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Life Satisfaction and Income Comparison Effects in Turkey

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Abstract This paper evaluates the relative impact of different types of benchmarks such as internal and external comparisons on subjective well-being in Turkey. There are few studies on life satisfaction for Turkey and they mostly focus on the impact of socio-demographic effects on subjective well-being. The main purpose of this paper is to investigate how reference group's self-reported life satisfaction is related to the level of consumption; as well as the level of internal and external comparisons and other socio-economic factors. The paper relies on the Life in Transition Survey (EBRD 2011), a survey conducted in late 2010 jointly by the European Bank for Reconstruction and Development and the World Bank. The survey includes 1,003 observations for Turkey. The emphasis of the paper is based on the concept of income comparisons—both to others in the relevant reference group and to oneself in the past (evaluation) and future (expectation). The main findings are; in addition to household consumption, internal and external comparisons have significant impact on life satisfaction. The impact of comparisons is asymmetric: in most cases under-performing one's benchmark has a greater effect than out-performing it.

Keywords Life satisfaction · Turkey · Ordered logit model · Relative income

1 Introduction

How do income and consumption affect individual well-being?[1] Standard economic theory typically argues that higher income and consumption provide higher utility. Moreover, it is

[1] A detailed literature review of economics and happiness can be found in Frey and Stutzer (2002).

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assumed that absolute income levels are the primary determinant of individual well-being. Most of the findings confirmed that at any given point in time in a specific country, people with higher incomes are happier than people with lower incomes and on average, people living in rich countries are happier than those living in poor countries. However Easterlin's leading study revealed that people with higher income are, on average, happier, but raising everybody's income does not increase everybody's happiness. This is because; individual's income in comparison to others income has not improved.[2] Easterlin (1974, 1995, 2001) asserts that only relative income seems to matter for life satisfaction whereas others, such as Veenhoven (1991), Oswald (1997), Stutzer (2004), Diener, Sandvik, Seidlitz, and Diener (1993), and McBride (2001) argue that utility depends on both absolute and relative income, but that the absolute component is rather small for richer countries.

As recent empirical works demonstrated that a person's subjective well-being not only depends on absolute income but also depends to a large degree on relative income; the emphasis has shifted towards the importance of relative income effect. The economic analysis of relative income effects can be dated back to Veblen (1949) who used the term conspicuous consumption to refer to expenditure in goods that signal the consumer's position in society, and Dusenberry (1949) who emphasized the importance of income in relation to others in determining consumption and savings patterns over time. More recently Pollak (1976), Frank (1985a, b), Weiss and Fershtman (1998), and Hollander (2001) provide good overviews of more recent literature on relative income.

In order to explain the paradox between happiness and income, there are several theories in advanced: first, social comparison theory (linked with Dusenburry's relative income hypothesis) indicates that comparisons with others play an important role in evaluating and constructing social reality.[3] The theory proposes that people compare their income with those around them (reference group). Income comparison includes comparison to others in the relevant reference group (social comparisons) as well as and to oneself in the past (adaptation or habituation). Therefore an increase in the income of the reference group has a negative effect on an individual's life satisfaction. Second, the adaptation theory states happiness will increase temporarily with an increase in income, overtime people will adjust to their higher income such that their happiness reverts back towards its original level. Third, the aspiration level theory states that it is the gap between aspirations and achievements which determines life satisfaction. According to the theory if an increase in income leads to an equal increase in income aspirations, the magnitude of this gap will remain constant; so that life satisfaction will not increase.

If income utility is relative, how do we measure it? One of the approaches for measuring the importance of relative standing is to ask individuals hypothetical questions regarding their choice among alternative states or outcomes for relative positions. People compare themselves to other people, but it is important to know with whom such a comparison is being made. Here, the idea is that individuals compare themselves to a series of standards. Then, satisfaction judgments depend on the gap between their actual situation and their comparison benchmarks. These comparison benchmarks includes; (a) internal reference points (internal benchmarks), such as past income or expected future income (b) open

[2] Especially several scholars observed that per-capita income in western countries like the United States, the United Kingdom, and Belgium, as well as Japan, has risen sharply in recent decades, whereas average happiness has stayed "virtually constant" or has even declined over the same period. See for details: Blanchflower and Oswald (2004), Diener and Oishi (2000), Myers (1993), Kenny (1999, 2004), Easterlin (1974, 1995), and Diener et al. (1995).

