between the income poor and expenditure poor in respect of the proportions of households living in Budapest: only 9 percent of the expenditure poor households live in the capital as against the 24 percent of the income poor. It seems that the many temptations and possibilities in the capital to spend induce the income poor living here to spend over their real financial resources.

From Table 4 data it can be concluded that double poor households live mostly in villages (generally in small ones), their heads are low educated, there are many large families among them with more children and, in addition, unemployment is considerably more frequent among them than among other types of households, even among households poor only from one aspect. It is worth mentioning, furthermore, the remarkable difference in the proportion of single person households: 34 percent of income poor households consists of one person as against their 21 percent among the expenditure poor. The difference in the proportion of households living in the capital was already discussed.

Table 4

Characteristics of poor and non-poor households, 2001 and 2002

Household characteristics	Neither income nor expenditure poor (NP)		Income poor (IP)		Expenditure poor (EP)		Income and expenditure poor (I&EP)	
	2001.	2002.	2001.	2002.	2001.	2002.	2001.	2002.
	year							
Average household size	2.6	2.6	2.5	2.9	3.0	3.1	3.6	3.8
	Percentages							
One member households	24.0	24.8	33.9	22.9	21.0	20.6	14.8	11.3
5 or more member households	7.8	7.7	11.2	11.0	16.8	18.5	29.6	32.4
Households with								
no child	60.7	61.0	60.1	44.3	55.4	55.7	29.9	30.8
3 or more children	3.9	3.8	8.9	7.5	10.0	10.0	22.4	27.2
unemployed member(s)	5.3	5.2	14.0	23.2	17.2	14.7	41.5	44.5
adult(s) without job	3.9	3.8	7.2	9.2	8.5	9.1	23.0	19.4
Households								
living in Budapest	21.1	21.9	23.6	9.7	9.3	11.8	9.0	3.4
living in villages	30.7	30.1	42.2	43.5	51.1	41.5	52.9	56.0
consisting only young persons within the household (under 30 years old)	5.7	5.6	5.4	8.2	3.2	5.4	14.5	5.8
consisting only old persons within the household (over 60 years old)	26.9	26.9	32.7	16.7	32.7	29.6	11.2	7.1
with head of low level of education	29.1	27.4	43.4	42.7	59.7	58.1	59.9	63.4
with head of high level of education	14.7	15.2	5.5	6.8	3.4	0.8	0.5	0.3
Subjective poor ^{a)}	6.6	8.4	6.2	7.4	42.5	49.4	30.1	28.4
Consuming poor ^{b)}	9.9	10.6	8.0	18.0	18.8	31.7	21.5	44.3
Housing poor ^{c)}	9.8	8.3	21.4	23.5	30.1	28.4	55.6	51.6
Housing-equipment poor ^{d)}	7.5	7.3	16.9	18.2	21.6	21.8	38.6	45.5
Multiple deprived ^{e)}	0.7	1.4	11.7	18.7	32.2	36.2	77.7	78.8

^{a)} We asked the households' opinion how much money would be needed for them to a low or very low living standard. If the households had more than 20 percent less income as needed according to their opinion for this minimum living standard, they were defined subjective poor.

^{b)} The household is consuming poor if the share of the food expenditure in their total current household expenditure exceeds 45 percent.

^{c)} The classification is based on the social environment of the dwelling and/or on the substandard quality of the dwelling.

^{d)} It refers to the provision of the household with consumer durables. Near 20 types of high-value domestic appliances were included. The index, based on standardized values for each appliance weighted using their distribution (based on z scores), was used to obtain housing-equipment deciles. Households in the bottom decile are housing-equipment poor.

^{e)} It is defined by means of 6 different types of poverty and social exclusion dimensions (e.g. income, expenditure, housing equipment, subjective poverty). If the household is poor from at least 3 aspects, it is considered multiple deprived.

