

Nutrition, income instability and Quality of Life: Determinants and differential patterns across members within the household[♥]

Mauricio Cardenas[♦], Vincenzo Di Maro[†], Carolina Meija[♦]

January, 2008

Abstract

Using an approach that complements standard income-based measures with broader measures of well-being we study the relationship between quality of life and deprivation. In particular, we use nutritional insecurity and income instability as measures of deprivation and we analyze their relationship with perceived and objective well-being. First, we investigate whether, and to what extent, nutritional insecurity affects perceived well-being. We then try to understand who, within the household, bears more the consequences of nutritional insecurity, both in terms of perceived welfare and in terms of objective nutritional outcomes. Finally, we focus on the relationship between perceived well-being and income instability.

[♥] Paper prepared for the research project on “Understanding Quality of Life in Latin America and The Caribbean: A Multidimensional Approach” sponsored by the Research Department of the Inter-American Development Bank. We would like to thank Eduardo Lora, Jere Behrman, Ravi Kanbur, and Carlos Eduardo Velez for useful comments, and Leonardo Gasparini for providing some useful data.

[♦] Fedesarrollo, Bogota’

[†] University College London and University Parthenope, Naples

1. Introduction

Economists like to study people on the basis of what they do (choices). However, human beings are much more complex and many aspects of their well-being are not necessarily reflected in observable choices, but are embedded in intangibles such as wishes, perceptions and expectations. As Amartya Sen (1986, p.18) puts it : “the popularity of this view [individual utility only depend on tangible goods, services and leisure and it is inferred from behaviour, or revealed preferences] in economics may be due to a mixture of an obsessive concern with observability and a peculiar belief that choice is the only human aspect that can be observed”.

A vast literature (that can be grouped under the denomination of “economics of happiness”) has been trying to challenge these narrow assumptions combining economists’ and psychologists’ techniques. In particular, the approach is to complement standard income-based measures of welfare with broader measures of well-being. The ultimate objective is to gain a better understanding of “Quality of Life” (QoL) in order to design successful policies for improving living conditions.

QoL is a broad concept that goes beyond the living conditions approach, which tends to focus on the material resources available to individual to manage their life. One definition, given by the European Foundation for the Improvement of Living and Working conditions (see Fahey, Nolan, and Whelan, 2003: 63), states that QoL means to enable people, as far as possible, to attain the aims and choose the lifestyle they wish for themselves. In general, there is a consensus that QoL refers to a holistic perspective, where many aspects of life should be considered including domains such as employment, economic resources, family and households, community life and social participation, health and health care, as well as knowledge, education and training.

Research on QoL, or perceived well-being in general, focuses on its interrelationships with income, inequality, macro and micro policies, political arrangements, and social capital.

One seminal relationship is the one between income and QoL. A traditional result, that holds for within countries comparisons (see Easterlin, 1974), is that wealthier people are, on average, happier than poor ones (see also Oswald, 1997; Diener et al, 2003). However, the relationship between per capita income and average happiness level across countries is much weaker. In particular, wealthier countries (as a group) are found to be happier than poor ones (as a group) but happiness seems to rise with income up to a point, but not beyond it.

There is now some controversy on the existence of this paradox. Anthony and Charles Kenny (2006) argue that welfare, represented by objective indicators, such as life expectancy, infant mortality, literacy, and housing, has a weak relationship with income, either absolute or relative. However, recent work by Angus Deaton (2007), which makes use of the 2006 World Poll collected by the Gallup Organization, shows that across countries average happiness is strongly related to per capita national income. Moreover, this effect holds across the range of international incomes, ruling out the existence of a critical level of per capita income above which income has no further effect on happiness.

The previous discussion introduces the main issue we want to address here: the relationship between QoL and deprivation. While deprivation in general and abject poverty in particular, tend to reduce happiness, it is also true that very poor people can be happier than other groups. This can happen if the poor might just have low expectations or simply do not perceive themselves as poor (Rojas, 2004). In addition, the well-being of those who escaped poverty is often undermined by insecurity associated to the risk of falling back to poverty. This can explain why happiness data shows that income has strong negative effects on welfare among this group. Unless panel data is used, income data alone does not reveal the vulnerability of these individuals. Indeed, their reported well-being is often lower than that of the poor (Graham and Pettinato, 2002).

Among the several measures of consumption deprivation that can potentially affect well-being (and, in turn, physical health) we focus on measures of nutritional security and income stability. Regarding the nutrition issue, the link between poor nutrition, worse adult labor market and educational outcomes, and poor health status has been established in the literature (see, among others, Strauss and Thomas, 1998 and Behrman, 1996). Of particular importance are the consequences of child malnutrition during the preschool period (Beaton, et al., 1993, Bhutta, et al., 1999, Bleichrodt and Born 1994, Lozoff and Wachs 2000, Pelletier, Frongillo and Habicht 1993, Pelletier, et al., 1995, Rose, Martorell and Rivera 1992, Wachs 1995). It is estimated that about half of all deaths in developing countries in children less than five years of age are due to the interaction between malnutrition and common infections.

Previous research on QoL has been devoted mainly at the general relationship between perceived well-being and physical health (of which nutrition is a major determinant). In general, positive states of well-being correlate with better physical health (e.g., Hilleras, Jorm, Herlitz, and Winblad, 1998; Murrell, Salsman, & Meeks, 2003; Ostir, Markides, Black, & Goodwin, 2000). While the correlations between objective physical health and well-being are lower (in part because people appear to adapt over time to many illnesses and because most people are relatively healthy), certain illnesses that interfere with daily functioning produce marked decrements in well-being. Direction of causality is not fully understood: not surprisingly self-reported health affects well-being (see Okun, Stock, Haring, and Witter, 1984) as well as objective health does, at least in case of severe health problems (see Brief, Butcher, George, & Link, 1993; Okun & George, 1984). However, there is also evidence that causality might run from well-being to health (see Diener and Seligman, 2004, p.13).

Here our main research questions are whether nutritional insecurity affects perceived measures of wellbeing and what the importance of nutritional problems is compared to

other alternative measure of deprivation (such as income measures, health status, unemployment and availability of social networks).

This issue is studied with 2 strategies: first we employ a cross-country approach, making use of the Gallup survey complemented with other national level information. In addition to this, we focus on the Colombian case using data from Fedesarrollo's *Encuesta Social*.

While the international comparison approach will allow us to address the main research question (relationship between nutritional insecurity and perceived well-being), the Colombia-specific exercise gives us the possibility of studying the relationship between a change in nutritional insecurity and change/level of perceived well-being, given the panel structure of the *Encuesta Social*.

One important finding when we study the relationship between perceived well-being and nutritional insecurity is that more nutritional insecurity has a negative effect on life satisfaction. This result is robust to taking into account several potentially important determinants of life satisfaction and to the choice of different estimation approaches and samples.

A second major issue studied here refers to the importance that intrahousehold allocation patterns have on the relationship between nutritional insecurity and perceived well-being. Our approach consists of studying first, with the Gallup's survey, whether the relationship between food insecurity and perceived well-being works in a differential manner according to gender, age, measures of woman role and position within the household (i.e. relationship with household head). Stepping down to a more micro level, we will then study directly the relationship between nutritional outcomes and nutritional insecurity within the Colombian context using data from the *Encuesta nacional de la situación nutricional en Colombia* (ENSIN).

Turning to the relationship between income and QoL, our approach is to focus on proxies of income stability (volatility of income and/or difference between current of income and permanent income) and relate them to measures of perceived well-being. In principle,

instability of income, potentially a major determinant of deprivation, can be very detrimental to objective and perceived well-being. However, this can be mitigated (or completely offset) by factors such as access to markets, availability of saving and insurance mechanisms, and the possibility of relying on social and family networks. Whether instability of income affects objective and perceived well-being is an empirical issue we want to investigate.

In particular we derive several proxies of household economic security and we relate them to a measure of perceived well-being. At the level of international comparisons, we make use of the *Latibarometro* survey to study the relationship between perceived deprivation and job insecurity (as a proxy of income instability). In addition to this, we perform a Colombia-focused analysis, using data from *Encuesta Social*, in which we proxy income instability with measures of income volatility.

Before turning to the study of the research issues presented above, it is important to discuss a definitional issue. Terms like “quality of life”, “well-being” and “happiness” entail different meanings and refer to very broad concepts. In order to reduce the confusion, several standard definitions have been proposed but a common and consistent organization of the concepts is yet to be achieved. Veenhoven (2000) proposes an analytic tool that can be used to clarify and classify the different meanings of “quality of life”; in particular, a fourfold classification of qualities of life is proposed. In what follows we use Veenhoven’s approach to organize the concepts and measures which we employ in our paper to study the general relationship between deprivation and perceived well-being (see table 1).

This paper is organized as follows. In section 2 we briefly describe the data we use. Section 3 deals with our main research question, that is whether nutritional insecurity affects perceived well-being. Section 4 will investigate who, within the household, is bearing more the consequences of nutritional insecurity both in terms of perceived well-being and of objective nutritional outcomes. In section 5 we will focus on the relationship between

perceived well-being and income instability. Finally, some concluding remarks and a discussion of the policy implications of the results are in section 6.

Table 1 – The four Qualities of Life (from the perspective of an individual)

	Outer Quality	Inner Quality
Chances	<ul style="list-style-type: none"> -Nutritional insecurity (if aggregate shock, e.g. a drought at country level) -Availability of social Networks -Women role in the society -Access to smoothing mechanisms (e.g. for unemployment) -(How good information about nutritional issues is) 	<ul style="list-style-type: none"> -Objective nutritional measures -Objective health status -Nutritional insecurity (shock at level of individual/household) -Position within the household (this can give a different capability of coping with problems of life) -Education -Stability of income flow
Results	<ul style="list-style-type: none"> -(Caring about children’s nutrition) - (“Eating well”) (good for the society since less health cost related to obesity) 	<ul style="list-style-type: none"> -Life satisfaction -Perceived standard of living -Perceived health status

Dimensions/variables not observed in our study are in brackets

2. Data

We discuss here some general details of the data sources used. Specific questions used in our estimation approaches are discussed in sections below together with the discussion of the results.

Gallup World Poll survey

Institution: Gallup

Frequency: yearly 2006 and 2007

Coverage: 132 countries;

Sample: cross section; 1000 individual observations per country

Link: <http://www.gallupworldpoll.com/content/24046/About.aspx>

The surveys contains information on a large set of dimensions (key for our purposes are perceived well-being (life satisfaction, health status, inequality) and nutritional insecurity) for 132 countries.

