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CHAPTER 4. EXPLORING THE LINKAGES BETWEEN ECONOMIC AND SUBJECTIVE WELLBEING IN THE CORRIDOR

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4.1 Introduction

This chapter has two main objectives: to provide a more detailed profile of the economic status of people living in the selected research sites, and to explore empirically the correlation between indicators of economic wellbeing (principally household income) and subjective wellbeing (SWB). Past research indicates that at low levels of income the relationship between economic and subjective indicators of wellbeing is positive and strong (Veenhoven, 1991; Diener et al. 1999; Hirata, 2001 *etc.*). However economic indicators, such as income, can usually explain only quite a low proportion of subjective indicators, such as global happiness: a correlation coefficient of 0.45 being the highest encountered in the literature by Biswas-Diener and Diener (2001) in their study of slum dwellers in Calcutta. Moreover, the SWB indicators traditionally used have been standard measures of global happiness or satisfaction with life. This paper goes beyond these approaches by initiating an exploration of the relationship between economic measures of wellbeing and satisfaction with life goals defined through the *emic* approach set out in the previous chapter.

This chapter starts with a brief review of existing literature linking economic indidcators and SWB in Peru. Section 4.3 then describes the level of household income and expenditure in each WeD research site and provides estimates of head count poverty rates comparable with official data. Section 4.4 analyses the relationship between household economic indicators and the Global Happiness Index (GHI) scores of individual members of the same households. Section 4.5 studies the relationship between material poverty and satisfaction with life goals as presented in the previous chapter. The extent to which economic wellbeing relates to different aspects of subjective wellbeing in Peru is then clarified.

The source for all data used in this chapter, unless otherwise stated, is the WeD Income and Expenditure survey (I&E) briefly described in Chapter 1. This was based on three rounds of interviews with heads of selected households and one other adult in each (usually the spouse) using a standard closed questionnaire. As far as possible the questionnaire was consistent with that used by official household surveys in Peru, subject to modifications arising from piloting and from the use of the same instrument by the WeD team in Bangladesh. Households were selected at random from among the 1,004 households interviewed using the RANQ in the seven WeD research sites, subject to the willingness of selected households to answer the questions. Interviews were conducted by four researchers, all of whom had already been part of the WeD research team for more than a year and who knew the selected sites well. The first interview took place in June 2004, with recall being required of respondents for a period of one to four months depending on the question. The second and third rounds took place in October 2004 and January 2005 and covered the previous three months.[1]

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[1] See the "WeD Toolbox" at www.welldev.org.uk for a more comprehensive description of data collection.

4.2. What we know about subjective and objective wellbeing in Peru
The link between economic variables and subjective wellbeing in Peru has already been investigated by a number of researchers. The most comprehensive exploration of the link between the two is Shuldt (2004). As an indicator of SWB he relies largely on periodic opinion surveys of inhabitants of Metropolitan Lima conducted by the market research company *Apoyo*. Between 1988 and 2003, these included the question "how would you describe your current family economic situation: good, satisfactory or bad?" The answer "good" was offered by between 2 and 8% of respondents. The answer "bad" was far more common: the highest response being 58% during the period of economic crisis in 1989. It then declined to a low of 22% in 2000 before rebounding sharply again to reach 54% at the end of 2003. Shuldt provides a detailed interpretation of these shifts by comparing the data with statistics over the same time period for GDP, employment and responses to additional attitude questions also collected by *Apoyo*, including general frustration and trust in the government.

In the official report on the 2001 national poverty survey, Herrera explores subjective perceptions of income by analysing data on what respondents perceived to be the minimum income necessary to live (INEI, 2002). This person-specific "subjective poverty line" (SPL) was strongly positively correlated with monetary estimates of the respondent's own household per capita income and expenditure: being typically slightly higher than this for poorer people, and lower (but still significant) for people above a threshold of S/.225 per capita per month. Table 4.1 compares the official estimates of per capita household expenditure against this SPL. It shows how perceptions of one's economic level (whether this is below or above the perceived minimum) are not always linked to the objective indicator. 58% (=32/55%) of 'officially poor' people did not see themselves as below their own estimate of the minimum income necessary to live, whereas 27% (=12.1/45%) of officially non-poor people did.

Table 4.1. Poverty head count based on official and subjective poverty lines

% of total sample	Official PL		
Subjective PL	Poor	Non-poor	*Total*
Poor	<u>23.0</u>	12.1	*35.1*
Non-poor	32.0	<u>32.9</u>	*65.9*
Total	*55.0*	*45.0*	*100*

Source: Herrera (2002:101).

The mismatch between subjective and survey based estimates of income is also clear in Table 4.2.[2] Herrera's (2006) study, drawing on an urban panel for Peru comprising 2.500 household, heads reveals that only 30% of the 10% of respondents allocated to a high per capita income category described their economic situation as fine or fairly good. Correspondingly only 26% of the 13% of respondents allocated to a low per capita income category described their economic situation as very difficult. That such mismatches occur even when questions refer specifically to income alerts us to the likelihood of even greater differences when income estimates are compared to broader indicators of SWB, such as responses to global happiness questions.

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[2] The question was "in view of your household's income, do you consider that: 1 - you live well; 2 – things are fairly good; 3 – things are alright, but you have to be careful; 4 – you live with difficulty."

Table 4.2. SWB and income comparisons for an urban sample in Peru

% of total sample	Estimated per capita income			
Response to SWB question	High	Middle	Low	*Total*
1. Things are fine or fairly good	<u>3.0</u>	6.2	0.4	*10.0*
2. Have to be careful	6.6	<u>60.1</u>	9.1	*76.0*
3. Very difficult situation	0.4	10.8	<u>3.4</u>	*14.0*
Total	*10.0*	*77.0*	*13.0*	*100.0*

Source: Herrera et al (2006:18).

Graham and Pettinato (2002) were able to draw on a separate panel data set comprising income data for 500 nationally representative households for the period 1991 to 2000 as well as data on *perceived* past income mobility in 2000. Income mobility during these ten years was found to be quite high: 55% of those in the bottom quintile in 1991 moved to a higher quintile by 2000; 48% of those in the top quintile slipped downwards, and those in the middle quintile were more likely to slip down (42%) or go up (36%) than to stay where they were (22%). Table 4.3 goes one step further by showing how survey based estimates of income mobility compared with perceived income mobility. What is striking here is the number of households (25.5% of the whole sample) whose income was recorded as having clearly risen, but whose retrospective perception was the contrary: a group the authors call "frustrated achievers". One explanation they advance for this is that these respondents had higher aspirations. For example, they were far more likely than "non-frustrated achievers" to describe their "personal situation" as worse than others in both their local community and the country as a whole (Graham & Pettinato, 2002).