[3] It was Festinger (1954) who used the term "social comparison" for the first time.

questions about the best possible living standards (self-anchoring scale) and (c) external reference points (external benchmarks), where comparisons refer to distinct demographic groups such as family members, parents, former schoolmates, colleagues, people in the same neighborhood, region, and the country.

In order to evaluate the impact of comparisons on subjective well-being, several scholars contribute to the literature providing stimulating findings. For example Campbell et al. (1976) tested the relative income hypothesis directly using three reference groups (typical Americans, most close relatives and most close friends) and satisfaction with two particular domains (housing and neighborhoods). In each case they found a positive association between reported satisfaction with the domain, and the gap between respondents' present status and the status of the reference groups as perceived by the respondents. McBride (2001) examined the effect of an individual's own income, past financial situation, and reference income on Subjective Well-Being. Past financial situation is subjectively defined by the respondents to as whether they were better-off or worse-off than their own parents. McBride found a negative correlation between subjective well being and the individual's reference income and the financial situation of the parents. Social comparisons within the family are studied by (Neumark and Postlewaite 1998) in order to test the role of relative income for utility. The results indicated that relative income play a significant role as determinants of subjective well-being. Knight et al. (2007) identified that 70 % of individuals indeed see their village as their reference group (by simply asking them to whom they compare themselves), making their rural sample (research included total of 22 provinces and 9,200 household in China) well-suited to the question of how important reference groups really are. Controlling for own income, and for village income, those respondents who say that their income was much above the village average report far higher happiness than those who say that their income was much below the village average. Senik (2009) evaluated the impact of income and internal comparisons on life satisfaction. Senik, by using Life in Transition Survey (2006) showed that internal comparisons to one's own past living standard outweigh any other comparison benchmarks. One of the major findings was that local comparisons (to one's parents, former colleagues or high school mates) are more powerful than self-ranking in the social ladder. Ferrer-i-Carbonell (2005) examined the influence of the income of a reference group on individual well-being by using large German panel known as GSOEP. Ferrer-i-Carbonell founded that the income of the reference group is about as important as the own income for individual happiness, that individuals are happier the larger their income is in comparison with the income of the reference group, and that for West Germany this comparison effect is asymmetric.

In this paper, the effect of various types of income comparisons on individual subjective well-being is empirically studied. This is done with a data set that includes reported satisfaction with life, consumption, comparison to the parents and household, and subjective ranking of income evaluation as well as control variables such as gender, marital status, health, age, education and employment (EBRD 2011). It also analyses the impact of global crises effect on life satisfaction by applying ordered logit model.

First, the study includes three different specifications to test the importance of external benchmarks (reference group) on individual well-being: evaluation of living conditions with parents' situation at the same age gives information about social comparison affect. Here individuals report whether their standard of living was better or worse than their parents. The better off people perceive themselves to be relatively, the happier they feel. Second, the concern for whether the household lives better than 4 years ago is also examined. Third, in addition to external benchmarks, the impact of self-ranking on an

economic ladder on life satisfaction is tested in the paper. Self-ranking ladder, as an internal benchmark, is also an important sign for relative income effect. In this case individuals are expected to evaluate their living standards in the society using a 0–10 scale approach. The question is also asked for past evaluation and future expectation.

The econometric results show that consistent with the economic theory there is a significant positive impact of consumption on life satisfaction. For the analysis of relative income concerns, individuals' downward comparisons have negative effect on life satisfaction whereas upward comparisons have positive impact in most cases. An ordered logit model shows that, comparisons are relevant and exert a significant impact on subjective well-being. Comparisons are asymmetric: under-performing one's benchmark is always more important than out-performing it. General ranking in the social ladder are more powerful than local comparisons (to parents) and household evaluations.

The paper proceeds as follows. Below, the methodology for the study of the effect of income comparisons on individual well-being is outlined. In this section the survey, data, variables, some descriptive statistics and the empirical strategy is introduced. Following empirical analyses, the main results are discussed and finally conclusions are drawn.

2 Data and Methodology

This paper relies on the Life in Transition Survey (EBRD 2011), a survey conducted jointly by the European Bank for Reconstruction and Development and the World Bank in late 2010. The main motive for the survey is to assess public attitudes, well-being and the impacts of economic and political change. Respondents were drawn randomly, using a two stage sampling method, with census enumeration areas as primary sampling units, and households as secondary sampling units. The survey includes 1,003 observations for Turkey. The sample is not equally balanced in terms of gender, female respondents dominate the sample: 64 % of the group is female.