Encuesta Social

Institution: Fedesarrollo

Frequency: yearly from 1999-2006 + new wave 2007

Coverage: Bogota', Cali, Bucaramanga

Sample: cross-section 1999-2003, panel 2004 to 2007

Link: description: <http://www.fedesarrollo.org/contenido/articulo.asp?chapter=161&article=470>

results: <http://www.fedesarrollo.org/contenido/capitulo.asp?chapter=162>

We will exploit the panel structure of this survey (from 2004). In addition to this, the 2007 survey will include additional questions that are useful for our research purposes: questions about nutritional insecurity (a special focus will be put on younger members within the household; in particular one question will ask whether there was not enough money to buy food for kids and teenager) as well as perception of well-being (in line with the Gallup's survey a question about life satisfaction will be added; in particular it will be asked on which step of the ladder the respondent feels to stand at the time of the interview assuming a ladder with steps numbered from zero to ten and that the higher the step the better he feels about his life, and the lower the step the worse he feels about it).

Encuesta nacional de la situacion nutricional en Colombia

Institution: Instituto Colombiano de Bienestar Familiar

Frequency: 2005

Coverage: Nationwide Colombia

Sample: 19500 households

Link: http://www.bienestarfamiliar.gov.co/ESPANOL/informes/encuesta_nal_de_la_situa/encuesta_nal_situa_nutricional.html

This survey contains anthropometric indicators, blood test measures and individual nutritional intakes of people age 2 to 64 years (particularly intakes of kilocalories, proteins, fats, carbohydrates, fibre, vitamin a, vitamin c, folic acid, zinc, calcium, iron).

Latibarometro

Institution: Corporación Latinobarómetro

Frequency: 1995-2005

Coverage: 18 countries (Bolivia, Costa Rica, El Salvador, Ecuador, Guatemala, Honduras, Mexico, Nicaragua, Panama', Peru', Uruguay, Argentina, Brasil, Venezuela, Chile, Colombia, Paraguay)

Sample: representative of 100% of population in all countries but Chile (70%)

Link <http://www.latinobarometro.org/index.php?id=8#18>

This is a unique survey for studying perception within LAC countries. In particular, we exploit the variables about job insecurity.

3. Nutritional insecurity and perceived well-being

Does, and to what extent, nutritional insecurity affect perceived measures of wellbeing?

In particular, our purpose is to understand whether food related problems are a main determinant of perceived well-being and what their importance is compared to other alternative measures of deprivation.

This issue will be studied with 2 strategies: first we employ a cross-country approach, making use of the Gallup survey complemented with other national level information. In addition to this, we focus on the Colombian case using data from Fedesarrollo's *Encuesta Social*. While the international comparison approach will allow us to address the main research question (relationship between nutritional insecurity and perceived well-being), the Colombia-specific exercise will give us the possibility of studying the relationship between a change in nutritional insecurity and change/level of perceived well-being, given the panel structure of the *Encuesta Social*.

International comparison: nutritional insecurity and perceived well-being

The first exercise is a cross-country approach that uses data from the Gallup World Poll survey. Several questions in this survey can be used as proxies of perceived well-being and nutritional insecurity.

Our main proxy of perceived well-being is the ladder question asking “on which step of the ladder (of life satisfaction) you feel to stand now” (see Q.1)¹. Another proxy is the one about perception of one’s standard of living (see Q.2).

Two different proxies of nutritional insecurity are used: one based on the question about not having enough money to buy food in the last 12 months (see Q.5; we label it here NI_money or “not enough money”) and the other one on the question about whether you or your family have gone hungry in the past 12 months (see Q.6; NI_hungry or “gone hungry”).

Figures 1 and 2 introduce the research issue we study here. They suggest that there is a negative association (and not far from being linear) between country average nutritional insecurity (proxied by “not enough money”) and the life satisfaction measure (see figure 1), with this relationship holding for the subset of LAC countries (see figure 2).

Is this relationship (more nutritional insecurity associated with lower life satisfaction) still holding after we take into account several potentially important determinants of life satisfaction, such as income measures, health status, unemployment and availability of social networks?

Our first answer to this question is based on a regression framework based on specification (1) in which we use country averages for the sample of all countries available in wave 2006 and the ladder question Q.1 as dependent variable. The results are in table 3.1 (for NI_money) and 3.2 (for NI_hungry).²

Our results show that on average countries with a higher nutritional insecurity rate have a lower average life satisfaction, with this result being robust to the choice of the proxy of nutritional insecurity and different sets of control variables. Main alternative determinants

¹ Full wording of all the relevant questions used here is in appendix A.

² Details of the estimations are below each table.

of life satisfaction included in the regressions are availability of social networks (proxied by question Q.34), being employed and presence of health problems (see Q.35).

$$(1) \quad Y_{i,t} = \beta_0 + \beta_1 NUT_{i,t} + \beta_2 EXP_{i,t} + \beta_3 X_{i,t} + e_{i,t}$$

where: i means country averages

t refers to wave 2006, 2007

Y = measures of perceptions of well-being

EXP = alternative (to nutritional insecurity) explanatory variables.

X = control variables

We then re-estimate specification (1) using data at the individual level (that is, we use all the observations within each country) and using the same sample (all countries in 2006 waves) we confirm that more nutritional insecurity translates into less life satisfaction (see results in table 3.3 and 3.4).

As the life satisfaction question has a time dimension for each respondent we calculate the standard deviation of past, current and future life satisfaction answers³ and study how this relates to nutritional insecurity. While results show that more nutritional insecurity (proxied by NI_money"; see table 3.5) brings to more volatility in life satisfaction over time, this does not seem to be case when NI_hungry is used as proxy of nutritional insecurity (see tables 3.6).

We exploit the time dimension of the life satisfaction question in one other way, that is we relate the current nutritional measures to the answer to the question about life satisfaction in the future (or better the perception formed at the current time about one's life satisfaction in the future). Results in table 3.7 and 3.8.

³ Respondents in each wave answer 3 related questions: one about current life satisfaction, one about life satisfaction 5 years ago and another one about life satisfaction in 5 years.

A different proxy of perceived well-being is also used, that is “satisfaction with one’s standard of living” (see Q.2). Both proxies of nutritional insecurity have a negative effect on perception of standard of living, with the effect being stronger for NI_money (see table 3.9 and 3.10).

We then finally turn our focus to LAC countries, with this allowing us to exploit both waves (2006 and 2007) of the Gallup survey. We estimate specification (1) using time and country fixed effects. Most of the estimations run above are repeated for this new sample, in particular we estimate the effect of nutritional insecurity on the life satisfaction measure Q.1 (see results in table 3.11 for proxy “not enough money” and in 3.12 for “gone hungry”), on standard deviation of the life satisfaction answers (see tables 3.13 and 3.14) and finally the relationship between satisfaction with standard of living (Q.2) and nutritional insecurity (see tables 3.15 and 3.16). While the main patterns of results above are generally confirmed by these new set of findings for LAC countries, two interesting differences are that the estimated impact of nutritional insecurity is smaller in magnitude (around -0.8 for LAC countries, bigger than 1 for the sample of all countries). In addition to this, we find that the (negative) effect of nutritional insecurity on standard deviation of life satisfaction is significant also for the proxy “gone hungry” in LAC countries sample.

Colombia case: change in nutritional insecurity and change in perceived well-being

We turn to our country specific exercise with three purposes: study whether our main result of nutritional insecurity being a negative determinant of life satisfaction holds also within the Colombian setting; focus on the change in nutritional insecurity and finally assess the role of victimization.

Our data source for this section is *Encuesta Social*, a survey that focuses on three of the main cities in Colombia (Bogota’, Bucaramanga and Cali). While there is not a direct question on life satisfaction in *Encuesta Social*, the availability of several questions about perceived status allowed us to define a proxy of perceived well-being as follows. We use 4

questions (see Q.7 to Q.10) and we compute an index ranging from 0 (lowest negative state) to 4 (highest positive state) that it is a count of how many ones (that is answer “yes” for Q.7 and Q.9, and answer “improved” for Q.8 and Q.10) are for each household (the question is at the household level; see table 3.17 for some descriptive statistics).

Nutritional insecurity is proxied by question (Q.11) and (Q.12), the first one referring more generally to “not having enough money to buy food” (NI_money), while the second one specifically to “being not able to consume meat” (NI_meat).

Our main hypothesis is tested in the Colombian setting estimating specification (3). We exploit the panel feature of Encuesta social (waves 2005 and 2006). We estimate with pooled OLS, random effects and fixed effects. Results are in table 3.18 (for proxy NI_money) and 3.19 (NI_meat).

$$(3) \quad Y_{i,t} = \beta_0 + \beta_1 \Delta NUT_{i,t} + \beta_2 EXP_{i,t} + \beta_3 X_{i,t} + \varepsilon_{i,t}$$

$$(4) \quad \Delta Y_{i,t} = \beta_0 + \beta_1 \Delta NUT_{i,t} + \beta_2 EXP_{i,t} + \beta_3 X_{i,t} + \varepsilon_{i,t}$$

where:

i is household, t is time (waves 2005, 2006, 2007)

Y_i = measure of perceived well-being

NUT_i = measures of nutritional insecurity

EXP_i = alternative (to nutritional insecurity) explanatory variables

X_i = control variables

Evidence is remarkably unanimous: no matter which estimation approach is pursued or which nutritional insecurity proxy is employed, nutritional insecurity has a negative effect on our proxy of perceived well-being after controlling for several potentially important determinants of life satisfaction.

We then turn to the study of the change in nutritional insecurity. Being nutritional insecurity (in what follows we use sometimes the abbreviation NI) proxied by a dummy variable, our variable of change in nutritional insecurity (between 2005 and 2006 wave) is a categorical one with the following values: 0 if NI₂₀₀₅=0 and NI₂₀₀₆=0; 1 if NI₂₀₀₅=1 and NI₂₀₀₆=0; 2 if NI₂₀₀₅=0 and NI₂₀₀₆=1 and 3 if NI₂₀₀₅=1 and NI₂₀₀₆=1 (see table 3.20 for some descriptive statistics).

Being these the change patterns in nutritional insecurity, the next step is to define an appropriate comparison group for each of them. For example, the change in perceived well-being after a drop in NI (from 1 to 0) can be compared to households that did not have nutritional problems in the 2 waves (0 to 0) or to household that did have them (1 to 1). Our approach is to try in separate regressions the different comparison groups. Results are in tables 3.21 (NI_money) and 3.22 (NI_meat).

