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Competitive pressure and subjective welfare

Part I
Mobility, Subjective Mobility and Subjective Well-being in Hungary

Paper to be presented at the Final conference of FP5 project of the European Commission *Competitive pressure and its social consequences in EU member states and in associated countries* (COMPPRESS HPSE-CT-2002-00149), Budapest, 28-29 April, 2006

Introduction[1]

Happiness research (see Kahneman et al., 1999; Kahneman and Tversky, 2000; Frey and Stutzer, 1999, 2000, 2002a,b; Layard, 2005) gives useful tools and clear concepts to measure experienced utility (life and material satisfaction) and to test government policy and household behaviour concerning the highest utility level achievable. In this paper subjective well-being measured by survey questions on life and material satisfaction is investigated. Our context is Hungary, between 2000 and 2002. We identify some basic variables that have important effect on how individuals perceive well-being in competitive pressure situation, namely, relative income mobility, subjective mobility, relative income position and subjective wealth position. We find that perception of changes in the relative income, wealth, and labour market positions, and the future prospects of these variables effect strongly on subjective well-being. Analysing the deviation between the objective and subjective trends of these variables and the reactions of households under these influences, we find that the objective trends of income and income mobility are very important with respect to satisfaction, but *how people perceive their past relative income and income mobility, and their prospect of upward mobility in the future are what really determine satisfaction*. *The majority of respondents underestimate the real size of changes in their past financial positions, and the uncertainty of the competitive pressure situation is what really leads to this underestimation.*

Kornai, 1971, raised several ideas in economic theory and methodology, thus e.g. description of the behaviour of decision-makers without assumptions regarding preference ordering. He made a distinction between two kinds of elementary decision processes, namely, standard versus fundamental decisions, and comparable versus non-comparable decisions, where the rational choice theory is hardly or not applicable. Standard decision processes are repeated periodically or almost periodically, their algorithms are composed of simple steps and require little information. Fundamental decision processes do not occur regularly, their algorithms composed of many and frequently complicated steps, and require a great deal of information. The real changes resulting from standard decisions are mostly reversible, while the real changes resulting from fundamental decisions are generally irreversible.

[1] Our study is part of the COMPPRESS *research programme,* Workpackage 4: ”The Effect of Competitive Pressure on Income Distribution and Social Policy, Public Perception, Attitudes and Norms”, Institute of Economics HAS, Budapest. We would like to thank László Halpern, Gábor Kőrösi, Claudia Senik, Manuela Stanculescu and Tine Stanovnik for their useful advice.

Consumer decisions may also be classified according to whether or not they are made under uncertainty (see the same book of Kornai, 1971). The term 'decision under uncertainty' is reserved for the case where utility depends not only on the decision but also on external conditions independent of the decision makers. Kornai had critical remarks on the changes over time in the set of alternatives and preference ordering, as well as on the 'maximising' behaviour of the decision makers. The changes over time were explained by three major groups of factors: changes in the external circumstances which are independent of the decision maker, changes in the relative position of the decision maker in comparison with his/her surroundings, and other factors (e.g. public opinion) influencing preferences. Analysing the changes in the relative position of the decision maker, Kornai argued that the preferences of the consumer are effected not only by changes in his/her income but also by changes in his status, his place on the scale of social prestige, his/her family position and other factors influencing the relative position. The decision maker can maximise only the expected value of the utility function, his/her decision and the consequences of this decision depend not only on the established taste of the decision maker, but also on uncertainty.

Scitovsky, 1976, also criticised the standard economic assumption that people can successfully predict future utility, or – at least – no systematic deviations are expected. Furthermore, he pointed out that people's behaviour violates certain axioms underlying the rational consumer hypothesis. There are situations in which people have to do a trade-off and decide between very different activities which are hardly comparable and fundamentally differ in the extent of the predictable future utility. These anomalies and paradox phenomena of the real-life decision making are introduced by happiness research. (See Kahneman et al. 1999; Clark and Oswald, 1994, 1996, 1998; Van Praag, 1993, 1999; Veenhoven, 1996a,b; Winkelmann and Winkelmann, 1998; Oswald, 1997; Diener and Suh, 1997; 2000; Inglehart and Klingemann, 2000; Diener and Biswas-Diener, 2002; Easterlin, 2001, 2002, 2005; Di Tella et al., 2001, 2003; Ferrer-I-Carbonell and Van Praag, 2003; Headey et al., 2004; Blanchflower and Oswald, 2004, 2005; Stutzer and Frey, 2006.)

In this study we also underline the importance of relative comparisons: in a transitive and competitive pressure situation people tend to compare themselves – almost always – to others. It is generally known that people's wants depend on what other people have, and on what they have got accustomed to. This attitude is much stronger after transition and in a competitive pressure situation, where people are strongly driven by the desire 'to keep up with other people' (see Falk and Knell, 2004; Layard, 2005; Luttmer, 2001, 2005).

When people become richer compared with other people, they become happier, and this leads to the permanent competition and to the desire to get upwardly mobile, as soon as possible. Economic mobility plays a role in the competition and it is an equaliser of opportunities (see Benabou and Ok, 2001a,b; Benabou and Tirole, 2005). More mobility increases income and wealth, and may improve the labour market status. That is why we can assume that mobility has (positive or negative) effect on subjective well-being. Volatility, with related high levels of mobility, in which there are very few guarantees for future income gains may have a negative effect on satisfaction, and it increases the probability of belonging to a frustrated achiever group. (See Graham, 2000, Graham and Pettinato, 2001, 2002a,b.)

We know from the literature that different beliefs about the fairness of social competition strongly influence the attitude toward redistribution and subjective well-being (see Alesina et al., 2004; Alesina and La Ferrara, 2005; Alesina and Angeletos, 2005; Alesina and Fuchs-Schundeln, 2005). If a society believes that connections and corruption determine wealth, it will tolerate high redistribution and high taxes. The impact of mobility on attitudes towards redistribution is affected by individual perceptions of the 'up and down' processes, and deeply depend on the extent and the dynamics of income and social mobility (see Alesina and Angeletos, 2005; Fong, 2005). On the other hand, people who have the everyday experience that the Hungarian society becomes more and more immobile, and think that fairness in mobility is a questionable concept these days, do not see mobility as an alternative tool for redistribution, and prefer more direct and speedy distributive policies (see Molnár and Kapitány, 2006). Furthermore, support for redistribution policies is negatively affected by expected future income that may separate the winners of transition (see Ravallion and Lokshin, 2000, 2001; Alesina and La Ferrara, 2005). Although disapproval of redistribution increases with income, there are a sizeable percentage of people in the higher income deciles who also approve redistribution policies, and respondents in the lower income groups do not necessarily support greater distribution. According to the POUM (Prospect Of Upward Mobility) hypothesis of Benabou and Ok, 2001, individuals who are currently poor may oppose redistribution because they hope to become rich in the future. And as a counterpoint, the rich may not necessarily oppose redistribution if they expect their income and wealth to fall in the future. This effect may be much stronger in the case of transition (see Molnár and Kapitány, 2006).

People would be willing to accept a significant fall in living standards if they could move up compared with other people (see Layard, 2005). Furthermore, after an actual income rise the norm by which this income rise is judged also rises and this norm depends on the past and

future prospects of income dynamics. People change their reference group – almost always – upwards, and this can seriously affect their satisfaction, negatively. *We will introduce a case below where a group of Hungarians in 2002 became objectively better off, and they got happier, but they felt relatively worse than it would have been expected according their income level.* We show how life and material satisfaction of this group is affected by this relatively big, but delayed real income increase, what was expected for a long time. We can see a quite similar case in Germany in 1990 (see Layard, 2005; Alesina and Fuchs-Schundeln, 2005; Frijters, Haisken-Denew and Shields, 2004). After reunification of Germany, the East German began to compare themselves with the West Germans, rather than with the other countries in Eastern Europe. In spite of the fact that their living standards increased after 1990, their level of happiness fell.