Table 4.3. Measured and perceived income mobility, 1991-2000 of a representative sample of 500 households in Peru

% of total sample	Measured per capita household income mobility			
	Rose by more than	Inter-mediate	Fell by more than	*Total*
Perceived income mobility	30%		30%	
Positive or very positive	<u>17.4</u>	9.7	2.8	*29.9*
Indifferent	15.1	<u>6.9</u>	2.5	*24.5*
Negative or very negative	25.5	13.5	<u>6.6</u>	*45.6*
Total	*58.0*	*30.1*	*11.9*	*100.0*

Source: Graham and Pettinato (2002), adapted from Table 4.

To sum up, these examples together suggest (unsurprisingly) that estimated monetary income is positively associated with positive feelings about respondents' economic situation. They also illustrate the existence of mismatches as people's perceptions do not always accord with the information they provide on their material circumstances. Besides satisfaction with one's economic level, more general measures have also been used to capture subjective wellbeing. As expected, research using global wellbeing questions as for instance *satisfaction with life as a whole* or *happiness* has also found that economic measures (income, expenditure, wealth) do not always associate strongly with SWB. Social comparison, even in developing countries like Peru, is considered to be playing an important mediating role (Graham and Felton, 2006; Herrera, 2006; Guillen-Royo, 2002). Drawing on these earlier studies this paper

contributes to the literature by focusing on relatively poor Peruvians and including in the analysis the satisfaction with goal scale developed in Chapter 3.

4.3 Household expenditure and poverty by research site

This section describes the economic level of respondents in the seven WeD research sites using estimates of household income and expenditure based on data collected through the three rounds of the WeD I&E survey. Both variables are commonly used to approximate economic wellbeing and to define household poverty. The main estimates of household income were derived from detailed questions about different types of activity and transfers. Expenditures (e.g. on inputs) directly associated with particular sources of income were deducted, but no attempt was made to include estimates of the value of family labour, nor of labour services provided on a reciprocal basis by and for neighbours. Household expenditure estimates were based on questions about (a) food consumption in the last week, broken down into 25 categories; (b) non-food consumables in the last month, divided into 13 categories; and (c) household durables and ceremonial expenses over the full recall period.

Table 4.4 presents mean monthly equivalent household income by research site. Surprisingly, the highest average per capita income and expenditure was reported for Llajta Jock. However, the small sample size (11) and its abnormally low average household size cast doubt on whether this figure is representative of the whole community. The next highest figure is for Nuevo Lugar, where income was more even between rounds and substantially higher than reported expenditure: features consistent with its status as a migration destination. The other urban site, by contrast is much poorer, though still richer in per capita incomes and expenditure terms than the other highland sites. Per capita income and expenditure was third highest in the jungle site of Selva Manta, but also fluctuated most sharply between rounds. The remaining three sites reported much lower per capita incomes: lower even than per capita expenditure. Variation between rounds in these sites was also large. Table 4.4. also shows the result of an ANOVA test of the significance of variation between rounds: "seasonality" indicating that at least one mean differs from the others at a 5% or higher level of significance.

Table 4.4. Average household income and expenditure by research site.

Soles	Llajta Iskay	Llajta Jock	Selva Manta	Aleg- ria	Des- canso	Prog- reso	Nuevo Lugar
Per capita figures (monthly mean household figure over the ten months)							
Income	53	211	140	80	53	114	157
Expenditure	72	140	105	101	105	97	111
Mean income per round (monthly equivalent) = A							
Round 1	427	342	216	287	553	502	762
Round 2	308	349	793	421	563	441	697
Round 3	-43	217	1157	109	447	466	735
Seasonality?	Yes	no	yes	yes	no	no	no
Mean expenditure per round (monthly equivalent) = B							
Round 1	359	263	629	419	507	444	584
Round 2	290	275	495	365	486	418	432
Round 3	324	291	371	325	385	395	504
Seasonalilty?	No	no	yes	yes	yes	no	yes

Income less expenditure (A-B)							
Round 1	68	79	-413	-132	46	58	179
Round 2	18	74	298	56	77	24	265
Round 3	-367	-75	786	-216	63	71	231
No. of hhs.	*14*	*11*	*10*	*50*	*49*	*50*	*63*
Av. hh size	*5.2*	*3.0*	*5.2*	*4.1*	*5.4*	*4.7*	*5.3*

Notes: Recall periods: Round 1 - March to June 2004; Round 2 – July to Sep 2004; Round 3 – Oct to Dec 2004. The exchange rate fell steadily during the period (from 3.5 to 3.3 averaging S/.3.4=$1.

As expected, income seasonality is directly related to the harvest cycle in the rural areas. The latter is decreasing from the first to the third round (October to December) in the Andean communities and follows the opposite trend in Selva Manta in the cloud forest. This is consistent with the common practice of seasonal migration between the two zones. Other sources of income such as business are more relevant in the urban communities, particularly during the first part of the year (from March to June). Wage income is strikingly important even in rural areas where people are employed as labourers in privately owned plots and in coffee and sugarcane plantations in the jungle. Regarding expenditure, seasonality was largely due to variations in non-food expenditure: mainly on education, which concentrates in the first period (March to June). It is also interesting to note that patterns of consumption follow Engel's law: when income increases the proportion spent on food decreases. Around two thirds of expenditure is on food with the exception of Nuevo Lugar where it accounts for less than 50% (Guillen-Royo, 2007).

The data collected on household income and expenditure is also useful for relating the economic level of the WeD research sites to the country as a whole. This is undertaken by estimating household poverty using the official poverty lines in Peru for 2005. The INEI estimates the extreme poverty line (EPL) based on the money needed in each region to purchase food for a month with a daily calorific value of 2,200 calories per person.[3] The poverty line (PL) is adjusted upward to reflect typical non-food expenditure of households whose expenditure on food is just sufficient to meet this calorific minimum (see Table 4.5). Poverty estimates for each site were then calculated by comparing these lines with estimated monthly equivalent income and expenditure for each household after making adjustments to reflect household size. Official poverty estimates in Peru do not make allowance for lower consumption needs of children. Nor do they allow for possible economies of scale in meeting subsistence requirements (through bulk purchase of food, for example).

Table 4.5. Official poverty lines for 2005 (Soles per person per month)[4]

Region	Sites	PL	EPL
Lima metropolitan	Nuevo Lugar	275	122
Junin urban	Progreso	218	117
Junin rural	Descanso, Selva Manta	199	116
Huancavelica rural	Alegria, Llajcta Jock, Llajcta Iskay	186	114

Source: Adapted from INIE (2004)

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[3] The precise calorific value is slightly higher in urban areas than in rural areas (INEI, 2002:35).
[4] The official figures were adjusted upward to reflect small regional price changes up to the middle of the survey period using inflation indices on the website of the Central Bank of Peru.