The following example should clarify how to read tables 3.21 and 3.22: consider table 3.21, column 2 (in which we include control). An increase in nutritional insecurity (that is change pattern="increase in NI (from 0 to 1)") has a significant negative effect (-0.394) when compared to households that faced a decrease in NI (see "3.decrease in NI (from 1 to 0)") and an effect of -0.299 when compared to households that experienced either a stable pattern (from 1 to 1) or a decrease in NI (from 1 to 0) (see row "2+3").

Our preferred comparison group for household that experienced an increase in NI is households with a stable pattern of no NI (from 0 to 0), since we are comparing household that started with the same level of NI (absence of it in wave 2005) and then had different levels of NI in 2006. While the coefficient estimated for NI has the expected negative sign (-0.037 for NI_money and -0.012 for NI_meat), this is not significant. However, if households with an increase in NI are compared with households with an opposite change pattern (decrease in NI) then the effect of change in NI is negative and significant (-0.394 for "not enough money" and -0.441 for "gone hungry").

When we compare household with a decrease in NI (from 1 to 0) with the group of those household that have a stable pattern of presence of NI (from 1 to 1) we find that the estimated coefficient is, as expected, positive and significant for the proxy NI_money (+0.243), but not significant for NI_meat (+0.155).

The final exercise in this section is one in which we re-estimate specification (3) trying to assess the effect of the victimization variables (victimization proxies are available only for 2006 wave). In particular we use dummies for: whether any member of the household has been victim of a crime; whether contacted police in last 6 months; whether taken any safety measure in the last year. Results in tables 3.23 and 3.24 suggest that victimization does not play a major role in the relationship between nutritional insecurity and perceived well-being.

4. Who is bearing nutritional insecurity within the household?

Household and individual characteristics can affect nutritional outcomes as well as the relationship between nutritional insecurity and perceived well-being. Two issues are relevant here: food insecurity at the household level might not necessarily translate into perceived or objective deprivation for all the members within the household (for example, intrahousehold allocation patterns might result in a food shock having more negative consequences for children than adults; see, among others, Behrman, 1988). Another issue is that nutritional patterns might reflect traditional practices, which might differ according to ethnic background. The ability of the household of coping with nutritional instability might depend on these practises (see Webb, Nishida and Danton-Hill, 2007 and the references in there).

Our approach consists of studying first, with the Gallup's survey, whether the relationship between food insecurity and perceived well-being works in a differential manner according to gender, age, measures of woman role and position within the household (i.e. relationship with household head).

Stepping down to a more micro level, we will then study directly the relationship between nutritional outcomes and nutritional insecurity within the Colombian context using data from the *Encuesta nacional de la situación nutricional en Colombia* (ENSIN).

Relationship between food insecurity and perceived well-being

Evidence that nutritional insecurity affects measures of perceived wellbeing does not necessarily imply that this relationship holds for all the members of the household, age-groups, ethnic groups and so on. As an example, consider an household that faces a food crisis (that is the food insecurity at the household level increases), in this case the perceived wellbeing of only some members within the household might be affected due to particular intrahousehold allocation patterns (for example, in case of a food shock the household might decide to reduce food intake of non-working members only). This can be studied with the Gallup's survey since the relationship between food insecurity questions (which ask the respondents to think about the situation of themselves and their family) and the questions about perceptions of wellbeing (that are eliciting individual information) are basically a relationship between a measure of a nutritional shock at the household level and proxies of individual wellbeing. The research issue is then to assess whether this relationship is different according to characteristics such as age, gender, relationship with household head and proxies of woman role in society.

The first exercise is a descriptive one: we estimate non parametrically the function linking life satisfaction (based on Q.1) and nutritional insecurity proxies for several categories of interest (age groups, gender, woman role in society and relationship with household head) and then plot these functions (see figure 3). While these estimated profiles can give only a very preliminary picture of the intrahousehold patterns behind the relationship between nutritional insecurity and life satisfaction, some interesting patterns arise: the negative effect of nutritional insecurity on life satisfaction becomes stronger as insecurity increases especially for older ages (see the difference in slopes in figure 3.a for all countries and 3.b

for LAC). Less marked differences arises when we consider gender and employment status as characteristics (see figure 3.c and 3.d).

One particularly interesting issue is the one about the importance of women role in society. A higher level of woman emancipation might make a difference in terms of consequences of nutritional insecurity. For instance, a woman with more bargaining power within the households might find easier to mitigate the consequences of nutritional insecurity for very young children. Our proxy of women “power” is an imperfect one, however it should be able to capture some aspects of the issue. We use the five statements in question (Q.17) (available only in 2007); each of these statements can be used as a proxy of women role in itself. In addition we compute an index ranging from 0 to 5 calculating for each respondent the number of answer “yes” to the statements.

The exercise we perform here is to study whether a difference in woman power can explain differences in the response to nutritional insecurity of younger age groups. In particular, we estimate the relationship between nutritional insecurity and life satisfaction of age group 15-19 (the youngest age group available in Gallup data) for different categories of women role index (in order to have enough observations for the non parametric estimation we define 3 categories: 0 if the women role index defined above takes values 0 or 1, 1=values 2 or 3 and 2=values 4 or 5). Figure 3.e shows a quite different response to nutritional insecurity in terms of our proxy of woman power: the negative slope of the estimated function is markedly bigger when woman power is lower (value 0).

We then turn to testing whether the response of life satisfaction to nutritional insecurity is different according to the categories described above using a more general regression setting based on specification (5).

$$(5) \quad Y_{i,t} = \beta_0 + \beta_1 DUM_{i,t} + \beta_2 NUT_{i,t} + \beta_3 DUM_{i,t}^c * NUT_{i,t} + \beta_4 EXP_{i,t} + \beta_5 X_{i,t} + \varepsilon_{i,t}$$

where:

i is household, c= relevant categories, t is time

Yi = measure of life satisfaction

NUTi= measures of nutritional insecurity

DUM=dummies for categories c

EXPi = alternative (to nutritional insecurity) explanatory variables

Xi = control variables

When testing differences according to age categories (we use as reference category the age group 30-39; see table 4.1) we find that there is a stronger negative impact of nutritional insecurity for very old ages (age 70 and above) both for nutritional insecurity proxy in terms of “not enough money” and “gone hungry”. As regards the youngest age group in our sample (age 15-19) we find an interesting result: while there is not a significant differential response in case of “not enough money”, this age group seems to bear more the consequence of nutritional insecurity when the proxy is “gone hungry”. Under the assumption that “gone hungry” is a proxy of more a serious nutritional problem compared to “not enough money” the result above suggest that only a more severe nutritional problem spill over into problems for younger ages. It gives some robustness to our results the fact that the results’ pattern are remarkably similar across the 3 samples of countries we consider: “all countries in 2006”, “all countries in 2006 + LAC in 2007”, “only LAC 2006 and 2007”.

Results for other relevant characteristics, namely sex, employment status, being household head and sex of household head are in table 4.2.

The last characteristics we try to exploit refers to the bargaining power of women. As stressed above more woman power within the household might alter the outcomes related

to presence of nutritional insecurity. Here we first test whether different levels of women power (as proxied by the 3 category variable defined above) determine a different response to nutritional insecurity. Results in table 4.3 suggest that this is not the case: the interaction of our measure of woman power (included both as a single variable and as dummies for categories) with nutritional insecurity (see columns 1 to 4) are not significant. In addition to this when we restrict the sample to the age group 15-19 the interaction of nutritional insecurity dummy and women power index is not significant either (see columns 5 and 6; interactions are not significant for other age groups either, results not shown). One caveat here is that, as stressed above, this proxy of women status might be not performing well in capturing the bargaining power of women within the household.

Nutritional outcomes and nutritional insecurity

In presence of nutritional insecurity who, within the household, is going to bear more the consequences (in terms of objective nutritional outcomes)? We try to answer this question within the Colombian context making use of a unique dataset that combines a module on perceptions of nutritional insecurity and individual nutritional outcomes, that is the *Encuesta Nacional de la Situacion Nutricional* en Colombia, or ENSIN, wave 2005.

In particular, we test here whether nutritional insecurity translates into different patterns as regards nutritional outcomes according to the following characteristics: age categories, children age 0-12 male and female, adults employed and pregnant or lactating females

Combining the results here (in terms of objective nutritional outcomes) with the results above (in terms of perceived status) can be potentially useful for at least two reasons: first we can establish some links that can be informative in terms of policy implications (for example, in case nutritional insecurity translates into a decrease in objective nutritional intake we can then build a bridge with the results about a perceived well-being and answer possibly more interesting questions, such as “Does this have an effect on life satisfaction?”. In a more methodological flavour the results here can also give us some

insights on the disconnections between household and individual level outcomes in case studies rely on household data (however this issue is not pursued here at the current stage).

Our proxies of nutritional insecurity are: dummy for whether in the last 30 days there was no enough money to buy food (see Q.18) and a variable measuring the degree of nutritional insecurity (4 categories where 0 is “absence of nutritional insecurity”, 1 “low nutritional insecurity”, 2 “nutritional insecurity with hunger, medium” and 3 is “nutritional insecurity with hunger, severe”; this is calculated on the basis of the responses to questions Q.18 to Q.23; this food security scale is based on Gary et al., 2000; an application to Colombian data is in Alvarez et al, 2006).

One first nutritional outcomes to be employed is daily kilocalorie intake (kcal). Being this measure not able to completely capture the substitution in nutritional content of food consumed, we also employ a better proxies of nutritional content, that is protein content per calorie. This is consistent with the idea that even if the individual caloric consumption stays constant in response to nutritional insecurity the substitution might still be happening at the level of foods with different quality/nutritional content.

We first consider the interaction between age groups and the nutritional insecurity dummy using specification (6).

$$(6) \quad Y_i = \beta_0 + \beta_1 DUM_i + \beta_2 NUT_i + \beta_3 DUM_i^c * NUT_i + \beta_4 EXP_i + \beta_5 X_i + \varepsilon_i$$

where:

i= household, c= categories such as age groups, gender, relationship with household head, adult working status.

DUM= dummy for relevant categories

Y = Nutritional outcome

NUT= measure of nutritional insecurity

Xi = control variables

For the age group 30-45 (our omitted category) the estimated impact of nutritional insecurity is a drop of 7,6% in daily caloric intake and of 7,3% in protein per calorie (see table 4.4). When we consider the interactions with the age groups a remarkably different patterns comes out: while the negative impact of nutritional insecurity is even stronger for younger ages in terms of daily caloric intake (see column 1), younger age groups bear less the consequences of nutritional insecurity in terms of protein per calorie (see column 2). This might suggest that when facing a nutritional problem households try to keep constant the caloric intake for older/working age groups, allocating less calories to younger ages, however it seems that at the same time younger ages are more sheltered in terms of decrease in nutritional content (quality) of food consumed.