The survey asks several series of general questions concerning the household to a first respondent (sections 1, 2 and 8) including the three "subjective ranking of ten scale" questions, and asks all the other questions (sections 3–7) to the person selected at the bottom of section 1 in the household. Since section 7 include life satisfaction and other questions related with control variables, it is important to follow the respondents who answered all sections. Therefore observations are kept only if respondents are the same person. In many cases, it luckily turned out that the same person actually answered all the questions. This involves an additional loss of only 48 observations. Eventually, the regressions are run on sample of 955 observations for Turkey.

Since individuals' self-ratings of their overall life satisfaction are measured by an ordered categorical variable, the estimations are based on the ordered logit regressions. The dependent variable is composed of individual responses to the question: all things considered how satisfied are you with your life as a whole these days? The respondents were shown a table with a 10-point scale, of which the two extreme values ('completely dissatisfied' = 0 and 'completely satisfied' = 10) were verbalized.

Following Senik's approach (2009) the main attitudinal questions that are exploited in this paper are labeled in the following way: "to what extend do you agree with the following statements": "I have done better in life than my parents"; and "My household lives better nowadays than around 4 years ago". For each separate question, respondents had to tick one answer out of seven proposed choices: "strongly disagree/disagree/neither disagree nor agree/agree/strongly agree/not applicable/don't know". Three other

comparison questions were asked: "please imagine a 10-step ladder where on the bottom, the first step, stand the poorest 10 % people in our country, and on the highest step, the tenth, stand the richest 10 %of people in our country. On which step of the 10 is your household today?" "Now, imagine the same 10-step ladder 4 years ago. On which step was your household at that time?" "And where on the ladder do you believe your household will be 4 years from now?"

3 Descriptive Statistics

In the sample, the average level of life satisfaction is 5.38. The result is parallel to the findings displayed by World Database of Happiness: happiness in Nations. According to WDH, between 2000 and 2009 average happiness in Turkey is 5.6. (Veenhoven 2012) .[4]

Mean subjective rankings for income ladder evaluation are 4.30 for present; 4.389 for the past and 4.61 for the future on a 10 steps ladder. Only 20 % of respondents judged that they live better today, whereas 27 % estimated that they lived better 4 years ago. Interestingly 31 % of the respondents placed themselves above the 5th step of the social ladder for 5 years later. In regard to life satisfaction levels, each category follows similar trend. According to Table 1 people who place themselves at the upper level (above the 5th step) are happier than other groups (5th step and below the 5th step). 50 % of respondents stated that they live better than their parents (at their age). Finally, 47 % of the sample agreed or strongly agreed that their household live better than 4 years ago.

The number of people evaluating their situation above the 5th step (4 years ago) is more than the number of people who evaluate themselves above the 5th step for today. Interestingly expectation of the respondents for the future is much optimistic. The number of people expects to be above the 5th ladder 4 years later is the highest number for rank evaluating questions. In addition, the happiest group consists of respondents who expect to be above the 5th ladder 4 years later. This can be explained by changing aspirations since an expectation of increases in income and aspiration levels are closely connected. Will an expectation of an increase in income eventually lead an increase of happiness? Aspiration level theory suggests that the person does not take into account that the aspiration level also rises as income increases, so that happiness levels do not change at the end.

In addition to comparison and evaluation variables, Table 1 also shows the mean scores of life satisfaction for the socio-demographic variables. Respondents never married are more satisfied than couples (although statistically not significant), and couples are much more satisfied than separated and divorced respondents. The relation between age and life satisfaction seems to be not a u-shaped. People with higher education report higher satisfaction scores than those with a low, as well as those with an average education level. Men are much satisfied with life than women (although statistically not significant). Lower satisfaction scores are reported by people in poor health and unemployed people. Being in paid employment is a source of higher satisfaction although it is not statistically significant in the regressions.

[4] All above happiness variants are based on responses to a survey question like: "Taking all together, how satisfied or dissatisfied you with your life-as-a-whole are these days?" Combined question types 10-step numeral life satisfaction and 11-step numeral life satisfaction. For a detailed study on life satisfaction and happiness in Turkey see: Selim (2008).