Analysing the effects on subjective well-being we find that unemployment really matters. We argue that the main issue is not unemployment, but *the labour market participation*. People 'living on the outskirts of activity', that is, on the border between activity and inactivity – unemployed and non-employed in active age, disability pensioners, casual workers, people living on subsidies, called together as marginal activity groups – report much lower satisfaction (see Di Tella et al., 2001, 2003; Blanchflower, 2001; Blanchflower and Oswald, 2004, 2005; Layard, 2005).

Evidence of Hungarian surveys (Lelkes, 2002a,b, 2004; Spéder et al., 2002) suggests that level of individual subjective well-being in Hungary is much below than that of Western Europe. The analysis of the determinants of satisfaction with life in general and of material well-being in Central and Eastern Europe is quite advanced (Sági, 1999a,b; Róbert, 1995, 1999; Spéder, 1998, Spéder et al. 2002; Klasen and Gruen, 2001; Lelkes, 2002a,b, 2004; Hayo, 2003; Senik, 2004a,b, 2005; Lokshin and Ravallion, 2000; Ravallion and Lokshin, 1999, 2000, 2001; Graham, 2000; Graham and Pettinato, 2001, 2002a,b; Gradín et al., 2004; Headey, Muffels and Wooden, 2004; Frijters, Haisken-Denew and Shields, 2004). A number of studies have analysed some aspects of well-being in the region (Rutkowski, 2001; Tóth, 2005), focusing first on job satisfaction (Blanchflower, 2001; Clark et al., 2005; European Foundation, 2004). To understand the different levels of perception, i.e. perception of changes in income, changes in distribution of incomes, changes in income and expenditure inequality and mobility, changes in material satisfaction, and the intersection between the perceptions of different changes in inequality and mobility together, that was the original and basic interest in our research.

First we introduce our data and methodology, and then we shortly discuss the dynamics of

income and income distribution in Hungary. In the next paragraph we define and compare absolute, relative and subjective mobility during the period 2000-2002 in Hungary. Afterwards, we introduce different approaches for measuring subjective well-being. In our first model the basic objective determinants of life and material satisfaction are tested. In the second model we focus on how perceived relative wealth status, subjective income mobility, and other subjective variables affect life and material satisfaction. The study is closed with the summary of our major findings. The tables of basic distributions of our subjective measures based on questions and data of a supplementary interview attached to the Household Budget Survey in 2002 are available in the Appendix.

Data and methodology

The Hungarian Household Budget Surveys (HBS) are undertaken by the Hungarian Central Statistical Office (HCSO). One third of households in the survey sample rotate annually, thus theoretically one third of households spend 3 years in the survey. This makes it possible to extract 3 years long rotation panels from the samples. The rotation panels usually contain 1700-2000 households with 4300-4900 persons. Because of the sample deterioration, the real size of the panels is one quarter/sixth of the original sample. In this study we use the HBS between 1993 and 2002, and the Rotation Panel of 2000-2002.

We could attach a supplementary survey for measuring subjective variables to the 2002 yearly interview of the HBS (asked in March 2003). In our supplementary survey the adult members of households taking part in HBS between 2000 and 2002 were asked. Our subjective questions and the raw distributions of the answers are presented in the Appendix. We have answers from 3540 members of 1903 households.

In the HBS samples (and consequently in the rotation panel sub-samples) the population of the larger cities, the active population and the highly qualified people are underrepresented. Weighting was applied to restore representativity. However, no weighting can solve an important sampling problem of the HBS after the transition. The poorest (e.g. homeless, functional illiterate persons) whom the interviewers could not create contact are missing from the sample. Also missing are the most affluent who often live in separation from the society, and refuse to disclose information to the survey.

Beside usual kinds of income, household income used in this study contains the value of consumption from own production. It also contains the balance of agricultural incomes and expenditures. Direct taxes and social security contributions are not included. In order to allow

comparisons of households of different size and composition, household income was equalised using the OECD equivalence scale: the first adult in the household was assigned a weight of 1, all other adults 0.7 and each child (below age 15) was assigned weight 0.5. Household income divided by the number of equivalent adults is household equivalent income.

Income inequality: income distribution across income quintiles

We present the dynamics of macro data of real per capita GDP and per capita real income, and the dynamics of micro data of household income and expenditure computed by the Rotation Panel (see Figure 1). Data for the real equivalent income computed by Household Budget Surveys between 1993 and 2002 are also shown (see Table 1). We can see that there is a significant discrepancy between the methodically different national accounts approach and the micro one. In the period investigated the Rotation Panel registers a much greater drop in per capita real income and expenditure than do the macro data. The other Hungarian household survey-based calculation – the TÁRKI's Hungarian Household Panel (HHP) – shows a very similar picture to ours.

Between 1993 and 1997 the real income and expenditure of the households significantly dropped. This was the consequence of the serious stabilisation measures introduced in March 1995 and the inflation rate what was higher than 28% at that time. After the 1995 stabilisation program, a considerable change occurred. The drastic changes in real income rearranged also the structure of household expenditures. We may say that the stabilisation package in 1995 was the final act of the first period of transition. (About interaction between inequality and mobility, and description of the decomposition of expenditure inequality see Kapitány and Molnár, 2002, 2004.)

Table 1: Real equivalent income, 1993=100

1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
100	97	87	79	79	83	86	90	99	112

Source: Own computation based on Household Budget Surveys

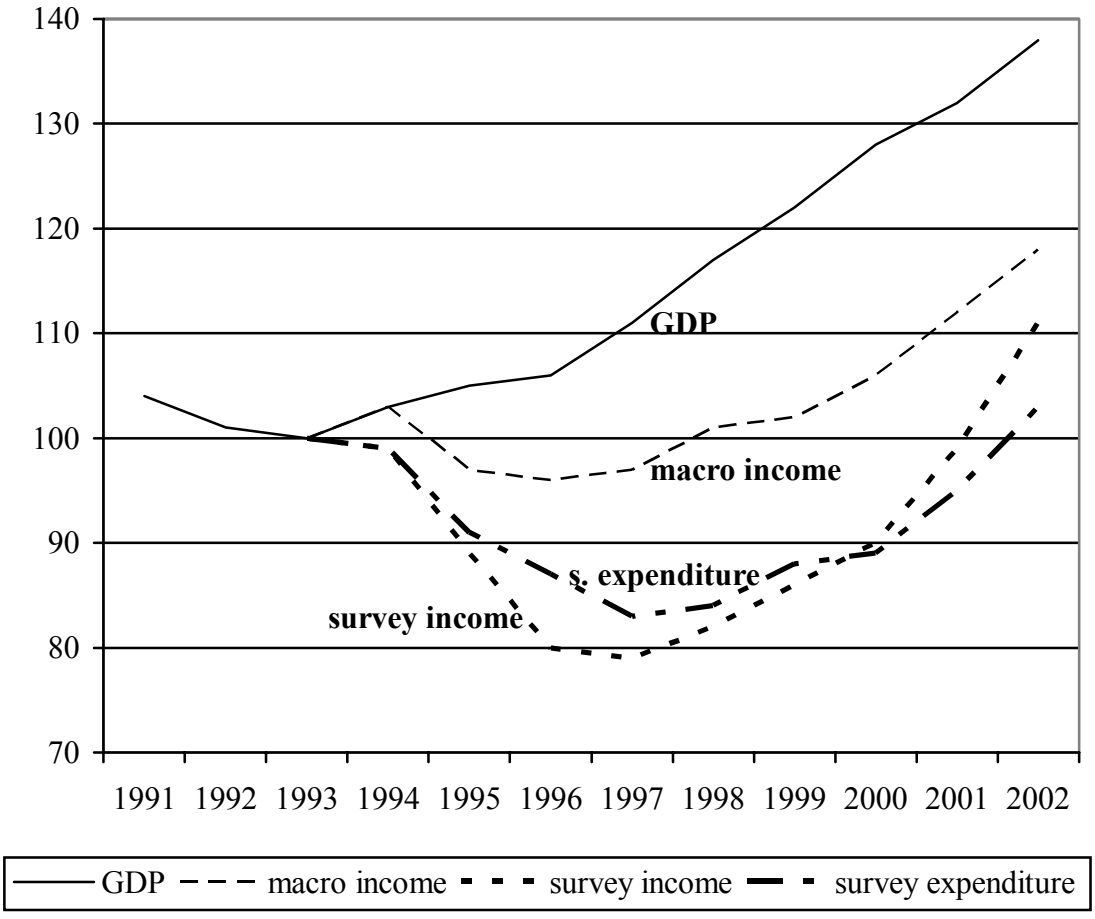
The growth of household incomes started after 1997, and the real income almost reached its 1993 level in 2001. So, comparing the income structures of different years we have to keep it in mind that the real income in 2001 was the same as in 1993, while its level in 1997 was by

20% less. Between 2000 and 2002 the income growth was extremely fast. This phenomenon is partly connected to the election in 2002, and we will see later that it has special significance in the interpretation of our results in modelling satisfaction.