A richer picture arises when we repeat the estimation allowing for different degree of nutritional insecurity (using the food security scale discussed above). We report the results in table 4.5 (while in the estimation the categories of food security are included in the same estimation, in table 4.5 we report them in different columns for clarity; the omitted category is households with “absence of nutritional insecurity”). Main findings are that only high levels of food insecurity (see columns 2 and 3) have a negative impact on caloric intake of young ages. The relatively better response to nutritional problem of younger ages in terms of protein per calories is still present for low level of nutritional insecurity (see columns 4 and 5) but disappears for the highest level of nutritional insecurity (as measured by the food security scale employed here, “nutritional insecurity with hunger, severe”; see column 6 in table 4.5).

This last set of results is remarkably in line with those above in terms of life satisfaction. There we find that life satisfaction of younger ages is negatively affected only by a proxy of a more serious nutritional problem. Consistent with this here we find that when facing a very high level of nutritional insecurity younger ages do not respond relatively better to nutritional insecurity (contrary to what happens for lower levels of nutritional insecurity).

Overall this result might be also used as evidence that the life satisfaction measure performs quite well as proxy of individual well-being.

Results for the other relevant categories (children less than 12, females and adult working status) are in tables 4.6, 4.7 and 4.8.

5. Perceived well-being and income instability

The last issue we want to study refers to the relation between objective and perceived deprivation and income instability. Recent work by Angus Deaton (2007), using the 2006 Gallup's survey, shows that happiness is always increasing in income and there is not a threshold above which income has no further effect on happiness. At the same time, it seems that more income growth is associated with less happiness.

Here we derive several proxies of household economic security proxies and we relate them to measure of perceived well-being. At the level of international comparisons, we make use of the *Latibarometro* survey to study the relationship between perceived deprivation and job insecurity (as a proxy of income instability).

In addition to this, we perform a Colombia-focused analysis, using data from *Encuesta Social*, in which we proxy income instability with measures of income volatility.

International comparison: Perceived well-being and income instability (proxied by difference between current income and permanent income)

In this first exercise we study how job insecurity (as proxy of income instability) affects life satisfaction. While *Latinobarometro* is a remarkable data source for studying perceptions in LAC countries over time (9 waves are available: 96 to 98, 2000 to 2004), one caveat is that most of the questions are not asked in all the waves. Our estimation approaches reflect the

attempt to try to compromise between the desire to use all the relevant variables and that of including as many waves (and so observations) as possible.

The estimation approach is based on specification (7). Our measures of perceived well-being is based on the direct question about life satisfaction available in *Latinobarometro* (see Q.24). As regards proxies of job security we employ different proxies that are explained below along with the discussion of the results.

$$(7) \quad Y_{i,t} = \beta_0 + \beta_1 \text{InclInst}_{i,t} + \beta_2 \text{EXP}_{i,t} + \beta_3 X_{i,t} + \varepsilon_{i,t}$$

where:

i is country averages, t is time

Yi =life satisfaction proxy

InclInst=Income instability measure

EXPi = alternative (to income instability) explanatory variables

Xi = control variables

Our first approach is to use a direct question on the degree of job security (see Q.33) as proxy of income instability; this question ask both about the current degree of job security and one in the past. The estimation is based on one wave (1997) only as the question above was asked only in 1997. Results in table 5.1 seem to suggest that overall the less secure your job is the less you are satisfied with your life (see column 1). In addition to this, this pattern holds both for current job security and for the proxy of it referring to the past (see column 2).

We then employ a different proxy of job security, this is the one asking “how worried you are about losing your job” (see Q.26). Being this question available in each of the waves, we can fully exploit the panel dimension of the survey. The results in table 5.2 (see column1 and 2) show that even a low degree of “being worried of losing one’s job” is

associated with a lower life satisfaction (see row “step 2”). Then higher degree of job insecurity will bring about a bigger negative impact on life satisfaction. When we restrict only to waves 2003 and 2004, in order to include control for health satisfaction (see Q.25), results’ pattern are basically unchanged (see columns 3 and 4).

One last proxy of job security is the question about “how much do you feel protected by the labor regulation in this country” (see Q.27), which is available for waves 1997, 2000 and 2001. Results in table 5.3 suggest that the less a worker is protected the more this has a negative influence on life satisfaction.

Overall the evidence above is remarkably consistent and a quite clear pattern seems to arise: more insecurity related to job brings about a lower perceived well-being, with this negative impact becoming stronger as the degree of job insecurity increases.

Colombia case: perceived well-being and income instability (proxied by volatility of income)

In our Colombia-specific estimation we focus on volatility of income as proxy of income instability. Two different proxies of income instability are available in our data source (*Encuesta Social*): a direct question about income stability (see Q. 32) and variability over time of income of the household head. The measure of perceived well-being we use is as in section 3 (see the discussion there for more details).

We estimate specification (8) and our main results exploit the direct question on income instability. Respondents report directly if they consider their income “very unstable”, “quite unstable”, “quite stable” or “very stable”.

We first study whether considering income “quite or very unstable” affects life satisfaction (that is we include a dummy for whether “income is quite or very unstable” in the regression; see columns 1 and 2 in table 5.4). We find a negative effect: presence of

instability of income (not taking into account the degree of it) lowers life satisfaction. We then consider the different degrees of income instability (that is we include the proxy as dummies for each category in the regression). Results show that only the category “very unstable” seems to lower life satisfaction (see columns 3 and 4).

$$(8) \quad Y_{i,t} = \beta_0 + \beta_1 \text{IncInst}_{i,t} + \beta_2 \text{EXP}_{i,t} + \beta_3 X_{i,t} + \varepsilon_{i,t}$$

where:

i is household, t is time

Yi = measure of life satisfaction

IncInst=perception of income stability

EXPi = alternative explanatory variables

Xi = control variables

Our next step will be to exploit variability over time of income of the household head as proxy of income instability. At the current stage only 2 waves (2005 and 2006) are available with information on incomes in our data source, with this meaning that we are not able to separate the change in income from its variability over time (these features might have different impacts on life satisfaction: for example, an increase in income in last 12 months might be associated to a higher life satisfaction, however if the past stream of incomes was very volatile this might affect negatively life satisfaction). Data from wave 2007 will be shortly available and will allow us to correctly disentangle variability in income (proxied by coefficient of variation) from change in income so as to estimate specification (9).

$$(9) \quad Y_{i,t} = \beta_0 + \beta_1 \text{CV(INC)}_{i,t} + \beta_2 \Delta \text{INC}_{i,t} + \beta_3 \text{EXP}_{i,t} + \beta_4 X_{i,t} + \varepsilon_{i,t}$$

where:

i is household, t is time

Yi = measure of life satisfaction

INC= Income of Household Head; CV(INC)= Coefficient of variation

EXPi = alternative explanatory variables

Xi = control variables

6. Conclusions

The narrow view of choice being the only aspect of human life that can be observed (and so the only determinants of individual utility) has been challenged by a new literature that is trying to add psychologists' techniques to the tools of economics. In particular, Quality of Life is approached with a holistic perspective that goes beyond income-based measures of welfare and tries to incorporate broader measures of well-being.

Within this broader approach we studied the relation between QoL and deprivation. Among the several measures of deprivation that can potentially affect well-being we focussed on measures of nutritional insecurity and income volatility.

As regards the relationship between nutritional insecurity and perceived well-being our main finding is that more nutritional insecurity has a negative effect on life satisfaction. This result is robust to taking into account several potentially important determinants of life satisfaction, such as income measures, health status, unemployment and availability of social networks, and to the choice of different estimation approaches and samples (worldwide, LAC countries, Colombia-specific case). In addition to this, a change in nutritional insecurity status seem to have an affect on life satisfaction.

When we turn to study of whether the relationship between food insecurity and perceived well-being works in a differential manner according to "intrahousehold allocation" characteristics, an interesting result arises: when testing differences according to age categories (we use as reference category the age group 30-39; see table 4.1) we find that there is a stronger negative impact of nutritional insecurity for very old ages (age 70 and above) both for nutritional insecurity proxy in terms of "not enough money" and "gone hungry". As regards the youngest age group in our sample (age 15-19) we find that while there is not a significant differential response in case of "not enough money", this age group seems to bear more the consequence of nutritional insecurity when the proxy is "gone hungry". Under the assumption that "gone hungry" is a proxy of more serious

nutritional problem compared to “not enough money” the result above suggest that only a more severe nutritional problem spill over into problems for younger ages.

In terms of nutritional outcomes (we use daily caloric intake and protein per calorie) we find that younger ages are coping relatively better (in terms of protein per calorie) than older groups to the presence of nutritional problems. However, this result does not hold at very high degree of nutritional insecurity.

This last set of results is remarkably in line with those above in terms of life satisfaction. There we find that life satisfaction of younger ages is negatively affected only by a proxy of a more serious nutritional problem. Consistent with this here we find that when facing a very high level of nutritional insecurity younger ages do not respond relatively better to nutritional insecurity (contrary to what happens for lower levels of nutritional insecurity). Overall this result might be also used as evidence that the life satisfaction measure performs quite well as proxy of individual well-being.

Turning to the last part of the paper, the relationship between income instability and QoL is studied deriving relating several proxies of household economic security and relating them to measure of perceived well-being.

At the level of international comparisons (we make use of the *Latibarometro* survey) the evidence we gather is remarkably consistent and a quite clear pattern seems to arise: more insecurity related to job (our proxy of income instability) brings about a lower perceived well-being, with this negative impact becoming stronger as the degree of job insecurity increases.

In the Colombia-focused analysis, using data from *Encuesta Social*, we proxy income instability with a direct question asking respondents to grade the degree of stability of the income they receive. Our evidence suggests that only for those considering their incomes very unstable there is a negative effect on life satisfaction.