Table 1 Descriptive statistics of the sample

	Sample	Mean	SD
Age			
15–24	114	5.58	2.085
25–34	268	5.53	1.966
35–44	242	5.34	1.787
45–54	138	5.36	1.945
55–64	121	5.03	1.999
65+	69	5.13	2.377
Education			
No degree	91	4.57	2.127
Elementary	391	5.04	1.949
Secondary	347	5.72	1.871
Post-secondary	42	5.95	1.724
University	69	6.22	1.465
Post-graduate	7	6.71	2.312
Gender			
Male	336	5.73	1.995
Female	617	5.19	1.916
Employment			
Not working	694	5.23	2.00
Working	261	5.79	1.78
Health			
Very Poor	17	3.50	2.242
Poor	88	4.50	2.039
Moderate	262	5.01	1.917
Good	403	5.57	1.799
Very Good	175	6.15	1.894
Marital status			
Never married	277	5.56	1.927
Married	646	5.31	1.970
Separated/divorced	30	5.20	1.989
Income evaluations (present)			
Up	195	6.54	1.502
Stab	312	5.61	1.805
Down	443	4.67	1.985
Income evaluations (future)			
Up	289	6.24	1.670
Stab	233	5.71	1.765
Down	398	4.67	1.977
Income evaluations (past)			
Up	258	6.12	1.694
Stab	218	5.62	1.892
Down	480	4.84	1.993
Better in life than my parents			
Strongly disagree	64	3.93	2.059

Table 1 continued

	Sample	Mean	SD
Disagree	129	5.21	2.007
Neither/nor	233	5.41	1.842
Agree	328	5.62	1.902
Strongly agree	151	5.54	1.920
Household lives better			
Strongly disagree	69	4.22	1.821
Disagree	185	4.95	1.897
Neither/nor	232	5.26	2.026
Agree	303	5.94	1.759
Strongly agree	144	5.50	1.997

4 Income Comparisons

Theoretically, ordered probit or logit estimations are appropriate to exploit the ranking information contained in the originally scaled dependent variable 'satisfaction with life'. Individuals' reported satisfaction is regressed on a number of socio-demographic characteristics, as well as income comparison questions and crisis effect. Since the main focus of this paper is on the effect of income comparisons on satisfaction with life, in all regressions, I systematically control for the objective level of household consumption.[5] The data set also contains information of usual socio-demographic control variables such as gender, education level, marital status, employment and health. The gender dummy takes on the value zero if the respondent is female and one if the respondent is male. Marital status dummy variable takes on the value one if the respondent is currently married or living with a partner and zero otherwise. I also include the crisis effect which evaluates how much respondents affected by the current economic global crisis. Question related with crisis asks for how much the economic crisis affected the household in 2 years. The choices were; a great deal, a fair amount, just a little, not at all. The health variable is a subjective response that takes on four values, ranging from poor to good health. Since employment question is not detailed in the survey, employment dummy takes one if the respondent worked for income during the past 12 months (including the date of survey) otherwise 0.

As a proxy for individual's economic comparison norm, I use a subjective "parents' standard of living" measure. The question asked is, "compared to your parents when they were the age you are now, do you think your own standard of living now is: much better, somewhat better, about the same, somewhat worse, or much worse?" More precisely, concerning the comparison questions, I group the possible answers in two groups: positive and negative (dropping the stable, not applicable and don't know choices). For "my household lives better nowadays than 4 years ago", I use two dummy variables: householdup, a dummy variable which takes value 1 for the choices agree and strongly agree and 0 otherwise, household down (a dummy which takes values 1 for the choices disagree and

[5] According to Life In Transition Survey (2011), the standard of living is measured using a series of questions regarding household expenditure during the past 12 months based on an comprehensive list of several items including Food, beverages and tobacco; Utilities (electricity, water, gas, heating, fixed line phone); Transportation (public transportation, fuel for car); Education (including tuition, books, kindergarten expenses); Health (including medicines and health insurance); and Clothing and footwear Durable goods (e.g. furniture, household appliances: TV, car, etc.)

strongly disagree and 0 otherwise). I proceed in the same way for the question "I have done better in life than my parents", creating the dummy variables parents up, and parents down. Finally I estimate life satisfaction on these categories, controlling for the usual socio-demographic variables.