Table 4.6 presents estimates of poverty incidence, based on mean monthly equivalent income and expenditure over the ten month period, using both unweighted and weighted (or "adult equivalent") estimates. The most striking finding is that the overall incidence of poverty in the sample is very high. The most comparable figure of 90.7% (unweighted and income based) is well above official estimates, for the country as a whole (51.6%), for Lima (37.1%), Junin (29.2%) and even Huancavelica (84.4%) which was the highest average figure for any department in the country (INEI, 2004 website). This difference may reflect in part methodological differences, but it also reflects the deliberate strategy of selecting poorer research sites for this study. All measures indicate that Llajcta Iskay is the poorest community, although the sample is small. Selva Manta has the lowest level of extreme poverty (though again on the basis of a small sample), followed by Nuevo Lugar. Alegria in the Mantaro Valley does not have markedly less extreme poverty than other highland sites, but does appear to have a higher proportion of non-poor households.

Table 4.6. Household poverty estimates (mean over ten months)

Percent of households		In extreme poverty				In poverty			
		Weighted		Unweighted		Weighted		Unweighted	
	n.	Inc.	Exp.	Inc.	Exp.	Inc.	Exp.	Inc.	Exp.
Llajcta Iskay	*14*	92.9	78.6	92.9	85.7	100.0	100.0	100.0	100.0
Llajcta Jock	*11*	72.7	63.6	72.7	72.7	90.9	90.9	90.9	90.9
Selva Manta	*10*	40.0	50.0	40.0	50.0	60.0	100.0	70.0	100.0
Alegria	*50*	76.0	66.0	78.0	74.0	88.0	96.0	92.0	96.0
Descanso	*49*	59.2	73.5	67.3	77.6	85.7	89.8	89.8	89.8
Progreso	*50*	58.0	68.0	64.0	78.0	92.0	96.0	92.0	96.0
Nuevo Lugar	*63*	42.9	63.5	49.2	69.8	84.1	85.2	90.5	96.8
Total	*247*	59.9	67.2	64.8	74.1	87.0	94.7	90.7	95.1

Notes: "Inc." and "Exp." refer to estimates based on monthly household income and expenditure respectively; "Weighted" refers to income per person in the household, "unweighted" gives an adult equivalent weight of 0.5 and 0.8 to 0-4 and 5-14 year olds respectively.

Seasonality also affects poverty estimates, although the match between overall and round-specific data is still high (between 80.2 and 86.2%), being slightly higher for expenditure-based estimates (see table A.4.1. in the appendix). This illustrates the extent of error that arises from relying on only a single visit interview as the basis for poverty classification. It is also interesting to note that income and expenditure based poverty classifications diverged more widely than those between rounds, with only 66.2% of all observations being the same. Table 4.7 shows that of the remainder, income estimates placed 10.5% in a 'more poor' category and 23.3% in a 'less poor' category than expenditure estimates.

Table 4.7. Comparison of income and expenditure based poverty classifications

Percentage share (for 247 households over three rounds)		Income based classification		
		Extreme poor	Poor	Non poor
Expenditure based classification	Extreme poor	55.3	15.5	2.6
	Poor	8.5	8.2	5.2
	Not poor	0.7	1.3	2.7

To sum up, this section has revealed a high rate of absolute poverty among households living in the seven selected research sites: markedly higher indeed than

official statistics for the Departments where they are located and Peru as a whole. It has also shown the effect of seasonality and of the different methods of estimation. The following sections will use expenditure data as an indicator of the household economic level. Expenditure (including consumption of own-produced goods) is preferred because the reliability of income estimates is lower where livelihoods are highly diversified and changeable over time (INEI, 2001).

4.4 Household economic level and happiness
Returning to the relationship between economic indicators and SWB measures in Peru, this section explores the association between expenditure and happiness in the corridor. Following the economics of happiness literature (see overviews by Frey and Stutzer, 2002, and Layard 2005) it is to be expected that expenditure and happiness are highly correlated in the research sites as most people are below the poverty line, and for poor people additional income can be used to satisfy basic needs. However, as emphasised in the introduction, this argument does not hold for everyone as there are happy people among the poorest and unhappy among the less poor. Even in materially poor settings, other factors, such as social comparison should also be taken into account.[5]

     In the WeD research sites happiness was investigated through the following question: "taking all things together, how would you say things are these days? Would you say that you are: very happy, fairly happy or not too happy?" For purposes of analysis responses were labelled 2, 1 and 0 respectively. A key assumption associated with use of this question is that everyone understands the gradation of the responses and that there is "ordinal comparability". This implies that individuals in the same language community have a common understanding of how to translate internal feelings into a number scale (Ferrer-i-Carbonell and Frijters 2004: 644). Since the information contained comprises ranked categorical answers an Ordered Probit model is used. Data was gathered from 247 households, with the question mostly answered independently by both the head of the household and the spouse. Of the 459 observations, 245 were heads, 199 spouses and the remaining 15 observations were 'other relations' of the head of household. In line with other research that allows only three categories of response most individuals (at least 70 per cent) chose the middle category as shown in Table 4.8.

Table 4.8. Distribution of responses to global happiness question by round.

Survey Round	No. of responses	Responses (%)		
		Very happy	Fairly happy	Not too happy
First	454	11	70	19
Second	452	5	73	21
Third	449	8	72	20

Source: WeD-Peru income and expenditure survey

Table 4.9 shows how average happiness scores varied more by site than by round. Overall the happiest people were found in Llajta Jock whilst the unhappiest were very clearly in Nuevo Lugar. Llajta Jock also had the highest level of household expenditure (see Table 4.4), but Nuevo Lugar had the second highest.[6] The analysis

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[5] Hirata 2001 for a thorough theoretical review of the lack of perfect fit between income and SWB
[6] This pattern diverges significantly from that derived from the RANQ, presented in Table 1.9. In that case Alegria beat Llajta Jock to first place, and Progreso was on average less happy than Nuevo Lugar.

of happiness determinants presented hereafter is meant to shed light into the causes of the paradox represented by Nuevo Lugar by investigating the different ways though which expenditure affects people's happiness.