References

- Álvarez MC, Estrada A, Montoya EC, Melgar-Quiñónez H., 2006, Validación de escala de la seguridad alimentaria doméstica en Antioquia, Colombia. *Salud Publica Mex* 2006;48:474-481.
- Beaton, G.H., R. Martorell, K.I. Aronson, B. Edmonston, B. McCabe, A.C. Rossand and B. Harvey., 1993, "Effectiveness of Vitamin a Supplementation in the Control of Young Child Morbidity and Mortality in Developing Countries." ACC/SCN State-of-the Art Series Nutrition Policy Discussion Paper No. 13. Toronto, Canada: Toronto University, 1993.
- Behrman, Jere R, 1988, "Nutrition, health, birth order and seasonality: Intrahousehold allocation among children in rural India *Journal of Development Economics*, Volume 28, Issue 1, February 1988, Pages 43-62
- Behrman, Jere R, 1996. "The Impact of Health and Nutrition on Education," World Bank Research Observer, Oxford University Press, vol. 11(1), pages 23-37, February.
- Bernal, R. and M. Cardenas, 2007, "Child Labor in Colombia", forthcoming, NBER Working Paper.
- Bhutta, Z.A., R.E. Black, K.H. Brown, J. Meeks Gardner, S. Gore, A. Hidayat, F. Khatun, R. Martorell, N.X. Ninh, M.E. Penny, J.L. Rosadol, S.K. Roy, M. Ruel, S. Sazawal and A. Shankar., 1999, "Prevention of Diarrhea and Pneumonia by Zinc Supplementation in Children in Developing Countries: Pooled Analysis of Randomized Controlled Trials." *Journal of Pediatrics* 135:689-697, 1999.
- Bleichrodt. N. and M.P. Born., 1994, "A Metaanalysis of Research on Iodine and its Relationship to Cognitive Development." In: J.B. Stanbury (Ed) *The Damaged Brain of Iodine Deficiency: Neuromotor, Cognitive, Behavioral, and Educative Aspects*. New York: Cognizant Communication Corporation, 1994, 195- 200.
- Brief, A.P., Butcher, A.H., George, J.M., & Link, K.E. (1993). Integrating bottom-up and top-down theories of subjective well-being: The case of health. *Journal of Personality and Social Psychology*, 64, 646–653.
- Deaton, A. July 2007. "Income, aging, health and wellbeing around the world: Evidence from the Gallup World Poll", mimeo, Princeton University
- Diener, E. and Seligman, M. 2004. "Beyond Money". *Psychological Science in the Public Interest*: American Psychological Society: Volume 5, N°1: 1-31.
- Diener, E. et al.. 2003. The relationship between income and subjective well-being: relative or absolute? *Social Indicators Research* 28, 195–223.
- Easterlin, R. 1974. Does economic growth improve the human lot? Some empirical evidence. In *Nations and Households in Economic Growth*, ed. P. David and M. Reder. New York: Academic Press.

Easterlin, R. 2003. Explaining happiness. *Proceedings of the National Academy of Sciences* 100 (19), 11176–83.

Fahey, T., Nolan B. and Whelan C. T., 2003, "Monitoring quality of life in Europe", Luxembourg: Office for Official Publications of the European Communities (download version at <http://www.eurofound.eu.int/publications/EF02108.htm>)

Gary B, Nord M, Price C, Hamilton W, Cook J., 2000, Guide to Measuring Household Food Security, Revised 2000. Alexandria VA: U.S. Department of Agriculture, Food and Nutrition Service, 2000.

Graham, C. and Pettinato, S. 2002. *Happiness and Hardship: Opportunity and Insecurity in New Market Economies*. Washington, DC: The Brookings Institution.

Goodman, A.C. and M. Kaway, 1982, Permanent Income, hedonic prices, and demand for housing: New Evidence, *Journal of Urban Economics*, vol.12, sep, page 214-237

Hilleras, P.K., Jorm, A.F., Herlitz, A., & Winblad, B., 1998, Negative and positive affect among the very old: A survey on a sample age 90 years or older. *Research on Aging*, 20, 593–610.

Kenny, Anthony and Charles. (2006) "Life, Liberty and the Pursuit of Utility", Imprint Academic., UK

Lozoff, B. and T. Wachs., 2000, "Functional Correlates of Nutritional Anemias in Infancy and Eady Childhood - Child Development and Behavior." In: U. Ramakrishnan (Ed.). *Nutritional Anemia*. Florida: Crc Press, 2000.

Murrell, S.A., Salsman, N.L., & Meeks, S. (2003). Educational attainment, positive psychological mediators, and resources for health and vitality in older adults. *Journal of Aging and Health*, 15, 591–615

Okun, M.A., & George, L.K. (1984). Physician- and self-ratings of health, neuroticism and subjective well-being among men and women. *Personality and Individual Differences*, 5, 533–539.

Okun, M.A., Stock, W.A., Haring, M.J., & Witter, R.A. (1984). The social activity/subjective well-being relation: A quantitative synthesis. *Research on Aging*, 6, 45–65.

Ostir, G.V., Markides, K.S., Black, S.A., & Goodwin, J.S. (2000). Emotional well-being predicts subsequent functional independence and survival. *Journal of the American Geriatrics Society*, 48, 473–478.

Oswald, A. 1997. Happiness and economic performance. *Economic Journal* 107, 1815–31.

Pelletier, D.I., E.A. Frongillo and J-P Habicht., 1993, "Epidemiologic Evidence for a Potentiating Effect of Malnutrition on Child Mortality." *American Journal of Public Health* 83(8):1130-1133, 1993.

Pelletier, D.I., E.A. Frongillo Jr, D.G. Schroeder and J-P Habicht., 1995, "The Effects of Malnutrition on Child Mortality in Developing Countries." *Bulletin of the World Health Organization* 73(4):443-448, 1995.

Rojas, M. 2004. *Well-being and the Complexity of Poverty*, Research Paper No. 2004/29. Helsinki: World Institute for Development Research.

Rose, D., R. Martorell, and J.A. Rivera., 1992, "Infant Mortality Rates Before, During, and after a Nutrition and Health Intervention in Rural Guatemalan Villages." *Food and Nutrition Bulletin* 14:215-220, 1992.

Sen, A., 1986, "The Standard of Living", in *Tanner Lectures on Human Values*, Vol. VII, Sterling McMurrin, ed. Cambridge, UK: Cambridge U. Press

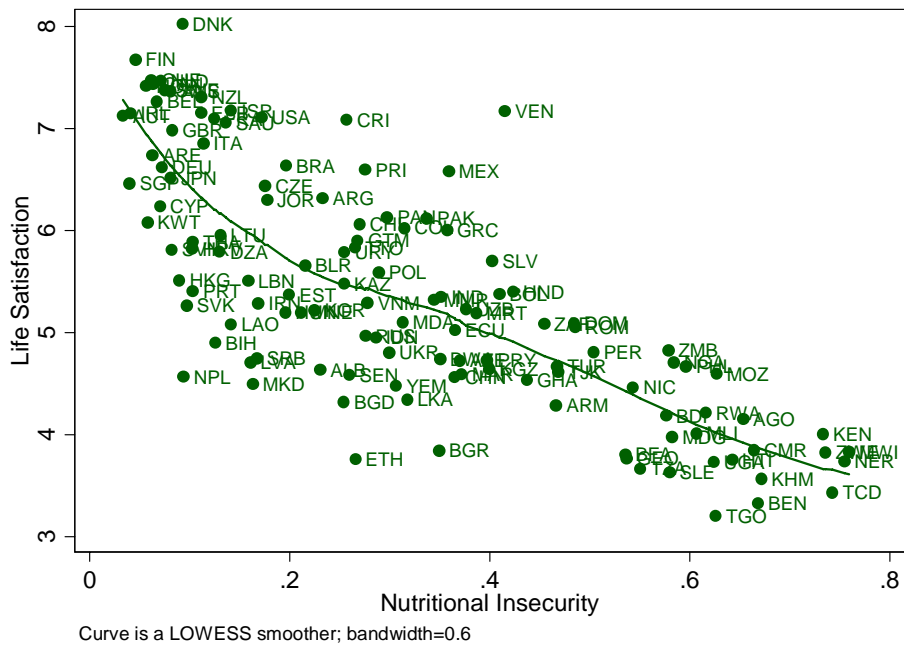
Strauss, J. and Thomas, D., 1998, "Health, Nutrition and Economic Development", *Journal of Economic Literature*, Vol. 36, No. 2, June, 766-817

Wachs, T.D., 1995, "Relation of Mild-to-Moderate Malnutrition to Human Development: Correlational Studies." *Journal of Nutrition* 125:2245s-54s, 1995.

Webb, Nishida and Danton-Hill, 2007, "Global distribution of micronutrients deficiencies" *Nutrition reviews*, vol.65, no.5

FIGURES

**Figure 1: Scatter Life Satisfaction against Nutritional Insecurity (proxied by “not enough money”)
Gallup, country averages, all countries wave 2006**



**Figure 2: Scatter Life Satisfaction against Nutritional Insecurity (proxied by “not enough money”)
Gallup, country averages, LAC countries wave 2006**