Table 5

Characteristics of well-off and not well-off households, 2001 and 2002

Household characteristics	Neither income nor expenditure well-off (NW)		Income well-off (IW)		Expenditure well-off (EW)		Income and expenditure well-off (I&EW)	
	2001.	2002.	2001.	2002.	2001.	2002.	2001.	2002.
	year							
Average household size	2.7	2.7	2.8	2.6	2.5	2.4	2.4	2.4
	Percentages							
One member family	24.2	23.7	16.1	18.4	25.9	31.6	24.7	26.5
5 or more member family	10.0	10.0	6.7	5.4	5.5	4.2	2.8	5.0
Households with								
no child	58.7	57.6	57.5	67.0	60.1	62.5	65.9	68.3
3 or more children	5.7	5.6	3.0	2.4	3.1	2.8	2.5	3.8
Households								
living in Budapest	17.3	17.2	42.7	39.9	27.2	26.3	37.0	40.8
living in villages	35.4	34.3	19.2	20.0	24.0	23.1	21.2	20.4
consisting only young persons within the household (under 30 years old)	5.2	4.6	8.9	10.2	7.5	12.3	13.4	12.3
consisting only old persons within the household (over 60 years old)	30.0	28.6	4.3	12.1	18.5	16.6	6.4	7.0
with head of low level of education	36.8	35.3	13.1	8.3	12.5	13.4	4.5	4.9
with head of high level of education	8.3	8.8	38.9	37.5	26.7	28.9	50.3	48.8
Subjective well off*	1.8	2.6	10.7	13.3	10.0	13.5	21.8	30.1
Housing-equipment well of**	7.5	7.2	18.5	19.8	19.8	23.4	29.3	30.9
Holiday abroad	13.7	15.6	12.9	23.3	31.1	31.6	30.7	35.5

* It is defined by self-categorization.

** Households in the top decile according to the housing-equipment index, see at Table 4.

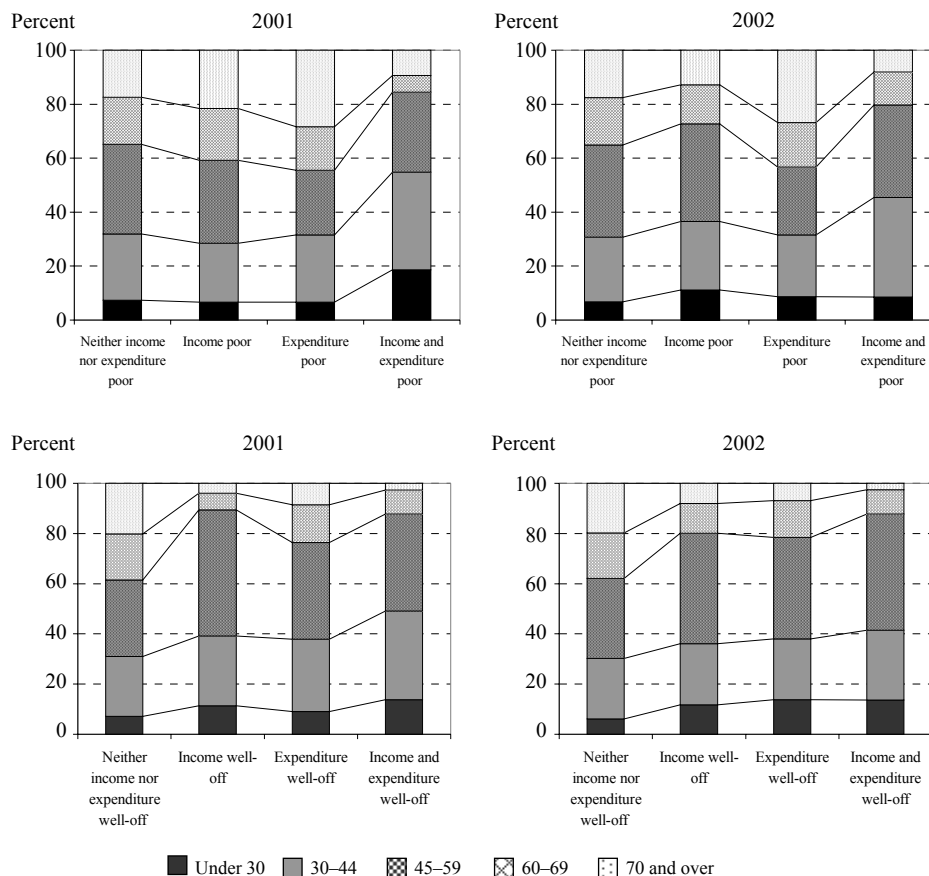
Further striking figures can be found in the last five rows of Table 4 above. While almost half of the expenditure poor households considered themselves poor in 2002, this was much less frequent, less than 30 percent among the double poor households. In respects of other dimensions of poverty, on the other hand, the proportions within the double poor households exceed markedly those within either only income or expenditure poor households. While e.g. the proportion of housing-equipment poor households among the income poor was only 18 percent and 22 percent among the expenditure poor households, it amounted to nearly 46 percent among the double poor households. However, perhaps the most important and striking figures are shown in the last row: these indicate that in both years multiple deprived and double poor households coincide to a great extent, almost four from every five double poor households are at the same time multiple deprived.