Table 4.9. Average global happiness by research site.[7]

	Round 1	Round 2	Round 3	Mean
Llajta Iskay	0.92	0.96	0.96	0.95
Llajta Jock	1.06	1.28	1.24	1.19
Selva Manta	1.00	0.90	1.00	0.97
Alegria	1.12	0.93	1.12	1.06
Descanso	0.93	0.74	0.88	0.85
Progreso	1.02	0.98	0.96	0.99
Lugar Nuevo	0.67	0.64	0.57	0.63

As expected, an initial analysis (see table A.4.3 in the appendix) pooling the data from the three rounds showed that expenditure and happiness are strongly associated in the corridor controlling for the relevant demographic variables. This is also the case for each and every round and when the effect of living in different sites is accounted for. Table A.4.4. reveals similar site specific variations using multivariate analysis to those presented above. One possible interpretation of this is that differences in income do not seem to override the subjective effect of belonging to a community and quality of natural environment, both of which are depleted in urban marginal communities such as Nuevo Lugar. This corroborates other findings: Herrera (2006) found that urban households have a more pessimistic view of their future prospects, while Graham and Pettinato (2002) find they are less likely to be satisfied even when their income grows. However, caution is needed here because of the possibility of reverse causation: that happier people are more successful in their economic activities and less inclined to migrate in search of prosperity (Diener et al., 2002; Staw, Sutton and Pelled, 1994, Fleming, 1999).

People's economic level does only affect SWB through the functional utility of consumption. Other aspects such as how one's level of expenditure compared to role models (neighbours, close relatives or even global elites) should be taken into account. Since Veblen (1899) many social scientists have acknowledged the effect of conspicuous consumption of reference groups on people's wellbeing. Previous studies in the Peruvian context (Graham and Felton, 2002; Herrera, 2006; Guillen-Royo, 2007) have observed that these effects are also strong in a highly stratified and unequal society such as Peru. Table 4.10 shows the result of an ordered probit analysis of happiness determinants for the three rounds of the I&E survey accounting for relevant demographic and perception variables. Household expenditure is introduced in the model through average (by site) and relative expenditure, thus distinguishing between on happiness of the overall income of a possible reference group (average expenditure) and of the relative status of each household within that

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These differences can be attributed to differences in sample composition and the time period between the two surveys.

[7] Means are calculated by using the following scores: "very happy"=2; "fairly happy"=1; "not too happy"=0.

group (relative expenditure).[8] The analysis also includes people's satisfaction with how income is managed in the household, to try to capture how the effect of <u>household</u> income on <u>individual</u> happiness depends is influenced by the extent to which the former is or is not managed with the respondent's particular subjective wellbeing in mind.[9]

Table 4.10. Ordered probit analysis of happiness determinants in the corridor

	Round 1		Round 2		Round 3	
	B	z-test	B	z-test	B	z-test
Age	-0.111	-3.29	0.017	0.45	-0.004	-0.11
Age-squared	0.001	3.13	0.000	-0.54	0.000	0.15
Average Expenditure (by site)	-0.003	-3.11	-0.004	-3.18	-0.007	-5.72
Relative Expenditure (within site)	0.205	2.05	0.510	3.56	0.235	1.60
Not satisfied with household Income management	-0.843	-2.98	-1.371	-4.37	-0.408	-1.12
Just satisfied with household Income management	-0.452	-2.69	-0.155	-0.73	0.032	0.15
Married	0.442	1.36	-0.508	-1.61	0.001	0.00
Female	-0.391	-1.18	-0.490	-1.35	-0.499	-1.46
Kids of 0-4	-0.293	-2.98	-0.045	-0.40	0.163	1.49
Kids of 5-15	-0.121	-2.39	-0.035	-0.63	-0.025	-0.39
Head	-0.293	-0.86	-0.368	-1.00	-0.290	-0.80
Dependency	0.579	1.74	0.103	0.28	-0.295	-0.86
Observations	436		433		430	
Wald chi2(16)	64.09		64.17		61.85	
Pseudo R2	0.10		0.11		0.13	

Correlations with demographic variables, including age of respondent, were not robust between rounds. This could be because the subjective effect of seasonal events such as festivals and harvests vary between people according to their age and gender. In much of the economic literature on happiness a strong finding that emerges within both high and low income countries is a U-shaped relationship between age and global happiness (Frei and Stutzer, 2002). The main explanation for this finding is that expectations of people change through the life cycle, with older people either reaching aspirations or changing these aspirations to accept their 'lot in life' (Warr, 1992; Clark, Oswald and Warr, 1996). But Table 4.8 reveals that only in the first round was age a significant predictor of people's happiness, showing a traditional U shape with the low point of happiness at 56 years. The absence of this finding in later rounds could also be due to age-specific emotional responses to repeat interviewing.

Other demographic characteristics of the household included the number of children below the age of five, and between five and fifteen years. Dependency was also measured by the ratio of the number of non-earners in the household to the household size. These measures are significant only for the first round, when higher expenditure on education was also reported as the new school starts. Although

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[8] Average expenditure refers to the arithmetic mean of total household expenditure by site for each round. The relative term is calculated by taking the household expenditure relative to average expenditure for each site, for each round (Di Tella and MacCulloch, 2003).
[9] Using an estimate of individual rather than household income would not circumvent this problem, due to interdependence of welfare within households. Ravallion and Lokshin (2001) suggest that the use of either household income or expenditure is a better predictor of life satisfaction than individual income.

understood as necessary for children's future prospects this extra spending was also seen as a serious extra burden, especially in rural areas. Thus partially explains the negative sign of the coefficients. The effect of the dependency variable may also change with the seasons depending upon when children and the elderly provide most unpaid family labour, for example.

Marital status, gender and position as head of the household did not come up as significant in this model. However, when the data of the three rounds is pooled together (refer to table A.4.3. in the appendix) being a woman is shown to be negatively related to happiness, which is a common finding in Latin-America. Lower education opportunities, higher morbidity and the generalised claims of gender discrimination in the society (Schuldt, 2004) contribute to explaining this finding. A further investigation of the data shows that for marital status and being head of household are highly correlated for women (r= 0.904) with the majority of non-married women being heads of their household. This also helps to explain why these two variables are not significant in any of the three rounds.

With respect to multiple effects of expenditure on wellbeing, Table 4.8 confirms that social comparison matters for happiness in the corridor. This is the case despite changes in significance between rounds, mainly of the relative expenditure coefficient which is lower in the third round, when the average income in the sites is also at its lowest (except in Selva Manta). Living in a relatively wealthy neighbourhood (in the sample this corresponds to Nuevo Lugar and Selva Manta) in terms of expenditure is negatively associated to happiness. This is affecting people in every round and might show how in a country with great inequalities living in wealthier areas with higher exposure to newer and better goods results in reduced wellbeing by rising aspirations but not opportunities for social or economic progression.