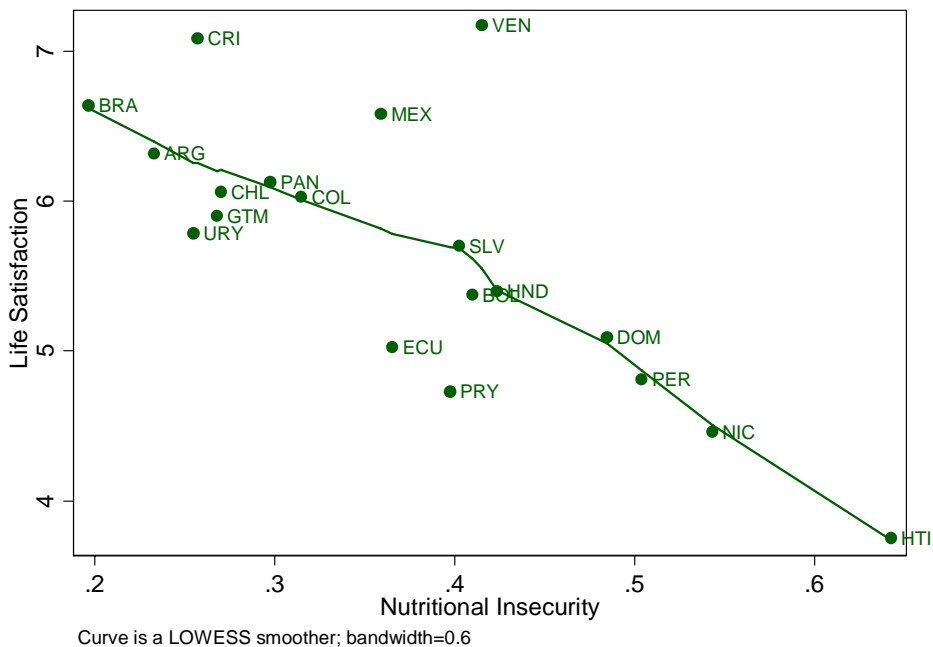
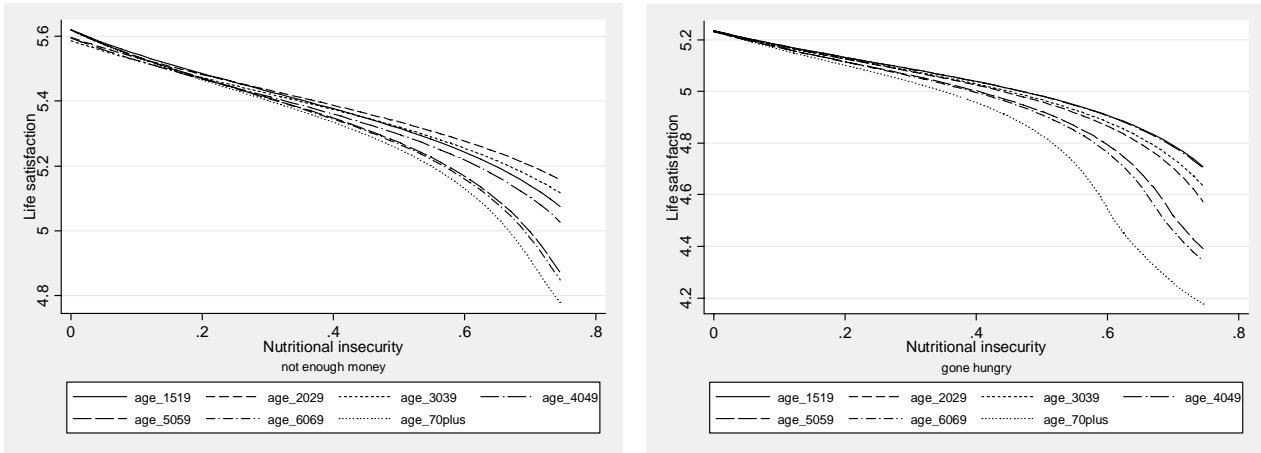


Figure 3: Nutritional insecurity and life satisfaction by relevant categories

Notes: non parametric regression on country averages, bandwidth=0.8, grid points=50, kernel=Epanechnikov

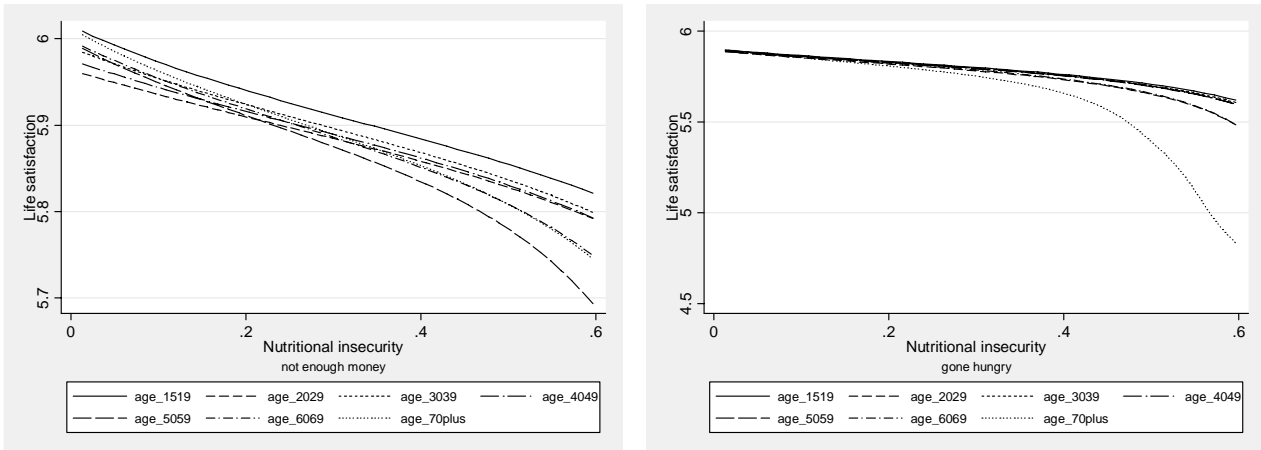
a) Age groups

sample: all countries wave 2006 Gallup



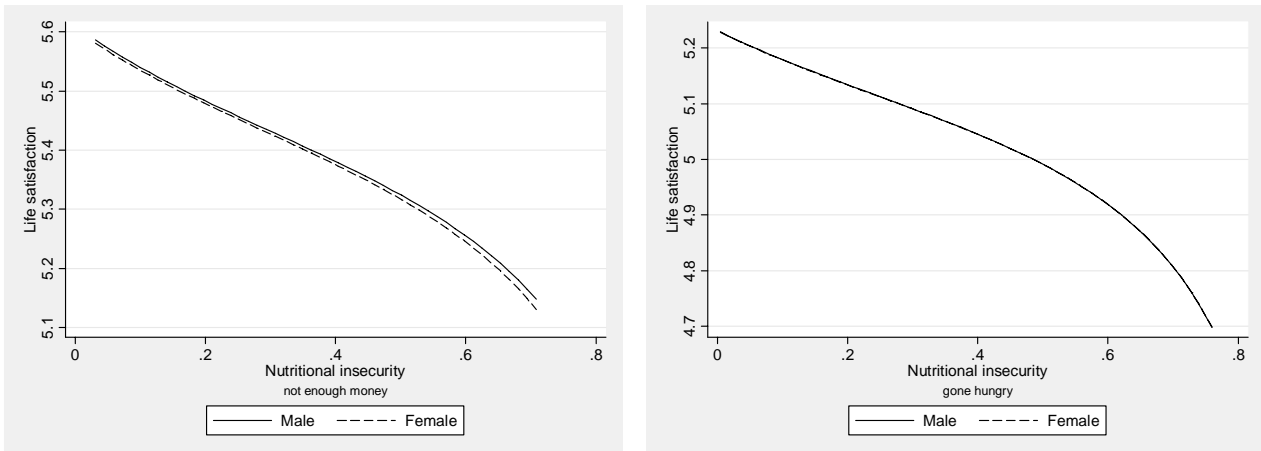
b) Age groups

sample: LAC wave 2006 and 2007 Gallup

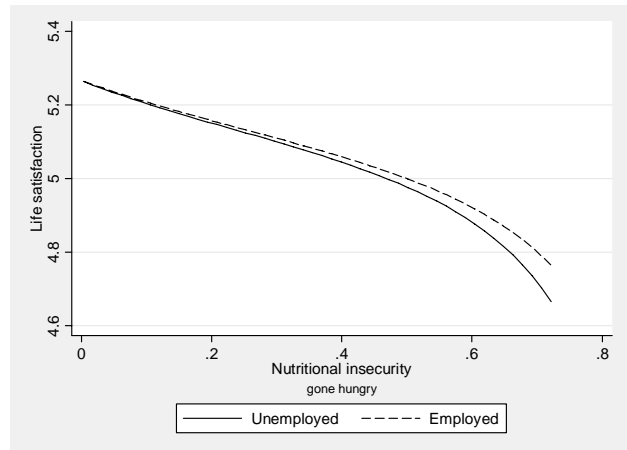
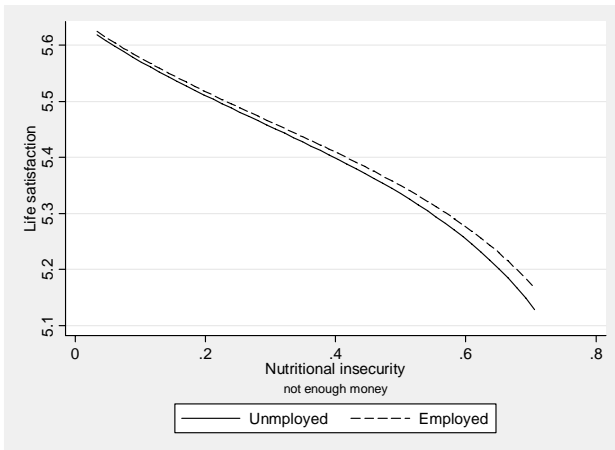


c) Gender

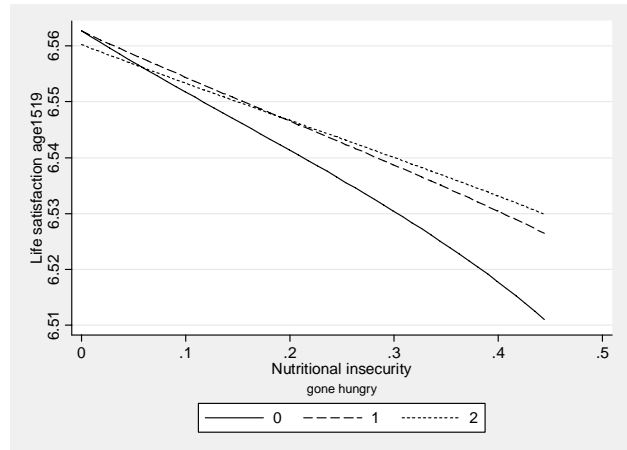
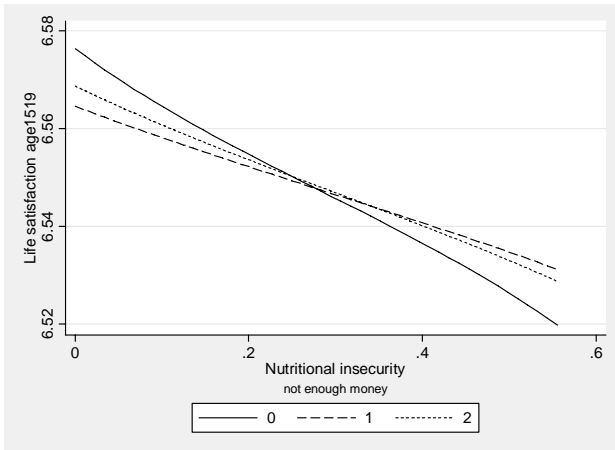
sample: all countries wave 2006 Gallup