Looking now at the opposite end of the income and expenditure distributions there are a number of similarities in the characteristics of the income and expenditure well-off households. However, significant differences can also be experienced in respect of a few characteristics. Thus it is remarkable e.g. that the proportions of single member households and those consisting of old persons only are considerably higher among expenditure well-off households than among income well-off households.

The opposite is true in respect of households with highly educated head and those living in Budapest. Among double well-off households the proportion of households with highly educated head is strikingly high, while that with low level of education is insignificant, much lower than among either groups of households well-off from one aspect only. As Table 5 data below indicate only 10-13 percent of income or expenditure well-off households consider themselves being well-off, among double well-off households, however, this rate is more than double: it was 22 percent in 2001 and 30 percent in 2002. From Table 5 it can be concluded, furthermore, that the proportion of households who spend their holiday abroad is, in today Hungarian circumstances, a good indicator of being really well-off, almost 36 percent of double well-off households gave account of such occurrence in 2002, while this proportion is some what lower among expenditure well-off households and lower, 13-23 percent among income well-off households.

It is instructive, finally, to investigate and compare the structure of the different types of poor and well-off households by the age groups of the household head. First it must be noted that households with elderly head generally do not belong to neither poor nor well-off households. On the other hand, if they are poor or well-off, this relates primarily their expenditures. We can differentiate between two types of old households: one part of them did not yet get accustomed to the consumer type society, they do not spend all their incomes, give preference to save instead. The other type of old households, on the other hand, is of spending type, i.e. their expenditures exceed their current income making use of their past savings. It is noteworthy, furthermore, in connection with Figure 6 that young and middle aged households are over-represented among all types of well-off households, as well as among double poor households, but the bulk of well-off households consist of households where the head is in the second half of his/her economically active life.

Figure 6. Percent of poor and well-off households by age group of the head, 2001 and 2002



CONCLUSION

We deem that the efforts made in connection with our research were not fruitless, in fact they were remunerative. To the question: whether income or expenditure is better to characterize the welfare, the living conditions of households in Hungary today, a definite answer cannot be given, the answer depends on the aim of the investigation. However, our results indicate that we can describe the living conditions of the population, the poor and the well-off households more precisely if using both measures. Thus it can be concluded that the answer to the question in the title is neither income nor expenditure, but if an HBS contains data on both the incomes and the expenditures of the households both variables are to be taken into account in a complex manner when investigating the living conditions, the poverty and the wealth of the households. Data unequivocally indicate that the really, deeply poor are those poor in respect of both income and expenditure and the really wealthy are well-off both in income and expenditure.

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