The share of the first income quintile in total income did not change in the investigated period, it remained at 11% level. However, the share of the fourth and fifth quintiles in total income unambiguously grew. Consequently, the ratio of income shares of the top and the bottom 20% (the Q5/Q1 ratio) also increased between 1993 and 2001.

Figure 1

Real GDP and the real values of per capita household income and expenditure



Source: GDP and macro income: Statistical Yearbooks of Hungary; survey data: own computations based on Household Budget Surveys.

After 1993, both the Q5/Q1 ratio and the Gini coefficient increased further to a small degree. The extent of inequality growth in case of both measures was a little bit larger between 1997 and 2001 than in the preceding period. However, the population usually felt the inequality growth between 1993 and 1997 stronger than between 1997 and 2001, because of the drastic

decline in average income. In addition, between 1996 and 1998, when the direct effects of stabilisation package were running out, the income inequalities on personal level were stagnating. This fact is documented in details in Kapitány and Molnár, 2002.

Table 2: The distribution of income sources across income quintiles

Quintile	**1993**	**1997**	**2001**	**2002**
1	11.1	11.0	11.0	10.9
2	15.1	15.5	15.4	14.9
3	18.0	18.5	18.3	17.7
4	21.8	22.6	22.2	21.7
5	33.2	33.9	35.1	34.7
Top 20% / bottom 20%	2.98	3.07	3.20	3.18
Gini coefficient	0.2231	0.2244	0.2371	0.2353

Source: Own computation based on Household Budget Surveys

Between 2001 and 2002 we can observe a slight, non-significant decrease in our inequality measure. In Hungary the growth of inequality was relatively slower than in other transition countries. Furthermore, we already remarked that people in deepest poverty and the most affluent are missing from the sample. Consequently, the size of inequality increasing between the pre- and post-transition period is somewhat underestimated.

Tóth, 2005, also published a time series of Gini coefficients covering the whole period of our investigation. His inequality indices are computed on the basis of the HHP, and after 1996 on the basis of TÁRKI Household Monitor surveys separate from each other and from the panel. The Gini coefficients and other inequality measures computed from the Rotation Panel are – in a small extent – systematically lower than those obtained from the HHP and the Household Monitor. This difference can be explained by the fact that the TÁRKI-surveys contain a relatively larger number of high-income households than the Household Budget Surveys, and, consequently, the Rotation Panels. *However, the inequality dynamics computed from the Rotation Panels give results very similar to those of Tóth, 2005*.

Absolute, relative and subjective mobility

When we think about the link between mobility and satisfaction, and we try to estimate the size of the effect of relative income position changes on satisfaction, we can imagine three basic cases. The first one and the most unlikely is that the mobility has no significant effect on

satisfaction. The second possibility well-known in the literature is that positive changes in income flows have additional positive effect on subjective well-being (see e.g. Senik, 2005; Fong, 2005; Boeri and Brandolini, 2005; among the latest publications). Respondents with upward mobility give positive assessments of their past economic progress, they may also have confidence in future economic processes, and that is the cause why they are more satisfied than the respondents on the same income level with stagnating relative income position.

The third possibility is that volatility in income flows may have negative effects on satisfaction. Respondents with upward mobility may give less positive assessments of their past economic progress than respondents having the same income for a longer while. Even their households that saw their real income to rise failed to perceive that they benefited over time, they are scared about future and have great fear of future economic progresses, and that is why they are less satisfied than the respondents on the same income level with stagnating relative income position. We have to calculate with this possibility in the case of great uncertainty, namely, in the case of competitive pressure situation, when the respondents with increasing income are pessimistic about their future income trends. (See Ravallion and Lokshin, 2000; Graham and Pettinato, 2001, 2002a,b.) Looking this phenomenon from the other side, the satisfaction of respondents with downward mobility is decreasing, but their satisfaction level remains higher those who have already been on this lower income level for a longer while.

In the following we argue that between 2000 and 2002, the third case is valid for Hungary. However, we have to underline, that our data-set is limited, and we are not able to analyse long-term processes, and we know nothing about the dynamics of satisfaction of respondents when the upward (or downward) mobility process is persistent.

For measuring different types of mobility, first we give definition for *subjective mobility*. The question behind this variable was the following: *How has the financial situation of your family changed during the last three years*, and the possible answers were: considerably declined, slightly declined, did not change, slightly improved, considerably improved. (Distribution of the answers is shown in Table A18 in the Appendix.)

In measuring *absolute mobility*, the real income of the year 2002 was compared to the average income of the years 2000 and 2001, and these income changes were classified into five categories. In Table 3 ‘<0.8’ means that the average real equalised income of the given person in the years 2000 and 2001 is less than the 80% of his/her real income in 2002; ‘0.8< <0.9’

means that this average is between the 80% and 90% of the income in 2002, etc. The bounds of these categories are not chosen by chance, we use that values (rounded and symmetrical around 1) which lead the maximum rank-correlation between the categories of the absolute and subjective mobility.

To generate the *relative mobility* variable we order the people in the sample according to their equalised income, and normalise the sequence between 0 and 100 per cent. We name this parameter the *relative income position* of the persons, what is a simple generalisation of the decile or percentile structure. The *difference of relative income positions* between two time periods can be used to measure relative mobility. Taking this measure as a starting point we can introduce further mobility variables. We can classify the differences into categories according to the extent of downward and upward changes of the relative income positions at 10 and 20 per cent level. For example, we regard a person mobile at the 10 per cent range, if his/her relative income position difference is ten per cent at least. In the simplest case we disregard the extent of the changes and consider only their direction.

Applying the 10 and 20%-range mobility measure we have shown already that the relative mobility was decreasing in Hungary between 1993 and 2001. After the stabilisation and in the period of growth the mobility gets lower, and the relative position of majority of people is getting more and more frozen. Between 2000 and 2002 the income and expenditure mobility were slightly increasing. (See chapter 5.2 of the COMPPRESS deliverable http://econ.core.hu/english/comppress/D14.pdf.)

Applying the 10 and 20 per cent range in mobility measuring is also not by chance. These are the values which lead the maximum rank-correlation between the categories of the relative and subjective mobility. Furthermore, the comparability of the relative and subjective mobility led us to not apply the usual transition matrix approach, in which mobility is measured by examining quintile-to-quintile (decile-to-decile) transition rates. This procedure has characteristic deficiencies. Considerable and very different changes in position are considered the same. Moreover, in some cases relatively big changes are not regarded, while in other cases very small changes in position are regarded as real shifts. E.g. there is no change measured when someone moves from the bottom to the top of a quintile, while that shift is considered mobility when someone moves from the top of the first quintile to the bottom of the second one. Investigating changes related to the starting position seems to be more natural in this application.

Comparing the absolute and subjective mobility we can see (Table 3) that only 17 per cent of the respondents are in the same category in both distributions, 12 per cent are in the lower and

71 per cent are in the upper triangle of the table. That is, more than 70 per cent of the respondents perceive smaller improvement (or bigger deterioration) in their material situation than it is observable in their absolute real income changes. Naturally, the cause of the deviation may be that we describe and take into account the real processes in an inaccurate way. However, the great size of asymmetry shows that the majority of people do not perceive their factual upward income mobility.