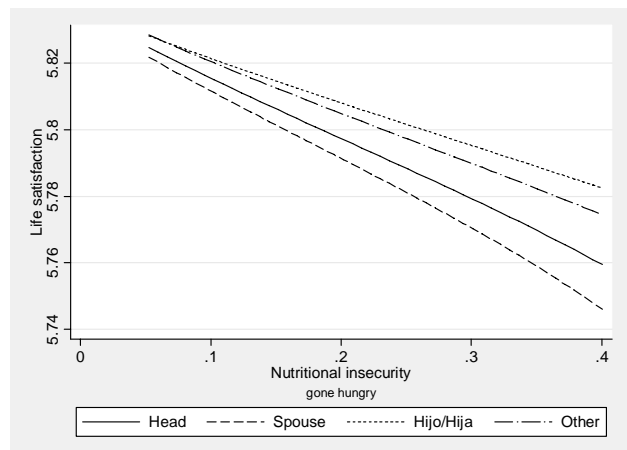
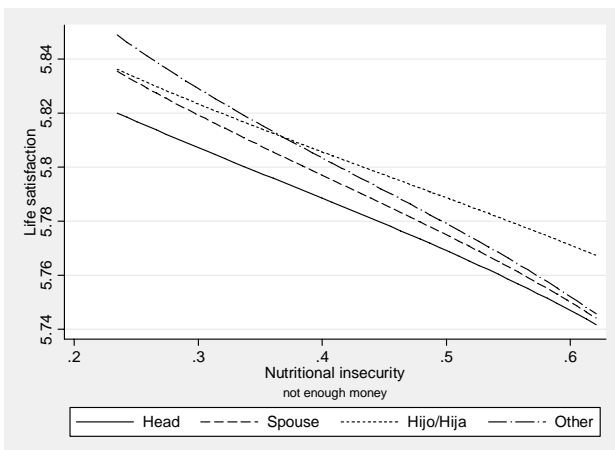
d) Employment status
sample: all countries wave 2006 Gallup



e) Women role in society
sample: LAC wave 2007 Gallup



f) Position within household
sample: LAC wave 2007 Gallup



TABLES

**Table 3.1: Life satisfaction (Q.1) and nutritional insecurity (“not enough money”)
(Gallup, Country averages, all countries 2006)**

	1	2	3	4	5
NI_money	-1.911*** (0.458)	-1.865*** (0.428)	-1.400*** (0.458)	-1.242** (0.553)	-1.570** (0.761)
log GDP 2005	0.558*** (0.079)	0.554*** (0.074)	0.444*** (0.081)	0.580*** (0.124)	0.475** (0.189)
GDP x capita. growth rate 2000 2005		-0.078*** (0.018)	-0.062*** (0.020)	-0.001 (0.023)	-0.001 (0.027)
social networks			2.096*** (0.737)	0.282 (0.806)	-1.294 (1.221)
Employed			0.272 (0.530)	0.272 (0.567)	-0.633 (0.801)
health problems			-1.029 (1.010)	-0.123 (1.158)	-0.664 (1.505)
controls (small set)	no	no	no	yes	yes
controls (large set)	no	no	no	no	yes
Number of observations	120	120	117	110	84
R2	0.717	0.756	0.775	0.859	0.847

note: .01 - ***; .05 - **; .1 - *;

Notes: OLS, Controls included are: *controls (small set)*: Dummies for countries with: HIV, ex_URSS, sub Saharan Africa, tropical region, land lock region, had colonial regime, Population: percentage 0-14, percentage 15-64; Ethnic and language fractionalization Country averages for: depression, divorced, satisfied with job, Health adjusted Life Expectancy at birth (HALE) males and females; Fertility rate; *controls(larger set)*: all those above and primary completion rate; freedom of press index; country averages for: satisfied of public transportation, roads, having been stolen, fear of walking alone.

**Table 3.2: Life satisfaction (Q.1) and nutritional insecurity (“gone hungry”)
(Gallup, Country averages, all countries 2006)**

	1	2	3	4	5
NI_hungry	-0.981** (0.407)	-1.384*** (0.380)	-1.115*** (0.373)	-2.029*** (0.607)	-2.589*** (0.917)
log GDP 2005	0.681*** (0.077)	0.612*** (0.071)	0.457*** (0.080)	0.601*** (0.118)	0.360* (0.191)
GDP x capita. growth rate 2000 2005		-0.095*** (0.019)	-0.071*** (0.020)	-0.003 (0.022)	-0.007 (0.026)
social networks			2.001*** (0.743)	0.280 (0.780)	-0.685 (1.185)
employed			0.599 (0.512)	0.458 (0.515)	-0.304 (0.719)
health problems			-1.244 (1.003)	0.138 (1.186)	0.011 (1.651)
controls (small set)	no	no	no	yes	yes
controls (large set)	no	no	no	no	yes
Number of observations	120	120	117	110	84
R2	0.690	0.745	0.774	0.868	0.856

note: .01 - ***; .05 - **; .1 - *;

Notes: OLS, Controls included are: *controls (small set)*: Dummies for countries with: HIV, ex_URSS, sub Saharan Africa, tropical region, land lock region, had colonial regime, Population: percentage 0-14, percentage 15-64; Ethnic and language fractionalization Country averages for: depression, divorced, satisfied with job, Health adjusted Life Expectancy at birth (HALE) males and females; Fertility rate; *controls(larger set)*: all those above and primary completion rate; freedom of press index; country averages for: satisfied of public transportation, roads, having been stolen, fear of walking alone.

**Table 3.3: Life satisfaction (Q.1) and nutritional insecurity (“not enough money”)
(Gallup, Individual data, all countries 2006)**

	1	2	3	4
NI_money	-0.613*** (0.029)	-0.613*** (0.030)	-0.550*** (0.029)	-0.550*** (0.029)
social networks			0.507*** (0.032)	0.507*** (0.032)
employed			0.085*** (0.026)	0.085*** (0.026)
health problems			-0.254*** (0.023)	-0.254*** (0.023)
religion is important	0.093*** (0.024)	0.092*** (0.024)	0.098*** (0.024)	0.098*** (0.024)
married	0.113*** (0.024)	0.115*** (0.024)	0.113*** (0.024)	0.113*** (0.024)
widow	-0.011 (0.037)	-0.010 (0.037)	0.010 (0.037)	0.010 (0.037)
depressed	-0.591*** (0.042)	-0.592*** (0.042)	-0.520*** (0.040)	-0.520*** (0.040)
income individual (as brackets)	yes	yes	yes	yes
income country	no	yes	yes	yes
controls geo	no	no	no	yes
Number of observations	86.730	85.949	81.937	81.937
R2	0.351	0.351	0.359	0.359

note: .01 - ***; .05 - **; .1 - *;

Notes: OLS (Ordered probit, results not shown, gives similar results), standard errors clustered at country level; Country fixed effects are included; income individual uses Gallup brackets; income country: countries grouped in 6 categories (high_income_OECD; high_income_nonOECD; low_income; lower_middle_income; upper_middle_income); controls geo: Dummies for countries with: HIV, ex_URSS, sub Saharan Africa, tropical region, land lock region, had colonial regime.

**Table 3.4: Life satisfaction (Q.1) and nutritional insecurity (“gone hungry”)
(Gallup, Individual data, all countries 2006)**

	1	2	3	4
NI_hungry	-0.547*** (0.035)	-0.547*** (0.035)	-0.473*** (0.034)	-0.473*** (0.034)
social networks			0.531*** (0.032)	0.531*** (0.032)
employed			0.088*** (0.027)	0.088*** (0.027)
health problems			-0.269*** (0.024)	-0.269*** (0.024)
religion is important	0.081*** (0.024)	0.080*** (0.024)	0.086*** (0.024)	0.086*** (0.024)
married	0.110*** (0.024)	0.111*** (0.024)	0.112*** (0.024)	0.112*** (0.024)
widow	-0.017 (0.037)	-0.015 (0.038)	0.008 (0.037)	0.008 (0.037)
depressed	-0.619*** (0.046)	-0.619*** (0.046)	-0.542*** (0.044)	-0.542*** (0.044)
income individual (as brackets)	yes	yes	yes	yes
income country	no	yes	yes	yes
controls geo	no	no	no	yes
Number of observations	86.749	85.968	82.003	82.003
R2	0.344	0.345	0.354	0.354

note: .01 - ***; .05 - **; .1 - *;

Notes: OLS (Ordered probit, results not shown, gives similar results), standard errors clustered at country level; Country fixed effects are included; income individual uses Gallup brackets; income country: countries grouped in 6 categories (high_income_OECD; high_income_nonOECD; low_income; lower_middle_income; upper_middle_income); controls geo: Dummies for countries with: HIV, ex_URSS, sub Saharan Africa, tropical region, land lock region, had colonial regime.

**Table 3.5: SD of life satisfaction (Q.1) and nutritional insecurity (“not enough money”)
(Gallup, Individual data, all countries 2006)**

	1	2	3	4
NI_money	0.080*** (0.019)	0.078*** (0.019)	0.076*** (0.019)	0.076*** (0.019)
social networks			-0.019 (0.018)	-0.019 (0.018)
employed			0.004 (0.010)	0.004 (0.010)
health problems			0.042*** (0.012)	0.042*** (0.012)
religion is important	0.053*** (0.013)	0.052*** (0.013)	0.051*** (0.013)	0.051*** (0.013)
married	-0.082*** (0.012)	-0.085*** (0.012)	-0.086*** (0.012)	-0.086*** (0.012)
widow	-0.015 (0.020)	-0.017 (0.020)	-0.018 (0.020)	-0.018 (0.020)
depressed	0.108*** (0.019)	0.107*** (0.019)	0.104*** (0.019)	0.104*** (0.019)
income individual (as brackets)	yes	yes	yes	yes
income country	no	yes	yes	yes
controls geo	no	no	no	yes
Number of observations	86.548	85.766	81.771	81.771
R2	0.128	0.128	0.129	0.129

note: .01 - ***; .05 - **; .1 - *;

Notes: OLS, standard errors clustered at country level; Country fixed effects are included; income individual uses Gallup brackets; income country: countries grouped in 6 categories (high_income_OECD; high_income_nonOECD; low_income; lower_middle_income; upper_middle_income); controls geo: Dummies for countries with: HIV, ex_URSS, sub Saharan Africa, tropical region, land lock region, had colonial regime.