5 External Benchmarks, Crisis Effect, Socio-Demographic Variables and Life Satisfaction

First, life satisfaction is regressed over the control variable group which is demonstrated by Model A in Table 2. I observe a positive relationship between satisfaction and age, health, household expenditure and education. The positive and significant coefficients on age for the sample indicate that happiness initially increases as age increases. Household consumption is positively correlated with reported satisfaction with life, thus suggests that consumption does raise happiness. The evidence is consistent with a positive relationship between individual consumption and happiness within a society at a given point in time. The high coefficient implies that an increase in household consumption increases life satisfaction by 1 point. In the next step, life satisfaction is regressed over each of the concerned variable groups. In regressions B crisis effect is introduced to the model and in regressions C and D, the life satisfaction function is extended to include measures for individuals' comparison levels. It is thus tested whether individuals' judgment of satisfaction with life is relative to their income comparisons. The result shows that global crisis has a negative impact on life satisfaction. In addition a negative effect on subjective well-being is estimated for both measures of individuals' income comparisons. This means that people experience lower well-being when they find themselves not successful as their parents (in terms of living standards). For the demographic control variables in the models B, C and D, coefficients of similar size to model A are estimated. Contrary to the expectations, being a couple is insignificant and has a negative effect on life satisfaction. Gender variable also is insignificant in all models. On the other hand, some results obtained in this study are similar to typical findings such as a positive age effect and education, positive influences of consumption and health status, and a negative effect of unemployment (although not statistically significant).

Both upward comparisons have positive coefficient, however only household up (my household lives better than 4 years ago variable) is statistically significant. On the other hand, unfavorable comparisons have significantly negative impact on life satisfaction. Introducing comparison variables to the models leads to a decrease of consumption coefficients from 1 to 0.909 and 0.988 respectively. In addition comparisons are asymmetric especially for comparison to parents. When comparisons are unfavorable; this has a more important (negative) impact on life satisfaction than when comparisons are favorable.

6 Internal Benchmarks and Life Satisfaction

In order to evaluate the effect of internal benchmarks the responses of the following questions are used: please imagine a 10-step ladder where on the bottom, the first step, stand the poorest 10 % people in our country, and on the highest step, the tenth, stand the richest 10 % of people in our country. On which step of the 10 is your household today? "Now, imagine the same 10-step ladder 4 years ago. On which step was your household at that time?" "And where on the ladder do you believe your household will be 4 years from

Table 2 Explanatory power of income comparisons and crisis effect on life satisfaction

Independent variables	A		B		C		D	
	Coefficients SE	z value	Coefficients SE	z value	Coefficients SE	z value	Coefficients SE	z value
Controls								
Age	0.011 (0.005)	2.408**	0.009 (0.005)	1.988**	0.012 (0.005)	2.592*	0.012 (0.005)	2.546**
Gender	0.108 (0.143)	0.755	0.058 (0.143)	0.404	0.098 (0.146)	0.670	0.076 (0.144)	0.528
Health	0.453 (0.070)	6.436*	0.410 (0.071)	5.791*	0.471 (0.071)	6.557*	0.376 (0.071)	5.265*
Marital status	−0.067 (0.123)	−0.544	−0.069 (0.124)	−0.559	−0.086 (0.126)	−0.685	−0.100 (0.125)	−0.807
Education	0.188 (0.041)	4.628*	0.163 (0.041)	4.012*	0.174 (0.042)	4.151*	0.209 (0.041)	5.070*
Log household consumption	1.000 (0.236)	4.235*	1.028 (0.238)	4.317*	0.909 (0.240)	3.787*	0.988 (0.239)	4.134*
Employment	0.019 (0.154)	0.124	0.022 (0.156)	0.143	0.068 (0.158)	0.433	0.064 (0.156)	0.408
Crisis effect			−0.236 (0.051)	−4.588*				
Comparisons								
Parents (up)					0.191 (0.139)	1.370		
Parents (down)					−0.577 (0.173)	−3.324*		
Household (up)							0.502 (0.144)	3.472*
Household (down)							−0.592 (0.162)	−3.655*
Log likelihood	−1,894.827		−1,865.397		−1,791.432		−1,828.386	
Pseudo-R2	0.034		0.038		0.041		0.047	
Observations	953		945		908		936	