Table 3: Distribution of subjective and absolute income mobility between 2000 and 2002

number of observations = 100%

	Absolute mobility					
Subjective mobility	< 0.8	0.8< <0.9	0.9 < < 1.1	1.1< <1 .2	1.2 <	Total
Considerably declined	**1**	2	4	3	5	14
Slightly declined	2	**2**	7	6	11	27
Did not change	3	2	**11**	8	18	42
Slightly improved	1	1	3	**3**	8	16
Considerably improved	0	0	0	0	**1**	1
Total	7	6	25	20	43	100

Note: < 0.8 means that the real equalised income of year 2002 is less than the 80% of the average income of 2000 and 2001; *0.8< <0.9* means that the real income of year 2002 is between the 80 and 90% of the average income of 2000 and 2001, etc.

Table 4: Distribution of subjective and relative income mobility between 2000 and 2002

number of observations = 100%

	Relative mobility					
Subjective mobility	< -20%	-20< <-10	-10< <10	10< <20	20% <	Total
Considerably declined	**1**	3	7	1	1	14
Slightly declined	3	**4**	14	3	3	27
Did not change	6	5	**21**	6	5	42
Slightly improved	1	2	8	**2**	3	16
Considerably improved	0	0	1	0	**0**	1
Total	12	14	50	12	13	100

Note: Relative mobility is measured by the difference of relative income position in 2002 and the average of relative income positions in 2000 and 2001. *< -20%* means that this difference is less than -20, on a 100 degree scale, -20< <-10 means that it is between -20 and -10%, etc.

Comparing relative and subjective mobility (Table 4) we can see a somewhat more symmetric matrix, the 28 per cent of the respondents are in the main diagonal, 26 per cent of them are in the lower triangle, and 46 per cent in the upper one. This unambiguously shows that the subjective mobility is much closer to the relative mobility than to the absolute one. It means that the change in relative position has strong influence on the perception of change in material situation, rather than the factual income level itself: *people value the changes in their material situations according to the changes in their relative positions, rather than the*

changes in their absolute income levels. The investigated time period is quite suitable for introducing this phenomenon. As we have seen already (Table 1), between 2000 and 2002, the growth rate of the real equalised income was extraordinary high, almost 24 per cent, and this is the reason why we got considerable deviations between the changes in absolute and relative positions.

Cross-sectional micro data of subjective well-being also often show a positive correlation with incomes, *but extra money does not necessarily make people better off either, because people tend to compare their living standards with others'.* Clark and Oswald, 1996, have found empirical evidence that a person's perception of well-being (job satisfaction) does not only depend on absolute but also relative variables. Furthermore, people tend to compare themselves to similar others for protecting themselves from unfavourable comparisons and dissatisfying situations. *Reference standard groups and their perceived positions on the income and wealth ladder* have very strong impact on subjective well-being. Subjective well-being is depending more on *relative positions,* rather than on the absolute levels of income. Taking *mobility* as a possible explanatory variable of satisfaction, our results also suggest that the relationship is much stronger between subjective well-being and *relative mobility* than between subjective well-being and absolute income changes.

It was also shown in the literature that volatility in income flows may have negative effects on subjective well-being, even among upwardly mobile individuals: respondents with upward mobility sometimes give negative assessments of their past economic progress (Graham and Pettinato, 2002a,b). These "frustrated achievers" tend to be less satisfied with life, and changes in their subjective well-being over time are also affected by both their real and perceived mobility in the past. *The large and consistent gap between objective trends and the subjective assessment of mobility of the upwardly mobile households may frustrate and also motivate these households.*

Objective determinants of life and material satisfaction in Hungary, 2002

Two satisfaction variables are used as proxies for subjective well-being, namely satisfaction with household material situation and general life satisfaction (cf. Spéder, Habich and Kapitány, 2002; Haller and Hadler, 2006).

Table 5: Material and general satisfaction in 2002, Hungary
Ordered logit estimates with objective variables (N=3398)

	(1) material satisfaction	(2) general satisfaction
2nd + 3rd quintiles of equalised income in 2002	0.91 (0.18)**	0.54 (0.16)**
4th quintile	0.98 (0.21)**	0.65 (0.19)**
9th decile	1.33 (0.26)**	0.73 (0.23)**
Lower 5 percentiles of 10th decile	1.95 (0.28)**	1.37 (0.29)**
Upper 5 percentiles of 10th decile	2.29 (0.38)**	1.88 (0.33)**
Casual workers	-1.11 (0.31)**	-1.93 (0.27)**
Unemployed	-0.94 (0.22)**	-0.99 (0.22)**
Disability pensioners	-0.60 (0.17)**	
Living on subsidies	-1.54 (0.43)**	-1.25 (0.41)**
Adult household members of marginal activity groups	-0.61 (0.17)**	-0.56 (0.14)**
Household contains couple (married or life-partners)	0.36 (0.12)**	0.38 (0.12)**
Household contains child(ren) under age 4	-0.72 (0.22)**	
Household contains permanently sick person		-0.31 (0.12)**
Student (after secondary school)		1.23 (0.25)**
Young (18-39 ages)	0.59 (0.12)**	0.62 (0.12)**
Elderly (55-X ages)	0.50 (0.12)**	0.55 (0.12)**
Graduated	0.39 (0.15)*	0.65 (0.15)**
Passenger car	0.29 (0.12)*	0.35 (0.12)**
Flat's/house's value between median and 90th percentile	0.25 (0.10)*	
Household has debts	-0.57 (0.21)**	
Rel. inc. pos.: up & in the lower 5 deciles in 2000[a]	**-0.30 (0.12)***	**-0.33 (0.12)****
Rel. inc. pos. Of 2002 minus rel. inc. pos. of 2001 (cont.)	**-0.89 (0.31)****	**-0.69 (0.34)***
Log pseudolikelihood at step 0	-4803.8	-4764.7
Log pseudolikelihood at last step	-4379.0	-4376.6
Pseudo R^2	0.088	0.081

Notes: Robust standard errors adjusted for clustering on households in parentheses.
* significant at 5% level, ** significant at 1% level.
Dependent variable of model (1): *To what extent are you satisfied or dissatisfied with the material situation of your household?* Dependent variable of model (2): *All things considered to what extent are you satisfied or dissatisfied with your life in general?* Possible answers: very dissatisfied (1), fairly dissatisfied (2), neither satisfied or dissatisfied (3), fairly satisfied (4), very satisfied (5).
[a] Relative income position increased from 2000 to 2001 and in 2000 the household was in the lower 5 equalised income deciles (dummy).

We can hypothesise with high certainty that income, labour market status and mobility will have significant impact on satisfaction. Similarly, health, housing conditions, family structure, family events, social life, and neighbourhood characteristics are also expected to be strongly correlated with life and material satisfaction, *but we would like to focus on mainly the impact of competitive pressure*. The analysis will therefore provide a systematic test of the basic

measures of well-being with respect to satisfaction in competitive pressure situation.

The analysis – which is done in two parts – always uses ordered logit models for estimating the main relationships. The two columns of Table 5 contain the material and general satisfaction models using only 'objective' variables as explanatory variables, while models presented in Table 6 include also 'subjective' variables.

The objective explanatory variables in Table 5 include income, labor market participation, family structure, age, education, a group of certain assets as proxy for measuring wealth of households (car and holiday house), and finally, change in relative income position between 2000 and 2002.

In our preliminary calculation three alternative income measures were tested: (1) the log of household income, (2) income quintiles/deciles, (3) not equidistant income groups, where the size of group depends on the income level. (In all the three cases income is adjusted to household size.)

Income is positively correlated with both material and general satisfaction. The coefficients proved to be significant for all three alternative income variables, however we can reach the strongest relationship in the third case, using diminishing income group sizes: quintiles first, deciles after, and two twentieths at the top (only this variant is presented in Table 5). We can also see here that increasing income the satisfaction of the highest income groups are relatively steeply increasing, which seems to contradict the theory of decreasing marginal utility, and the convex-concave shape of the value function of income. A partial explanation for this phenomenon may be that the highest income groups are missing from our sample, so the end of the typical value function of income is cut down here. We shall see later that introducing subjective income variables the same phenomenon does not exist.