As explained earlier, it would be expected that relative income does not matter much for poor people as concerns linked to satisfaction of their physiological needs appear more urgent. Table 4.8 shows, in contrast, that people's distance to the community average income matters even for a sample of mostly very poor people. This fits with Graham and Felton's study of a representative sample in Latin America, where they found that people in the two lowest quintiles together with the richest were the most concerned about their relative economic position. Thus, participants that spend less than the average in their community are unhappier and the ones with a higher expenditure happier. Interestingly, this was not necessarily the case in round three though; and one explanation for this is that the reduction in expenditure experienced in that round (linked to a drop in crop income) equalised consumption within the rural and peri-urban communities, thus diminishing concerns about their position within their peer group.

A strong correlation is found between happiness and satisfaction with household income management in the first and second round, as well as in the analysis undertaken by pooling the data from the three rounds together. This conforms with the hypothesis that happiness depends not only on variation in income and expenditure between households, but also how it is allocated within them. However, this evidence should be taken with caution, because perception a negative view of household income management could well be correlating with unhappiness via unobserved personality traits, such as a generally optimistic or positive outlook. This could be tested in future by including additional variables of positive and negative in the regression.

Overall the most interesting result from this analysis is that social comparison matters even in materially deprived settings such as the Peruvian corridor. This contributes to explain, for instance, why respondents in Nuevo Lugar are significantly less happy despite reporting higher overall levels of expenditure. They live in a wealthier neighbourhood, exposed to newer and more sophisticated goods than the rural and poorer communities. The next section explores this further by using satisfaction with life goals from the WeDQoL as indicators of people's SWB. Although less comparable with previous research, these offer a more rigorous set of measures of what is meant in the sites by SWB. Thus, they might clarify the reasons for the paradox encountered in the corridor between objective and subjective wellbeing indicators.

4.5 Economic wellbeing and life goal satisfaction

So far the relationship between economic and subjective wellbeing has been investigated using a standard global happiness question. However, other measures capturing wider aspects of people's perceptions should also been taken into consideration as they add richer information about people subjectivities. Since Seligman's (XXXX) initial work in the field of positive psychology many instruments has been developed to capture subjective wellbeing, but most of them have been extensively validated only in Western societies (Houghton, 2006; 2007). These include the Positive and Negative Affect Scale (PANAS) and the Satisfaction with Life Scale (SWLS) with which single item measures such as the happiness scale used in the preceding section, seem to significantly correlate (Frey and Stutzer, 2002).

This section goes beyond standard SWB measures and uses the satisfaction with goals scale presented in Chapter 3. Its purpose is to see if any correlations could be identified between economic variables and the life goal satisfaction indicators that add to our understanding of the relationship between economic and subjective wellbeing in the research sites. This analysis is somewhat 'heroic' for two reasons. First, the first rounds of the I&E and the WeDQoL surveys were conducted more than three months apart. Second, due to differences in sampling methodology and response rates the overlapping sample size (135 households) is significantly smaller than the sample size for either individual survey, thus reducing statistical degrees of freedom. Given these data limitations, a failure to establish statistical associations would not on its own constitute definitive evidence that they do not actually exist. Conversely, any correlations that are established would suggest quite a robust underlying relationship.

Chapter 3 derived from the WeDQoL survey seven key subjective wellbeing variables: three meta-life goals (place to live better, raise a family, progress from a secure base); three corresponding meta-life goal satisfaction indicators; and one indicator of satisfaction with availability of resources necessary to achieve these goals. It is interesting to start with the investigation of how the satisfaction variables correlate with responses to the global happiness question when asked of the same individuals when they were re-interviewed as part of the I&E survey.[10] Happiness is related to positive affect, as well as to goal satisfaction, whereas the WeDQoL measures emphasise more strongly the cognitive dimension. On these grounds it could be expected that the two measures would be significantly but lowly correlated, as they capture different aspects of people's SWB.

ANOVA tests identified a statistically significant relationship at a 10 percent or better level of significance between all the satisfaction measures except progress from

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[10] Matching data was available for 155 individuals, including 76 women.

a secure base (see Table A.4.5. in the appendix). The happiest people in the sample had on average higher satisfaction with resources and with raising a family than the unhappiest. These associations were stronger when the analysis was replicated for the sub-sample of women for resources and with the sub-sample of man for raising a family. For men only there was also a significant link with satisfaction in relation to the better place to live goal, this being lowest for the middle of the three happiness categories.

This suggests that happiness in the WeD research sites is associated with being satisfied with attaining the goal of living in a better place and the one linked to raising a family for men and with satisfaction with resources need to reach valued goals for women. These results link to Rojas' (2006) work where he explored the correlations between happiness and satisfaction with life domains (health, consumption, work, family, friendship, personal). He found that all domains where lowly but statistically correlated with happiness: satisfaction with one's family life, health and consumption being the ones that showed the highest correlation coefficients (from r= .35 to r= .30). Although he did not derive life domains through an *emic* approach his work also highlights the importance of taking into account the different areas that constitute people's subjective wellbeing when researching its linkages with other indicators.

As a second exercise ANOVA was used to investigate if the WeDQoL scores varied significantly according to the income poverty category of the respondents' households.[11] Results are reproduced in Appendix 4.6. These show some *a priori* unexpected links.[12] Two satisfaction measures associated to higher happiness seem to be related to higher poverty. First, people who reported a higher satisfaction in terms of place to live were the ones in extreme poverty. This can be explained by the fact that extreme poverty is more rural, and people in more rural areas are more satisfied with where they live: the result was replicated (but more weakly) when analysis was repeated for rural and semi-urban respondents only, disappeared for the sub-sample of urban households only. Second, people in extreme poverty also reported higher satisfaction against the raise a family goal, a finding confirmed by correlations between per capita household expenditure and the SWB variables (Appendix 4.7).[13] This suggests a possible trade-off between achieving higher income and being satisfied with family development particularly in urban areas. A Malthusian explanation of this is that people delay having a family in the hope of achieving greater income and security beforehand. Conversely, people may achieve satisfaction in raising a family but at the expense of experiencing greater material poverty.

Analysis of the urban sub-sample also identified some linkages in the expected direction, with significant differences in mean satisfaction against the goal of progress from a secure base. Mean satisfaction was lowest for respondents from households in the extreme poor category.[14] Furthermore, a significant positive link was established between poverty status and perception of available resources. The latter is particularly

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[11] Both sets of data were available for a total of 202 individuals belonging to 135 households. Poverty categories used were based on income data, but results using the expenditure data were very similar ANOVA of the seven SWB variables for men and women in this sample did not reveal any significant differences. For this reason cross-tabulation with poverty data was not carried out by gender.

[12] Reported results are significant at the 10% level or better.

[13] These correlations also provide some evidence of goal formation: higher per capita expenditure being significantly and positively correlated with the importance of place to live better and negatively with raise a family.