* $p < 0.01$, ** $p < 0.05$, *** $p < 0.10$

Table 3 Explanatory power of income evaluations on life satisfaction

Independent variables	E		F		G	
	Coefficients SE	z value	Coefficients SE	z value	Coefficients SE	z value
Controls						
Age	0.007 (0.005)	1.638	0.010 (0.005)	2.264**	0.010 (0.005)	2.205**
Gender	0.148 (0.143)	1.037	0.112 (0.143)	0.788	0.159 (0.144)	1.102
Health	0.400 (0.070)	5.680*	0.432 (0.070)	6.133*	0.417 (0.072)	5.796*
Marital status	0.012 (0.124)	0.100	−0.028 (0.124)	−0.230	−0.027 (0.125)	−0.215
Education	0.102 (0.042)	2.442**	0.136 (0.041)	3.302*	0.099 (0.042)	2.314**
Log house consumption	0.807 (0.239)	3.382*	0.741 (0.237)	3.123*	0.821 (0.242)	3.391*
Employment	0.012 (0.154)	0.077	0.015 (0.155)	0.096	0.019 (0.156)	0.121
Comparisons						
Econ rank (up)	0.831 (0.159)	5.208*				
Econ rank (down)	−0.789 (0.137)	−5.759*				
Econ rank (up) (4 years ago)			0.360 (0.163)	2.202**		
Econ rank (down) (4 years ago)			−0.586 (0.148)	−3.949*		
Econ rank (up) (4 years from now)					0.446 (0.155)	2.880*
Econ rank (down) (4 years from now)					−0.856 (0.151)	−5.688*
Log likelihood	−1,838.277		−1,867.518		−1,790.033	
Pseudo-R2	0.060		0.045		0.054	
Observations	951		951		921	

* $p < 0.01$, ** $p < 0.05$, *** $p < 0.10$

now?" Concerning the income ladder question, I used the modified series of dummy variables: econrankdown a dummy variable which takes value 1 for people who position themselves under the 5th step and 0 otherwise and econrankup, a dummy which takes value 1 if the respondents declare their position higher than the 5th step. This categorization is also done for rankings for 4 years ago (evaluation for the past) and for 4 years after (evaluation for the future).

I now regress life satisfaction over the control variables and economic evaluation variables (econrankup, econrankdown for present, for the past and for the future) which is demonstrated by Models E, F, G in Table 3. For the control variables in these models, coefficients are of similar size to the models A, B and C. Only, when economic evaluation variables introduced, the coefficient of consumption decreased significantly.

The results for comparison effects demonstrate that income evaluations are relevant and exert a significant impact on subjective well-being. Table 3 shows that comparison questions have quite an important explanatory power in the regression of life satisfaction. Ranking high on the social ladder has a positive impact on individual life satisfaction and vice versa. In addition comparisons are asymmetric especially for (econrank—4 years ago) and (econrank-4 years from now on): when evaluations are unfavorable; this has a more important (negative) impact on life satisfaction than when evaluations are favorable; except for evaluation-for today: the coefficient of econrankup for today is higher than

(0.831) the coefficient of econrankdown for today (−0.789). However, in regard to evaluation for the past and future coefficients of downward evaluation are higher than upward evaluations. An interesting finding is that; when income evaluations introduced to the regressions coefficient of consumption significantly reduces (from 1 in model A to 0.807, 0.741 and 0.821 respectively) in models E, F and G. This indicates that, for a given comparison level, high consumption has not a larger effect on life satisfaction as it has with a given comparison level. The change in the size of the coefficient for household consumption provides indirect evidence that people adjust their aspiration levels with their income level for a given comparison level. For instance, the coefficient of household consumption in model G (in which expectation of income variable introduced) has the highest value in comparison to models E and F. This suggests that satisfaction stemming from consumption could be due not to actual consumption but to the representation of one's living standard as an expected achievement.

A clear ranking also emerges among the type of interactions that are being analyzed: income evaluation rankings are more important than inter-personal comparisons. Especially the coefficients of downward ranking in the social ladder are more powerful than the coefficients of local comparisons to parents and household.

7 Conclusion

This paper presents empirical evidence for the effect of consumption and income comparisons (internal and external benchmarks) on individual well-being. Analyzing Life In Transition Survey Data (2011) for Turkey it is found that consumption has a positive impact on individual's satisfaction with life. More important finding appears to be the comparison of Models C, D, E, F, and G, where I include measures of income comparisons and income rankings respectively. Income comparisons do seem to exert an impact on subjective well-being. "Internal benchmarks" "external benchmarks" are important; however self-ranking on an economic ladder prove to be more influential than local comparison to parents and household evaluation. Unfavorable comparison, in most cases, are more powerful than positive ones on life satisfaction. Comparisons are asymmetric: in most cases, under-performing internal benchmark is more important than out-performing it. The analysis also provides pervasive evidence of global crisis effect on life satisfaction. The results show that crisis have a negative impact on life satisfaction.

The analytical contribution of this paper is in demonstrating the substantial extent to which feelings of well-being are linked to income comparisons, and evaluations of income. The results demonstrate that people's subjective well-being is negatively affected by their income comparison level, controlling for the effect of consumption and other individual characteristics. This is a significant outcome that comparisons in the utility function seem to matter, despite the strong emphasis of economic theory approach on the role of consumption.

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