With respect to competitive pressure the most important block of variables is the labour market participation (see the previous Hungarian well-being studies, e.g. Lelkes, 2004). After controlling for income *the unemployed and quasi-unemployed are significantly less satisfied than workers and than other non-actives* (e.g. normal pensioners), labour market status is the major element of dissatisfaction. People 'living on the outskirts of activity', around the border of activity and inactivity – *unemployed, disability pensioners, casual workers, people living on subsidies; called together as marginal activity groups* in the Tables – report much lower satisfaction. Their proportion is about 13 per cent in the total population. Furthermore, not only these people, but even their family members are more dissatisfied. The proportion of people in these marginal activity groups together with their family members is already 31 per

cent of the whole population.

The specific category of *disability pensioners* deserves particular attention because this was a typical way of escaping and withdrawing from the labour market during economic transition as an alternative to unemployment. According to the previous Hungarian well-being studies *health* is also a major (negative) component of individual's subjective well-being (see Lelkes, 2004). The impact of health on life satisfaction is large: the coefficient of bad health is usually greater than that of unemployment or income. Knowing this we have to put on the question, what is the stronger effect in case of disability pensioners: inactivity or bad health. After analysing the variable of permanently sick persons in the family, we can find this health variable insignificant in the material satisfaction model, but it really substitutes the variable of disability pensioners in the life satisfaction model.

Hungarian researches (Lelkes, 2002a,b, 2004; Sági, 1999a,b) have showed that entrepreneurship has become more positively associated with life satisfaction over time, even controlling for income, education, and so on. We could not find significant relationship between entrepreneurship and satisfaction.

Among variables concerning marital status of adults and family circumstances of the households we found two variables which have considerable effect on satisfaction. *People living in households containing couples* (married or living in common-law marriage) are more satisfied both with their material situation and with their life in general than the rest. (Naturally, if we used per capita income instead of equalised income we would get other demographic variables playing role in modelling.) In our previous study[2] we have already shown that the relative position of *families with younger children* got permanently worse between 1993 and 2002. They are unambiguously the losers of transition. Their positions did not improve even in the period of growth. Quite understandably, families with children aged not older than 3 years are less satisfied with their material situation than the others. Presumably, this negative effect is compensated by the pleasure of taking care of the little ones; therefore, in the case of general satisfaction this variable is significant only at 10 per cent level.

The increase in the number of *students in the population aged over 18* is largely due to the intensive expansion of higher education. In case of life satisfaction the coefficient of students is significant and has positive sign. Education for those aged over 18 seems to be a source of pleasure, the members of this group are quite satisfied with their life.

The effect of *age* has the very well-known U-shaped form, where there is first a decrease in satisfaction and than an increase at the end. In case of age we also prefer using discrete time variables instead of quadratic continuous ones. The category of young is quite broad, middle-aged are between 40 and 54 (this is the reference category in Table 5), and the category of older people is over 54. The *middle-aged* are more dissatisfied than the average. In this age category people are still active and taking part in competition, but got socialised in another political and economic situation. Several research results show that this middle-aged group gives a greater weight to present income than do either the young or the old. They are more concerned about unemployment, consumption and status competition, that is they are more exposed to impacts of the competitive pressure situation.

Education, independent of income, has a positive effect on satisfaction. Being highly educated has positive and significant effect on satisfaction in our models. Those with higher education have the highest level of satisfaction, even after controlling for labour market status and household income. This suggests that this relative satisfaction of the graduated can improve their earnings potentials.

Previous research results showed that variables for *level of wealth* have strong, positive and significant effect on satisfaction (see Graham and Pettinato, 2002b). As a proxy for measuring level of wealth we use passenger car (which is owned by 38% of the population in the sample), property (flat or house) value, and household debts. Owning passenger car increases satisfaction, and - not surprisingly – the variable of household debts has negative coefficient in modelling material satisfaction. The effect of the flat property is not unambiguous. Both people who own flat with relatively small reported value (below the median value) and people who have explicitly expensive flat (above the 90 percentile) are relatively less satisfied with their material situation than the others. That is, according to this proxy, the wealthiest people are relatively less satisfied with their material situation.

The two "last but not least" variables in our models here are the *variables for measuring relative income mobility*. Between 2000 and 2001 we disregard the extent of the income changes and consider only their direction. So, the first mobility variable is the dummy of persons with upward relative income mobility between 2000 and 2001, with a restriction, that this variable identifies only respondents with income under the median in 2000. The second mobility variable is the difference of relative income positions in 2002 and in 2001. *Both mobility variables have negative coefficients*. We would get similar result (with a little bit

[2] "Impact of transition and pre-accession on income distribution and inequality in selected EU catching-up and candidate

smaller pseudo R2) if we use only one continuous variable instead of these two variables, namely, the relative income position in 2002 minus the average of the relative income positions in 2000 and in 2001.

Naturally, our result shown in Table 5 does not mean that the upward mobility would reduce satisfaction. If we use income categories (variables in the first five rows of Table 5) for 2001 instead of income categories for 2002, leaving other variables unchanged, the sign of the coefficient of the second mobility variable would change to the opposite, with similar absolute value to the former one.

Analogously, we get similar results if we use the income categories of 2000, and we put the difference of relative income positions in 2001 and in 2000 into the model, as well as the difference of relative income positions in 2002 and in 2001 respectively. In this case the sign of *both mobility variables are positive*.

From these results it follows that *upward mobility increases satisfaction, but people who reached a certain income level just now are less satisfied than those who have already been around this income level for a long while.*

This argument can be supported also by two simple cross-tables. Table 6 shows the average material satisfaction in 2002 by the direction of relative income mobility between 2001 and 2002 according to the deciles of household income in 2001, and in 2002, respectively. As appropriate, the total rows of the two subtables are identical. We can see in both subtables – with unimportant exceptions – that the values of satisfaction are monotonously increasing in all columns. In the first table, making comparison by income deciles of 2001, we can see in all rows that the upward mobile persons are more satisfied than the downward mobile persons with the same income in 2001. Making comparison by income deciles of 2002, we can see without exception in each row that the average satisfaction of upward mobile persons is less than the average satisfaction of downward mobiles. (Naturally, in the case of total population we get different result, as the average income of upward mobile people is significantly higher in 2002, than in 2001.) The same phenomenon is illustrated also by Figure 2.

This unique and paradox phenomenon introduced in the right side figure means that *people who have already had their present relative income positions are much satisfied than the newly upward mobile ones*. For explaining this phenomenon we divided the upward mobile group into two subgroups by activity. The first group contained the people working in the competitive sector, namely, the entrepreneurs and employees in private firms, the second was

countries". http://econ.core.hu/english/comppress/D14.PDF

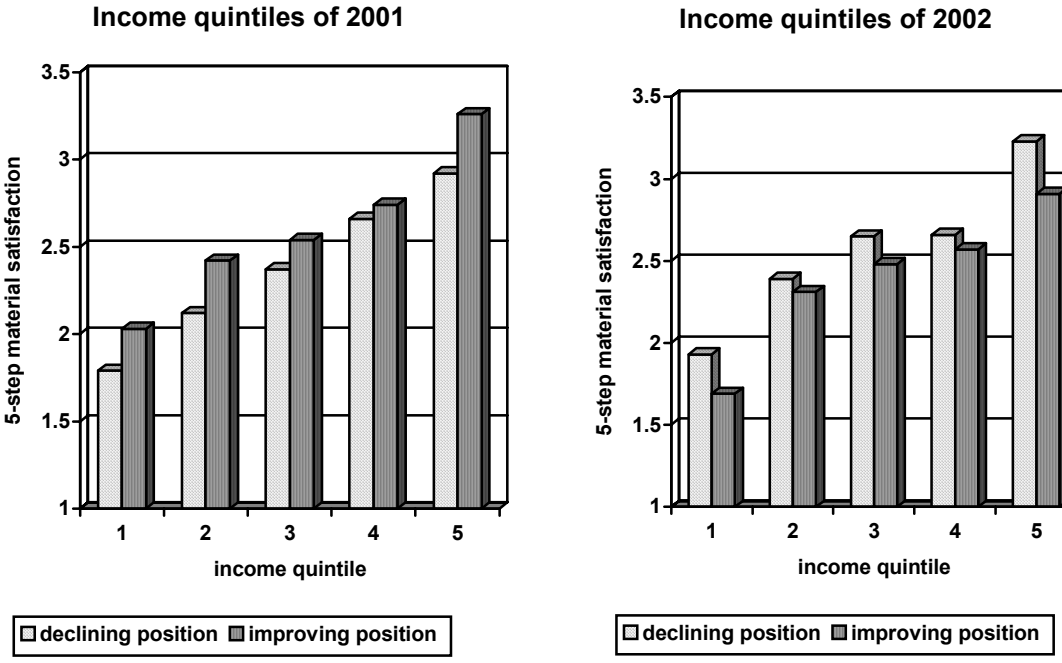
the group of others. We hypothesised that the relatively smaller satisfaction came from the competitive pressure situation, and this situation could be associated with uncertainty and discontent.