[14] It was also lower for six respondents in the non poor category than for those from only poor households. These respondents might fall into the category of "frustrated achievers" identified by Graham and Felton (2002).

interesting as the regression analysis had shown how higher expenditure was linked to happiness controlling for sites but negatively affecting it through the effect of the reference group and a lower status. People satisfied with the amount of resources in urban areas are in the non poor category and have a higher status than their counterparts.

This analysis shows that using measures of SWB related to goals explicitly valued by respondents reveals its relationship to economic indicators to be more complex and subtle than might otherwise be evident. Extremely poor people are better off in terms of their living environment since most of them are rural, whilst in urban shanty towns the poorer have a higher satisfaction in terms of personal progress with security. Thus, poverty is not always related to lower wellbeing. More specifically it is possible to identify people who are relatively poor but enjoy higher subjective wellbeing in relation to their environment, community and family life. Such analysis is certainly intriguing enough to warrant further investigation.

4.6 Conclusions
This chapter has presented a detailed account of the economic status of people living in the research sites and has linked it with two different approaches to measuring subjective wellbeing: global happiness and use of a battery of indicators relating to achievement of locally identified life goals. Evidence that most people in the sample are below the national poverty line suggests that there should be a strong correlation between economic and subjective measures of wellbeing, as people would be expected to use any extra money to increase the satisfaction of their basic physiological needs. However, early studies in Peru highlighted the possibility of mismatches between subjective and estimated poverty, as well as the significance of social comparisons. The findings here confirm that relative as well as absolute income and expenditure are important: other things equal the move from a lower income rural area to a higher income urban area, such as the Lima shanty town, has an adverse effect on happiness because it results in lower relative income.

The study of happiness determinants was complemented by an initial exploration of the linkages between the WeDQoL measures and economic variables. This identified positive links between income variables and perceived adequacy of resources, as well as progress with security in urban sites. However, it revealed negative effects of income on satisfaction relative to the goal of living in a better place and raising a family, with people in higher material poverty experiencing significantly higher average of goal satisfaction. This illustrates the scope for more subtle empirical analysis of how someone who is materially poor can enjoy higher SWB. The study does not reveal that living in a relatively poor and isolated community isolates people from exposure to advanced consumption alternatives, but that it better permits greater fulfilment of non-material life goals such as raising a family and living in a better place.

Further analysis of how economic variables relate to multiple indicators of SWB based on use of the WeDQoL would be useful both to test the preliminary findings here and also identity additional ones, particularly concerning goal formation. With a larger sample it would also be possible to investigate through regression analysis whether the strength of the relationships varied for richer and poorer households. This paper also highlights the importance of distinguishing how SWB is influenced at different social levels, each nested inside each other like Russian dolls. He we have sought to distinguish three: site or community level effects, including average income;

intra-community or inter-household effects, including relative income; and intra-household level effects, including control over use of household resources.

APPENDIX: Additional statistical tables.

Table A4.1. Variation in household poverty incidence by round

% Overall classification	Round 1 classification			Round 2 classification			Round 3 classification		
	EP	P	NP	EP	P	NP	EP	P	NP
Income based estimates (n=247)									
Ext. poor	56.3	8.5	0.0	57.5	6.9	0.4	60.7	4.0	0.0
Poor	4.0	16.6	5.3	6.1	16.6	3.2	5.7	18.6	1.6
Not poor	1.2	0.8	7.3	0.0	2.4	6.9	1.6	0.8	6.9
Matching		80.2			81.0			86.2	
Expenditure based estimates (n=247)									
Ext. poor	63.2	10.9	0.0	69.6	4.5	0.0	70.0	4.0	0.0
Poor	1.6	16.2	3.2	7.7	13.0	0.4	7.7	13.0	0.4
Not poor	0.0	1.2	3.6	0.0	1.6	3.2	0.0	1.6	3.2
Matching		83.0			85.8			86.2	

Notes: Rows are based on monthly equivalent data over the ten months, columns on data for each round. *Matching* refers to the percentage of households classified in the same poverty category using data for all ten months and for one round only.

Table A4.2. Site-specific seasonal stability of poverty classifications

Matching rate (%)	Llajta Iskay	Llajta Jock	Selva Manta	Aleg-ria	Des-canso	Prog-reso	Nuevo Lugar
Income based	85.7	69.7	50.0	76.7	83.0	85.3	91.0
Expenditure based	88.1	90.9	76.7	82.7	87.1	87.3	83.1

Note: Percent of households in each site classified as extremely poor, poor or non-poor in each round in the same way as they were classified using the ten months of data taken together.

Table A4.3. Happiness determinants in the corridor from pooled data

	Model I		Model II	
	B	z-test	B	z-test
Age	-0.038	-1.93	-0.044	-2.30
Age-squared	0.000	1.76	0.000	2.15
Log (Expenditure)	0.461	5.02	0.428	4.72
Average Expenditure (by site)	-0.006	-9.98	-0.005	-7.20
Married	-0.067	-0.37	-0.031	-0.18
Female	-0.446	-2.36	-0.427	-2.31
Kids of 0-4	-0.099	-1.46	-0.066	-0.98
Kids of 5-15	-0.079	-2.29	-0.071	-2.10
Head	-0.329	-1.67	-0.313	-1.62
Dependency	0.019	0.89	0.029	1.34
Round 2	-0.582	-6.07	-0.494	-5.09
Round 3	-0.535	-5.37	-0.426	-4.20
Satisfaction with household income management (3= very, 1=not satisfied)			0.454	5.20
Rho	0.061	1.52	0.037	0.94
Observations	1,278		1,278	
Log Likelihood	-897.414		-883.881	

Note: Site dummies are not included because of multicollinearity with the average expenditure term.

Table A4.4. Happiness determinants in the corridor controlling for community

Dependant Variable=Happiness, 2=very happy, 1= fairly happy, 0=not too happy	Round 1		Round 2		Round 3	
	B	z-test	B	z-test	B	z-test
Age	-0.127	-3.64	0.018	0.44	-0.003	-0.07
Age-squared	0.001	3.47	0.000	-0.57	0.000	0.15
Log (Expenditure)	0.303	2.41	0.652	3.82	0.377	2.24
Not satisfied with household Income management	-0.932	-3.09	-1.294	-3.38	-0.077	-0.18
Just satisfied with household Income management	-0.797	-3.71	-0.327	-1.08	0.330	1.00
Married	0.525	1.60	-0.511	-1.53	0.007	0.02
Female	-0.323	-0.98	-0.430	-1.15	-0.398	-1.15
Kids of 0-4	-0.237	-2.18	-0.078	-0.72	0.245	2.12
Kids of 5-15	-0.118	-2.32	-0.051	-0.92	0.005	0.07
Head	-0.189	-0.56	-0.301	-0.80	-0.200	-0.55
Dependency	0.340	0.90	0.181	0.47	-0.646	-1.61
Alegria	-0.178	-0.43	0.165	0.51	0.588	1.79
Llajta Jock	0.376	0.68	1.122	2.17	0.472	0.86
Nuevo Lugar	-0.688	-1.77	-0.356	-1.47	-1.140	-6.99
Progreso	0.198	0.52	0.424	1.82	-0.240	-2.09
Descanso	0.071	0.18	-0.512	-2.05	-0.214	-1.51
Llajta Iskay	0.182	0.37	0.762	2.19	-0.276	-1.23
Observations	436		433		430	
Wald chi2(16)	78.77		75.51		73.85	
Pseudo R2	0.122		0.142		0.144	

Table A4.5. One way ANOVA of subjective wellbeing indicators against global happiness scores (1=very happy; 2=happy; 3=not too happy).
(a) For full sample

	GH*	Obs.	Mean	s.d.		Sum sq'rs	d.f.	Mean sq're	F	Sig.
Goal - place to live better	1				Between Groups	0	2	0.22	1.38	0.25
	2	100	2.51	0.41	Within Groups	24	152	0.16		
	3	25	2.40	0.36	Total	24	154			
Goal - raise a family	1	30	2.28	0.58	Between Groups	0	2	0.24	0.90	0.41
	2	100	2.22	0.49	Within Groups	40	152	0.26		
	3	25	2.10	0.52	Total	41	154			
Goal - progress from a secure base	1	30	2.67	0.31	Between Groups	0	2	0.01	0.11	0.90
	2	100	2.70	0.29	Within Groups	13	152	0.09		
	3	25	2.69	0.29	Total	13	154			
Satisfaction with resources	1	30	2.07	0.51	Between Groups	1	2	0.46	2.94	0.06
	2	100	1.87	0.32	Within Groups	24	152	0.16		
	3	25	1.93	0.52	Total	25	154			
Satisfaction relative to place to live better	1	30	2.22	0.31	Between Groups	0	2	0.13	1.07	0.35
	2	100	2.12	0.36	Within Groups	19	152	0.12		
	3	25	2.16	0.39	Total	19	154			
Satisfaction with raise a family	1	30	2.72	0.57	Between Groups	2	2	1.20	3.15	0.05
	2	100	2.62	0.62	Within Groups	58	152	0.38		
	3	25	2.32	0.66	Total	60	154			
Satisfaction with progress from a	1	30	2.04	0.37	Between Groups	0	2	0.02	0.19	0.83
	2	100	2.01	0.30	Within Groups	16	152	0.11		

	GH*	Obs.	Mean	s.d.		Sum sq'rs	d.f.	Mean sq're	F	Sig.
secure base	3	25	2.04	0.35	Total		16	154		

(b) Men only

	GH*	Obs.	Mean	s.d.		Sum sq'rs	d.f.	Mean sq're	F	Sig.
Goal - place to live better	1				Between Groups	0.41	2	0.21	1.18	0.31
	2	44	2.48	0.43	Within Groups	12.75	73	0.17		
	3	17	2.37	0.41	Total	13.16	75			
Goal - raise a family	1	15	2.32	0.64	Between Groups	0.38	2	0.19	0.65	0.53
	2	44	2.17	0.52	Within Groups	21.66	73	0.30		
	3	17	2.10	0.51	Total	22.05	75			
Goal - progress from a secure base	1	15	2.68	0.30	Between Groups	0.01	2	0.00	0.03	0.97
	2	44	2.69	0.29	Within Groups	6.40	73	0.09		
	3	17	2.67	0.30	Total	6.40	75			
Satisfaction with resources	1	15	2.01	0.48	Between Groups	0.31	2	0.15	0.88	0.42
	2	44	1.85	0.35	Within Groups	12.62	73	0.17		
	3	17	1.90	0.51	Total	12.93	75			
Satisfaction relative to place to live better	1	15	2.29	0.31	Between Groups	0.76	2	0.38	3.14	0.05
	2	44	2.06	0.37	Within Groups	8.87	73	0.12		
	3	17	2.24	0.33	Total	9.63	75			
Satisfaction with raise a family	1	15	2.97	0.13	Between Groups	3.10	2	1.55	4.83	0.01
	2	44	2.57	0.62	Within Groups	23.41	73	0.32		
	3	17	2.35	0.63	Total	26.51	75			
Satisfaction with progress from a secure base	1	15	2.17	0.35	Between Groups	0.37	2	0.19	1.73	0.18
	2	44	1.98	0.31	Within Groups	7.85	73	0.11		
	3	17	2.04	0.35	Total	8.22	75			

(c) Women only

	GH*	Obs.	Mean	s.d.		Sum sq'rs	d.f.	Mean sq're	F	Sig.
Goal - place to live better	1	15	2.56	0.37	Between Groups	0.05	2	0.02	0.17	0.84
	2	56	2.52	0.40	Within Groups	10.99	76	0.14		
	3	8	2.46	0.25	Total	11.04	78			
Goal - raise a family	1	15	2.25	0.53	Between Groups	0.20	2	0.10	0.42	0.66
	2	56	2.26	0.46	Within Groups	18.17	76	0.24		
	3	8	2.09	0.58	Total	18.37	78			
Goal - progress from a secure base	1	15	2.66	0.33	Between Groups	0.03	2	0.01	0.16	0.86
	2	56	2.71	0.29	Within Groups	6.84	76	0.09		
	3	8	2.73	0.30	Total	6.87	78			
Satisfaction with resources	1	15	2.13	0.54	Between Groups	0.70	2	0.35	2.39	0.10
	2	56	1.89	0.29	Within Groups	11.07	76	0.15		
	3	8	1.98	0.59	Total	11.77	78			
Satisfaction relative to place to live better	1	15	2.16	0.31	Between Groups	0.18	2	0.09	0.75	0.48
	2	56	2.16	0.34	Within Groups	9.30	76	0.12		
	3	8	2.00	0.47	Total	9.49	78			
Satisfaction with raise a family	1	15	2.47	0.72	Between Groups	1.43	2	0.71	1.68	0.19
	2	56	2.66	0.62	Within Groups	32.29	76	0.42		
	3	8	2.25	0.76	Total	33.72	78			
Satisfaction with progress from a secure base	1	15	1.92	0.36	Between Groups	0.15	2	0.07	0.74	0.48
	2	56	2.03	0.30	Within Groups	7.72	76	0.10		
	3	8	2.05	0.36	Total	7.87	78			

Table A4.6. One way ANOVA of subjective wellbeing indicators against household income poverty category (1=extreme poor; 2=poor; 3=non-poor).