Table 6: Average material satisfaction in 2002 distributed by deciles of equalised household income and by the direction of relative income mobility between 2001 and 2002

	Average satisfaction	
Income deciles in 2001	Downward mobiles	Upward mobiles
1	1.68	1.85
2	1.90	2.20
3	2.11	2.43
4	2.13	2.41
5	2.37	2.56
6	2.36	2.52
7	2.64	2.59
8	2.69	2.84
9	2.77	3.09
10	3.06	3.43
Total	2.48	2.54

	Average satisfaction	
Income deciles in 2002	Downward mobiles	Upward mobiles
1	1.84	1.57
2	2.00	1.79
3	2.33	2.19
4	2.44	2.42
5	2.65	2.37
6	2.65	2.56
7	2.63	2.47
8	2.70	2.66
9	3.07	2.65
10	3.49	3.12
Total	2.48	2.54

Figure 2: Average material satisfaction of households with declining /improving relative income position between 2001 and 2002 by income quintiles of 2001 and 2002



Instead of difference of relative income positions in 2002 and 2001 we use dummy variables of these two groups. Dummy variable of the first group is significant with negative sign, but the variable of the second one is not significant. Using dummy variable of people working in the competitive sector the explanatory power of our model is also increasing. Taking into account the family members of people working in the competitive sector we can improve further the value of pseudo R^2. *We find evidence for verification of our hypothesis: relatively smaller satisfaction of the upward mobile people is prevalent in the competitive sector.*

We also find that the explanation of this paradox in the first glance phenomenon can be associated with uncertainty. The relatively smaller satisfaction came from the competitive pressure situation and this situation could be associated with uncertainty and discontent. P*eople working in the competitive sector perceived their new position uncertain and unstable, they assumed income trends to turn back in the future, and this perception had the negative effect on their satisfaction.*

In an uncertain situation these 'newly arrived people' may make quite different consumer decisions (see Stutzer and Frey, 2006). Majority of them begin to invest their extra money to real estate property and get into dept immoderately, others begin to consume extravagantly and sub-optimally. Their consumer decisions and the longer lasting consequences of their decisions following the income increase have influence on subjective well-being. Our case is different. The relatively smaller satisfaction is not resulted from the people's decision, rather than from their expectations to future external conditions independent on their decisions. People who just arrived in their new and better positions were quite pessimistic about these new positions, and did not believe in security and permanency of their new states. This is why this *subgroup of Hungarians, after a considerable income increase, became objectively better off, they got happier, but felt relatively worse than it would have been expected.*

Subjective variables explaining material and general satisfaction in Hungary, 2002

Besides the objective explanatory variables, the models presented in Table 7 include few subjective correlates of satisfaction. Introducing subjective variables improves our estimations, significantly.

We consider not only the (objective and subjective) values of changes in relative income and wealth position, but also the subjective value of wealth position itself. In our supplementary interview we included an Economic Ladder Question[3] for both 2000 and 2002. Among subjective variables the subjective wealth position in 2002 has the strongest effect on satisfaction. Respondents were asked to place their household to 9 steps on the poor-rich scale of the income/wealth ladder, but nobody choose the ninth step. We draw together the groups of respondents choosing the seventh and eighth step, and they form the reference category in the model (see also Table A4 in the Appendix).

It holds true that individuals thinking themselves wealthier are more satisfied and this effect is stronger in the case of material satisfaction. Despite of introducing subjective wealth positions, the variables of current income are still significant, albeit their effect on satisfaction is smaller than the effect of subjective ranking variables. People having larger income are more satisfied. However, introduction of subjective variables – mainly in the case of general satisfaction – terminated the situation when the difference between satisfaction of the higher income categories was bigger than the difference in satisfaction of the lower income categories.

Above a certain income, the effect of factual income on satisfaction is stagnating. The subjective valuation of the current income position of households is the dominant variable in both of our models. Two theories for explaining these findings are: adaptations and relative position concerns (see Easterlin, 2003; Frey and Stutzer, 2004; Di Tella at al., 2004). This growth-without-happiness paradox has been introduced several times in other countries and other periods of time (e.g. Blanchflower and Oswald, 2004; Diener and Diener, 2002; Veenhoven, 1993). Empirical evidence on the strong effect of relative position using well-being data is presented in Clark and Oswald, 1996; Blanchflower and Oswald, 2004; and Ferrer-i-Carbonell, 2005). In our findings *both the factual income and the subjective wealth position have significant effect on satisfaction. The subjective valuation of the current income position has the stronger effect on satisfaction. However, below a certain income level the factual income position has its independent impact on satisfaction.*

[3] See Graham and Pettinato, 2002b.

Table 7: Material and general satisfaction in 2002, Hungary
Ordered logit estimates with objective and subjective variables (N=3398)

	(1) material satisfaction	(2) General satisfaction
2nd + 3rd quintiles of equalised income in 2002	0.53 (0.17)**	
4th quintile	0.56 (0.20)**	
9th decile	0.75 (0.25)**	
Lower 5 percentiles of 10th decile	1.28 (0.26)**	
Upper 5 percentiles of 10th decile	1.15 (0.37)**	
Ln(equalised house hold income in 2002)		0.54 (0.17)**
Marginal activity groups together [a]	-0.55 (0.17)**	-0.39 (0.13)**
Household contains permanently sick person		-0.25 (0.12)*
Student (after secondary school)		0.94 (0.26)**
Elderly (55-X ages)	0.54 (0.11)**	0.37 (0.11)**
Graduated		0.32 (0.14)*
Household has debts	-0.41 (0.19)*	
Relative inc. mobility between 2000 and 2002 (cont) [b]	-0.80 (0.32)*	-0.84 (0.34)*
Subjective position in 2002: level 1 (from 8)	-5.01 (0.51)**	-3.63 (0.47)**
Subjective position in 2002: level 2	-4.16 (0.44)**	-3.36 (0.37)**
Subjective position in 2002: level 3	-3.18 (0.40)**	-2.59 (0.34)**
Subjective position in 2002: level 4	-2.49 (0.38)**	-2.11 (0.32)**
Subjective position in 2002: level 5	-1.72 (0.38)**	-1.34 (0.33)**
Subjective position in 2002: level 6	-1.38 (0.38)**	-0.84 (0.34)**
Subjective mobility: no change in material situation	0.64 (0.12)**	0.50 (0.11)**
Subjective mobility: slightly improved mat. sit.	0.81 (0.18)**	0.72 (0.17)**
Subjective mobility: considerably improved mat. sit.	2.35 (0.99)*	
Essentially agree with restricting income of the rich	-0.22 (0.10)*	-0.22 (0.10)*
Opinion: no chance for the hh to obtain better mat. sit.	-0.36 (0.11)**	-0.38 (0.11)**
Expectations on children's future: much worse	-1.30 (0.43)**	-1.18 (0.31)**
Absolutely uncertain to find another job [c]	-0.45 (0.12)**	-0.60 (0.11)**
Effect of EU on the chance of employees: positive	0.35 (0.10)**	0.47 (0.10)**
Log pseudolikelihood at step 0	-4803.8	-4764.7
Log pseudolikelihood at last step	-3937.5	-4030.0
Pseudo R^2	0.180	0.154

Notes: Robust standard errors adjusted for clustering on households in parentheses.
* significant at 5% level, ** significant at 1% level.
Dependent variable of model (1): *To what extent are you satisfied or dissatisfied with the material situation of your household?* Dependent variable of model (2): *All things considered to what extent are you satisfied or dissatisfied with your life in general?* Possible answers: very dissatisfied (1), fairly dissatisfied (2), neither satisfied or dissatisfied (3), fairly satisfied (4), very satisfied (5).
[a] Marginal activity groups: casual workers, unemployed, disability pensioners, people living on subsidies.
[b] Relative income position in 2002 minus the average of the relative income positions in 2001 and 2002.
[c] This dummy variable signs that he answer to the question *Imagine the situation that tomorrow you lose your job! How certain are you that you will be able to find another job not worse than the present one?* was "absolutely uncertain" (see Table A10 in the Appendix).