(a) For full sample

	GH*	Obs.	Mean	s.d.		Sum sq'rs	d.f.	Mean sq're	F	Sig.
Goal - place to live better	1	132	2.51	0.39	Between Groups	0.03	2	0.01	0.09	0.92
	2	59	2.51	0.43	Within Groups	31.70	198	0.16		
	3	10	2.57	0.45	Total	31.73	200			
Goal - raise a family	1	132	2.13	0.56	Between Groups	0.24	2	0.12	0.42	0.65
	2	59	2.19	0.48	Within Groups	56.08	198	0.28		
	3	10	2.05	0.45	Total	56.32	200			
Goal - progress from a secure base	1	132	2.72	0.28	Between Groups	0.12	2	0.06	0.76	0.47
	2	59	2.67	0.31	Within Groups	16.29	198	0.08		
	3	10	2.67	0.26	Total	16.42	200			
Satisfaction with resources	1	132	1.89	0.36	Between Groups	0.02	2	0.01	0.05	0.95
	2	59	1.91	0.44	Within Groups	28.16	198	0.14		
	3	10	1.87	0.20	Total	28.17	200			
Satisfaction relative to place to live better	1	132	2.17	0.36	Between Groups	0.91	2	0.46	3.75	0.03
	2	59	2.02	0.33	Within Groups	24.09	198	0.12		
	3	10	2.10	0.35	Total	25.00	200			
Satisfaction with raise a family	1	132	2.53	0.67	Between Groups	3.14	2	1.57	3.35	0.04
	2	59	2.50	0.69	Within Groups	92.60	198	0.47		
	3	10	1.95	0.83	Total	95.74	200			
Satisfaction with progress from a secure base	1	132	1.98	0.33	Between Groups	0.06	2	0.03	0.26	0.77
	2	59	2.01	0.31	Within Groups	20.98	198	0.11		
	3	10	1.94	0.39	Total	21.04	200			

(b) Urban sites

	GH*	Obs.	Mean	s.d.		Sum sq'rs	d.f.	Mean sq're	F	Sig.
Goal - place to live better	1	47	2.73	0.29	Between Groups	0.01	2	0.01	0.06	0.94
	2	25	2.73	0.36	Within Groups	7.85	75	0.10		
	3	6	2.78	0.40	Total	7.86	77			
Goal - raise a family	1	47	2.10	0.62	Between Groups	0.10	2	0.05	0.13	0.88
	2	25	2.17	0.61	Within Groups	28.62	75	0.38		
	3	6	2.08	0.58	Total	28.72	77			
Goal - progress from a secure base	1	47	2.87	0.19	Between Groups	0.03	2	0.01	0.38	0.68
	2	25	2.86	0.19	Within Groups	2.82	75	0.04		
	3	6	2.80	0.21	Total	2.84	77			
Satisfaction with resources	1	47	1.75	0.21	Between Groups	0.36	2	0.18	2.80	0.07
	2	25	1.88	0.32	Within Groups	4.79	75	0.06		
	3	6	1.90	0.21	Total	5.15	77			
Satisfaction relative to place to live better	1	47	1.94	0.38	Between Groups	0.46	2	0.23	1.83	0.17
	2	25	1.80	0.29	Within Groups	9.35	75	0.12		
	3	6	2.06	0.32	Total	9.80	77			
Satisfaction with raise a family	1	47	2.47	0.69	Between Groups	3.02	2	1.51	2.97	0.58
	2	25	2.26	0.75	Within Groups	38.14	75	0.51		
	3	6	1.75	0.76	Total	41.15	77			
Satisfaction with progress from a secure base	1	47	1.85	0.25	Between Groups	1.20	2	0.60	7.44	0.00
	2	25	2.12	0.29	Within Groups	6.03	75	0.80		
	3	6	1.87	0.49	Total	7.23	77			

(c) Rural and peri-urban sites

	GH*	Obs.	Mean	s.d.		Sum sq'rs	d.f.	Mean sq're	F	Sig.
Goal - place to live better	1	85	2.39	0.38	Between Groups	0.11	2	0.06	0.38	0.68
	2	34	2.35	0.40	Within Groups	17.59	120	0.15		
	3	4	2.25	0.32	Total	17.70	122			
Goal - raise a family	1	85	2.15	0.52	Between Groups	0.18	2	0.09	0.40	0.67
	2	34	2.21	0.36	Within Groups	27.33	120	0.23		

		N	Mean	SD	Source	SS	df	MS	F	Sig
	3	4	2.00	0.20	Total	27.52	122			
Goal - progress from a secure base	1	85	2.64	0.28	Between Groups	0.34	2	0.17	2.04	0.13
	2	34	2.53	0.31	Within Groups	10.10	120	0.08		
	3	4	2.48	0.19	Total	10.44	122			
Satisfaction with resources	1	85	1.97	0.39	Between Groups	0.12	2	0.06	0.33	0.72
	2	34	1.93	0.51	Within Groups	21.80	120	0.18		
	3	4	1.82	0.18	Total	21.92	122			
Satisfaction relative to place to live better	1	85	2.30	0.27	Between Groups	0.37	2	0.18	2.58	0.08
	2	34	2.19	0.25	Within Groups	8.51	120	0.07		
	3	4	2.17	0.43	Total	8.88	122			
Satisfaction with raise a family	1	85	2.56	0.66	Between Groups	0.77	2	0.38	0.90	0.41
	2	34	2.68	0.60	Within Groups	51.09	120	0.43		
	3	4	2.25	0.96	Total	51.85	122			
Satisfaction with progress from a secure base	1	85	2.05	0.35	Between Groups	0.38	2	0.19	1.73	0.18
	2	34	1.93	0.30	Within Groups	13.15	120	0.11		
	3	4	2.05	0.19	Total	13.53	122			

Table A4.7. Correlations between subjective wellbeing variables and per capita monthly household expenditure.

	Pearson correlation	Significance	Obs.	Partial correlation*	Significance	D. of F.
Goal - place to live better	0.055	0.438	201	0.081	0.321	150
Goal - raise a family	-0.063	0.372	201	-0.030	0.718	150
Goal - progress from a secure base	-0.060	0.397	201	-0.142	0.081	150
Satisfaction with resources	0.041	0.563	201	0.058	0.481	150
Satisfaction relative to place to live better	-0.213	0.002	201	-0.155	0.056	150
Satisfaction with raise a family	-0.078	0.270	201	0.044	0.589	150
Satisfaction with progress from a secure base	0.065	0.358	201	0.105	0.199	150

Note *The control variable is satisfaction with household income management.