For the sake of correct interpretation it is important to underline another difference between the two types – objective and subjective – of our variables. The factual income level is a flow type variable, while in valuation of the current material situation of the household an asset position, namely, the wealth position is also taken into account.

Introducing subjective wealth position as an explanatory variable changes the role of some other objective variables, too: in this model the marginal activity group is still less satisfied than the others, however there is no significant difference between the categories of this group, so it is used as a unified group; variables of family circumstances and marital status are not significant here; younger people are not significantly different from the middle age people, only the dummy of older people is in the model; proxy variables of wealth (car and flat property) have been fallen out.

In these models the relative income mobility, for better comparison with subjective mobility, is measured by the difference of the relative income position in 2002 and the average of the relative income positions in 2000 and 2001. The effect of relative income mobility is the same what we found in the case of models without subjective variables.

Analysing the effect of income mobility on satisfaction, variable of subjective income mobility is especially important. In contrast with objective mobility, coefficients of subjective mobility are increasing all along its categories, that is, *the more people value their subjective mobility positive, the more they are satisfied with both their financial situation, and their life in general. Perception of upward mobility – in contrast with objective mobility – really gives an additional surplus to satisfaction.* The difference between relative and subjective mobility shows that a significant part of people with increasing relative income position do not perceive this growth, and the majority of respondents underestimate the real size of changes in their material situation.

What are the main determinants of the difference between subjective and relative mobility[4] (see Table 4)? Modelling the gap between the subjective and objective mobility, we number the categories of both the subjective and the relative mobility from 1 to 5, and subtract these values from each others. The difference called *mobility perception gap*[5] was explained in an ordered logit model on household level. Naturally, this mobility perception gap essentially depends on the categories of relative mobility. For example, if one of the households belongs to the highest relative mobility category, this subjective mobility gap cannot be positive. For filtering out this effect we apply relative mobility also as an explanatory variable in the model.

Summarising shortly our main findings:

[4] Before answering this important question we have to mention that in questioning subjective mobility only households were asked and not the members of the households. This variable of subjective mobility was taken from the main inquiry of the Household Budget Survey.

[5] See the very similar variable called 'perceptions gap' in Graham and Pettinato, 2002b.

- The mobility perception gap has a positive and significant relationship with the level of income. *The lower the income category of a household is in the final year, the more this household perceives smaller its income mobility compared to its factual relative mobility*. (As we have seen in Table 4, the population underestimates in average its factual upward relative mobility.) We can distinguish four categories, namely, households belonging to the first equivalent income quintile, households belonging to the second, third or fourth quintile, households belonging to the ninth decile, and households belonging to the tenth decile.

- Expenditure on culture, entertainment and vacation is positively correlated with the mobility perception gap. Those households who have the highest share of expenditure on recreation look more overestimating their past mobility, and households who are on the other end of the scale are underestimating it. After controlling for the income level, the bigger the share of expenditure on recreation in total household expenditure is, the more these households perceive their income mobility higher than their factual relative mobility.

- Analysing the relationship between mobility perception gap and the family structure of the households we find that those households that are containing couples (married or living in common-law marriage) are likely to judge their past mobility more positively than the rest of the households.

- We find an opposite effect in the case of households with member 'living on the outskirts of activity' (unemployed, disability pensioners, casual workers, people living on subsidies). *These marginal activity groups of households are underestimating their past relative income mobility compared with that of the others.*

- If we examine the effect of settlement type we find that households living in Budapest and in larger cities are more likely to underestimate their past mobility compared with that of the others.

- Not surprisingly, age has the very well-known U-shaped quality, where we get the minimum value at age about sixty. Those households aged about sixty are underestimating their past income mobility and are tended to be much more critical when assessing their progress compared with that of the others, while the youngest households are more positive in judging of dynamics of their relative mobility compared with that of the others. (The age of household was measured by the average age of household members over eighteen.)

The consistent gap between relative and subjective mobility explains the fact that both mobility variable have significant effect in our models. *This consistent gap between the subjective assessment and the objective value of mobility may be resulted by the uncertainty of the competitive pressure situation.* This uncertainty phenomenon is what we fairly illustrated with the example of the marginal activity groups and with the middle aged households and households before retirement. It is also very obvious that living in a household containing couple is likely to be more secure than living in a mutilated family, and this extra security explains the more positive valuation of past mobility compared with that of the others.

The reference groups, what people choose and aspire to be in, are also playing a very important role in subjective mobility formation. The influence of these subjectively chosen reference groups may also lead to the underestimation of the real size of changes in financial positions. This phenomenon can be illustrated with the example of households living in big cities, and also explained by the special effect of income level in modelling of mobility perception gap.

Besides the variables of subjective ranking of relative income position and subjective mobility we have numerous other subjective variables having strong relationship with satisfaction. In the case of these other subjective variables the share of 'does not know' responses is very high. We did not leave out these respondents from the panel population because the number of observations would become non-acceptably low. We identify and collect these respondents in separate categories.

Surprisingly, 45 per cent of respondents essentially agreed with the statement that *the government should restrict the income of the rich. They are less satisfied than the others.* We can say that there is a link between the uncertainty and demand for redistribution, and between antipathy toward rich and the relative discontent. (See Molnár-Kapitány, 2006).

Subjective variables having strong impact on satisfaction are connected to the future prospects of mobility and the uncertainty of the labour market situation. The possible answers to the question 'Do you see any chance for your household to obtain a better financial position' were: no chance, work prospects, health status prospects, children's future prospects, or other prospects (see Table A6 in the Appendix). Those people, 30 per cent of the population, who do not see any chance for their household to obtain a better financial position – ceteris paribus –, are much more dissatisfied with both their financial situation and their life

in general than the others. Those people who think that their children will live much worse in the future compared with them are also more dissatisfied than the others.

40 per cent of employees answered ‘absolutely uncertain’ to the question ‘How certain are you that you will be able to find another job not worse than the present one?’ (see Table A10 in the Appendix). These people are more dissatisfied than the others. *We can see that people’s tolerance of uncertainty and income risk are mainly determined by the assumed cost of loosing job and the extent of their concern about it.* The question ‘What kind of effect will have Hungary's joining the EU on the chances of the Hungarian employees?’ (see Table A11 in the Appendix) is also connected with the future prospects and the uncertainty of the labour market positions. People who expect negative or no effect are rather dissatisfied than those who expect positive effect.

We have seen that people belonging to the marginal activity groups, independently of the income level of their household, are more dissatisfied with their position than the others. This *relative dissatisfaction characterises also those who are not living on the outskirts of activity, but they feel their labour market position uncertain and they are afraid of the labour market consequences of the competitive pressure*.

We can also see that besides factual and perceived financial situation, the future prospects of mobility plays also very important role in satisfaction formation. Expectations about future prospects for growth and mobility affect both material satisfaction and life satisfaction in general. From our findings we may draw important lessons related to some steps of the two Hungarian governments in 2001 and 2002. Between 2000 and 2002 the real income of households increased by 20 per cent. This dynamic growth can be explained mainly by political and not economic reasons. In 2001, before the parliamentary elections in May 2002, the vacating government created a pre-election budget with considerable extra household income outflow. After this, the new government – keeping its election promises – continued this kind of redistributive policy.

As we have seen, income growth within uncertain circumstances generates relatively smaller rise in satisfaction than it would be expected. If this uncertainty is expanding also to the future expectations and many people are thinking that they can not expect further improvements in their financial and labour market positions may have negative effect on satisfaction. *Based on our results we can argue that such kind of policy which raises the income of the population in relatively smaller extent, but continuously and providing new opportunities for individuals may induce more positive effect on satisfaction.*

Conclusions

The findings introduced here make some contributions to the research area of subjective well-being. They support the findings in the literature of happiness, in our wider analysis we also find the standard set of variables to be significant.

Income growth within uncertain circumstances may generate relatively smaller rise in satisfaction than it would be expected according to the income level. We introduced a case where positive changes in income flows had no additional positive effect on subjective well-being. Upward mobility increased satisfaction, but people who just reached a certain income level in 2002 were less satisfied than those who had already been around this income level for a longer while. As an explanation to this phenomenon we found that relatively smaller satisfaction of the upward mobile people is prevalent in the competitive sector. People working in the competitive sector perceived their new position uncertain and unstable, they possibly assumed income trends to turn back in the future, and this perception had the negative effect on their satisfaction.

Labour market status is a major element of dissatisfaction in Hungary. The unemployed, the non-employed in active age, and the quasi-unemployed, that is people living around the border of activity and inactivity are significantly less satisfied than workers and than other inactive, after controlling for income. Furthermore, not only these people, but even their family members are less satisfied than the average. The relative dissatisfaction of these marginal activity groups can be explained again by uncertainty.

The objective trends of relative income and income mobility are very important with respect to satisfaction, but how people perceive their past income mobility, and their prospects of upward mobility in the future are what really determine satisfaction. Households thinking themselves wealthier are more satisfied than others. Both the factual income and the subjective wealth position have significant effect on satisfaction. The subjective valuation of the current income position has the stronger effect on satisfaction. However, under a certain income level the factual income position has its independent positive impact on satisfaction.

The more people value their subjective mobility positive, the more they are satisfied with both their financial situation and their life in general. Perception of upward mobility – in contrast with objective mobility – really gives an additional surplus to satisfaction. The significant negative effect of factual relative mobility remains in effect beside subjective mobility.

We found that the majority of respondents underestimate the real size of changes in their financial positions. The consistent gap between the trends of objective and subjective values of relative income mobility variables – named as mobility perception gap – is depending on the influence of reference groups, but the uncertainty of the competitive pressure situation is what really leads to this underestimation. The lower the income category of a household is in the final year, the more this household perceives smaller its income mobility compared to its factual relative mobility. After controlling the income level, the marginal activity groups are underestimating their past relative income mobility compared with that of the others.

Further subjective variables having strong impact on satisfaction are connected to the future prospects of mobility and the uncertainty of the labour market situation. People's tolerance of uncertainty and income risk are mainly determined by the assumed cost of loosing job and the extent of their concern about it. Relative dissatisfaction characterises also those who are not living on the outskirts of activity, but they feel their labour market position uncertain and they are afraid of the labour market consequences of the competitive pressure. The future prospects of mobility plays also very important role in satisfaction formation.

Based on our results we can draw also a policy conclusion: such kind of policy which raises the income of the population in relatively smaller extent, but continuously and providing new opportunities for individuals may induce more positive effect on satisfaction. The unusual and one-time income increase does not generate adequate increase in satisfaction.

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Appendix

Subjective variables of supplementary interview attached to the Hungarian Household Budget Survey, 2002 (questioning in March 2003)
(N= 3540, age of respondents ≥ 18 years)

Table A1. All things considered to what extent are you satisfied or dissatisfied with your life in general? (%)

Very dissatisfied	15
Fairly dissatisfied	22
Neither satisfied nor dissatisfied	39
Fairly satisfied	21
Very satisfied	2
Doesn't know, no answer	1
Total	100

Table A2. To what extent are you satisfied or dissatisfied with the material situation of your household?

Very dissatisfied	21
Fairly dissatisfied	28
Neither satisfied nor dissatisfied	31
Fairly satisfied	18
Very satisfied	1
Doesn't know, no answer	1
Total	100

Table A3. How does your household get along with its monthly disposable income?

With great difficulty	12
With difficulty	18
With some difficulty	30
Reasonably	35
Easily	4
Very easily	0
Doesn't know, no answer	1
Total	100

Table A4. To which step would you place your household at the present time on a 9-step ladder (first step means poorest, ninth step means richest)?

1	4
2	7
3	19
4	27
5	26
6	10
7	4
8	0
9	0
Doesn’t know	3
Total	100

Table A5. On which step was your household in 2000 in the previous poor-rich scale?

1	4
2	8
3	18
4	28
5	26
6	10
7	3
8	1
9	0
Doesn’t know	2
Total	100

Table A6. Do you see any chance for your household to obtain a better financial position?

No chance	29
Work prospects	43
Health status prospects	13
Children’s future prospects	8
Other	3
Doesn’t know, no answer	4
Total	100

Table A7. How will the economic situation of Hungary change in the next 3 years, considering also the effect of Hungary's joining the EU?

		% of real responses
Considerably declines	6	8
Slightly declines	13	16
Doesn’t change	34	41
Slightly improves	26	32
Considerably improves	3	3
Doesn’t know, no answer	18	-
Total	100	100

Table A8. How will the financial situation of your household change in the next 3 years, considering also the effect of Hungary's joining the EU?

		% of real responses
Considerably declines	6	7
Slightly declines	16	20
Doesn't change	21	27
Slightly improves	32	40
Considerably improves	5	6
Doesn't know, no answer	20	-
Total	100	100

Table A9. To what extent are you concerned about the idea that you, or somebody else in your family lose her/his job?

		% of real responses
Very concerned	32	40
Fairly concerned	22	28
A little bit concerned	18	22
Not at all concerned	9	11
Non specific, doesn't know, no answer	19	-
Total	100	100

Table A10. Imagine the situation that tomorrow you lose your job! How certain are you that you will be able to find another job not worse than the present one?

		% of real responses
Absolutely uncertain	24	42
Fairly uncertain	21	38
Fairly certain	8	15
Absolutely certain	3	5
Non specific, doesn't know, no answer	44	-
Total	100	100

Table A11. What kind of effect will have Hungary's joining the EU on the chances of the Hungarian employees?

		% of real responses
Negative effect	12	17
No significant effect	18	40
Positive effect	31	43
Doesn't know, no answer	29	-
Total	100	100

Table A12. What kind of effect will have the stronger market competition, caused by our joining to the EU, on the interest of the Hungarian consumers?

		% of real responses
Negative effect	19	28
No significant effect	21	29
Positive effect	30	43
Doesn't know, no answer	30	-
Total	100	100

Table A13. How have the income and wealth inequalities changed in Hungary from the middle of the 1990s?

Considerably increased	54
Increased	30
Slightly increased	6
No significant change	4
Slightly decreased	1
Decreased	1
Considerably decreased	0
Doesn't know, no answer	4
Total	100

Table A14. Do you agree that the government should restrict the income of the rich?

Essentially disagree	6
More disagree than agree	13
More agree than disagree	27
Essentially agree	45
Doesn't know, no answer	9
Total	100

Table A15. Do you agree that the government should allocate more income to the poor?

Essentially disagree	3
More disagree than agree	6
More agree than disagree	28
Essentially agree	58
Doesn't know, no answer	5
Total	100

Table A16. According to your expectations, how will your child(ren) live in the future compared with you? (N=2288, respondents having child)

		% of real responses
Much worse	1	1
Worse	7	9
Essentially in the same way	26	29
Better	47	55
Much better	6	6
Doesn't know, no answer	13	-
Total	100	100

Table A17. How are your grown-up children living at present time compared with you (only for children living outside of the household? (N=1414, respondents having grown-up children)

Much worse	1
Worse	10
Essentially in the same way	36
Better	43
Much better	5
Doesn't know, no answer	5
Total	100

Table A18. How has the financial situation of your family changed during the last three years? (asked in the HBS, one answer per household)

Considerably declined	13
Slightly declined	27
Did not change	43
Slightly improved	15
Considerably improved	1
Doesn't know, no answer	1
Total	100