**Table 3.6: SD of life satisfaction (Q.1) and nutritional insecurity (“gone hungry”)
(Gallup, Individual data, all countries 2006)**

	1	2	3	4
NI_hungry	0.080*** (0.019)	0.078*** (0.019)	0.076*** (0.019)	0.076*** (0.019)
social networks			-0.019 (0.018)	-0.019 (0.018)
employed			0.004 (0.010)	0.004 (0.010)
health problems			0.042*** (0.012)	0.042*** (0.012)
religion is important	0.053*** (0.013)	0.052*** (0.013)	0.051*** (0.013)	0.051*** (0.013)
married	-0.082*** (0.012)	-0.085*** (0.012)	-0.086*** (0.012)	-0.086*** (0.012)
widow	-0.015 (0.020)	-0.017 (0.020)	-0.018 (0.020)	-0.018 (0.020)
depressed	0.108*** (0.019)	0.107*** (0.019)	0.104*** (0.019)	0.104*** (0.019)
income individual (as brackets)	yes	yes	yes	yes
income country	no	yes	yes	yes
controls geo	no	no	no	yes
Number of observations	86.548	85.766	81.771	81.771
R2	0.128	0.128	0.129	0.129

note: .01 - ***; .05 - **; .1 - *;

Notes: OLS, standard errors clustered at country level; Country fixed effects are included; income individual uses Gallup brackets; income country: countries grouped in 6 categories (high_income_OECD; high_income_nonOECD; low_income; lower_middle_income; upper_middle_income); controls geo: Dummies for countries with: HIV, ex_URSS, sub Saharan Africa, tropical region, land lock region, had colonial regime.

**Table 3.7: Life satisfaction “future” and nutritional insecurity (“not enough money”)
(Gallup, Individual data, all countries 2006)**

	1	2	3	4
NI_money	-0.562*** (0.036)	-0.563*** (0.036)	-0.495*** (0.035)	-0.495*** (0.035)
social networks			0.524*** (0.042)	0.524*** (0.042)
employed			0.096*** (0.028)	0.096*** (0.028)
health problems			-0.270*** (0.028)	-0.270*** (0.028)
religion is important	0.141*** (0.026)	0.139*** (0.026)	0.137*** (0.026)	0.137*** (0.026)
married	-0.076*** (0.023)	-0.074*** (0.023)	-0.071*** (0.023)	-0.071*** (0.023)
widow	-0.195*** (0.051)	-0.193*** (0.051)	-0.157*** (0.053)	-0.157*** (0.053)
depressed	-0.555*** (0.041)	-0.555*** (0.042)	-0.482*** (0.040)	-0.482*** (0.040)
income individual (as brackets)	yes	yes	yes	yes
income country	no	yes	yes	yes
controls geo	no	no	no	yes
Number of observations	79.110	78.425	74.939	74.939
R2	0.247	0.248	0.250	0.250

note: .01 - ***; .05 - **; .1 - *;

Notes: OLS (Ordered probit, results not shown, gives similar results), standard errors clustered at country level; Country fixed effects are included; income individual uses Gallup brackets; income country: countries grouped in 6 categories (high_income_OECD; high_income_nonOECD; low_income; lower_middle_income; upper_middle_income); controls geo: Dummies for countries with: HIV, ex_URSS, sub Saharan Africa, tropical region, land lock region, had colonial regime.

**Table 3.8: Life satisfaction “future” and nutritional insecurity (“gone hungry”)
(Gallup, Individual data, all countries 2006)**

	1	2	3	4
NI_hungry	-0.506*** (0.043)	-0.507*** (0.043)	-0.428*** (0.043)	-0.428*** (0.043)
social networks			0.539*** (0.042)	0.539*** (0.042)
employed			0.097*** (0.028)	0.097*** (0.028)
health problems			-0.283*** (0.029)	-0.283*** (0.029)
religion is important	0.133*** (0.026)	0.131*** (0.026)	0.130*** (0.026)	0.130*** (0.026)
married	-0.082*** (0.023)	-0.080*** (0.023)	-0.076*** (0.024)	-0.076*** (0.024)
widow	-0.202*** (0.052)	-0.200*** (0.052)	-0.162*** (0.054)	-0.162*** (0.054)
depressed	-0.581*** (0.043)	-0.581*** (0.043)	-0.503*** (0.041)	-0.503*** (0.041)
income individual (as brackets)	yes	yes	yes	yes
income country	no	yes	yes	yes
controls geo	no	no	no	yes
Number of observations	79.112	78.427	74.987	74.987
R2	0.243	0.244	0.247	0.247

note: .01 - ***; .05 - **; .1 - *;

Notes: OLS (Ordered probit, results not shown, gives similar results), standard errors clustered at country level; Country fixed effects are included; income individual uses Gallup brackets; income country: countries grouped in 6 categories (high_income_OECD; high_income_nonOECD; low_income; lower_middle_income; upper_middle_income); controls geo: Dummies for countries with: HIV, ex_URSS, sub Saharan Africa, tropical region, land lock region, had colonial regime.

**Table 3.9: Perception of standard of living and nutritional insecurity (“not enough money”)
(Gallup, Individual data, all countries 2006)**

	1	2	3	4
NI_money	-0.547*** (0.035)	-0.547*** (0.035)	-0.473*** (0.034)	-0.473*** (0.034)
social networks			0.531*** (0.032)	0.531*** (0.032)
employed			0.088*** (0.027)	0.088*** (0.027)
health problems			-0.269*** (0.024)	-0.269*** (0.024)
religion is important	0.081*** (0.024)	0.080*** (0.024)	0.086*** (0.024)	0.086*** (0.024)
married	0.110*** (0.024)	0.111*** (0.024)	0.112*** (0.024)	0.112*** (0.024)
widow	-0.017 (0.037)	-0.015 (0.038)	0.008 (0.037)	0.008 (0.037)
depressed	-0.619*** (0.046)	-0.619*** (0.046)	-0.542*** (0.044)	-0.542*** (0.044)
income individual (as brackets)	yes	yes	yes	yes
income country	no	yes	yes	yes
controls geo	no	no	no	yes
Number of observations	86.749	85.968	82.003	82.003
R2	0.344	0.345	0.354	0.354

note: .01 - ***; .05 - **; .1 - *;

Notes: OLS, standard errors clustered at country level; Country fixed effects are included; income individual uses Gallup brackets; income country: countries grouped in 6 categories (high_income_OECD; high_income_nonOECD; low_income; lower_middle_income; upper_middle_income); controls geo: Dummies for countries with: HIV, ex_URSS, sub Saharan Africa, tropical region, land lock region, had colonial regime.

**Table 3.10: Perception of standard of living and nutritional insecurity (“gone hungry”)
(Gallup, Individual data, all countries 2006)**

	1	2	3	4
NI_hungry	-0.156*** (0.010)	-0.156*** (0.010)	-0.140*** (0.010)	-0.140*** (0.010)
social networks			0.132*** (0.007)	0.132*** (0.007)
employed			0.009** (0.004)	0.009** (0.004)
health problems			-0.045*** (0.005)	-0.045*** (0.005)
religion is important	0.050*** (0.005)	0.050*** (0.005)	0.048*** (0.005)	0.048*** (0.005)
married	0.021*** (0.005)	0.021*** (0.005)	0.021*** (0.005)	0.021*** (0.005)
widow	0.021** (0.009)	0.021** (0.009)	0.029*** (0.009)	0.029*** (0.009)
depressed	-0.140*** (0.007)	-0.139*** (0.007)	-0.122*** (0.007)	-0.122*** (0.007)
income individual (as brackets)	yes	yes	yes	yes
income country	no	yes	yes	yes
controls geo	no	no	no	yes
Number of observations	85.832	85.042	81.060	81.060
R2	0.224	0.223	0.237	0.237

note: .01 - ***; .05 - **; .1 - *;

Notes: OLS, standard errors clustered at country level; Country fixed effects are included; income individual uses Gallup brackets; income country: countries grouped in 6 categories (high_income_OECD; high_income_nonOECD; low_income; lower_middle_income; upper_middle_income); controls geo: Dummies for countries with: HIV, ex_URSS, sub Saharan Africa, tropical region, land lock region, had colonial regime.

**Table 3.11: Life satisfaction and nutritional insecurity (“not enough money”)
(Gallup, Individual data, LAC 2006, 2007)**

	1	2	3
NI_money	-0.851*** (0.069)	-0.851*** (0.069)	-0.772*** (0.068)
social networks			0.696*** (0.057)
employed			0.208*** (0.040)
health problems			-0.314*** (0.048)
religion is important	0.180*** (0.041)	0.180*** (0.041)	0.176*** (0.043)
married	0.054 (0.040)	0.054 (0.040)	0.057 (0.042)
widow	-0.012 (0.059)	-0.012 (0.059)	0.028 (0.067)
depressed	-0.688*** (0.076)	-0.688*** (0.076)	-0.559*** (0.069)
income individual (as brackets)	yes	yes	yes
income country	no	yes	yes
Number of observations	24.729	24.729	24.344
R2	0.093	0.093	0.108

note: .01 - ***; .05 - **; .1 - *;

Notes: OLS (Ordered probit, results not shown, gives similar results), standard errors clustered at country level; Country and year fixed effects are included; income individual uses Gallup brackets; income country: countries grouped in 6 categories (high_income_OECD; high_income_nonOECD; low_income; lower_middle_income; upper_middle_income); age groups dummies included.

**Table 3.12: Life satisfaction and nutritional insecurity (“gone hungry”)
(Gallup, Individual data, LAC 2006, 2007)**

	1	2	3
NI_hungry	-0.936*** (0.093)	-0.936*** (0.093)	-0.828*** (0.092)
social networks			-0.055 (0.032)
employed			-0.038** (0.017)
health problems			0.038 (0.026)
religion is important	0.057** (0.023)	0.057*** (0.023)	0.057** (0.023)
married	-0.079*** (0.016)	-0.079*** (0.016)	-0.083*** (0.016)
widow	-0.064* (0.036)	-0.064* (0.036)	-0.062 (0.036)
depressed	0.152*** (0.021)	0.152*** (0.021)	0.140*** (0.020)
income individual (as brackets)	yes	yes	yes
income country	no	yes	yes
Number of observations	24.613	24.613	24.239
R2	0.021	0.021	0.022

note: .01 - ***; .05 - **; .1 - *;

Notes: OLS (Ordered probit, results not shown, gives similar results), standard errors clustered at country level; Country and year fixed effects are included; income individual uses Gallup brackets; income country: countries grouped in 6 categories (high_income_OECD; high_income_nonOECD; low_income; lower_middle_income; upper_middle_income); age groups dummies included.

**Table 3.13: SD of life satisfaction and nutritional insecurity (“not enough money”)
(Gallup, Individual data, LAC 2006, 2007)**

	1	2	3
NI_money	0.193*** (0.038)	0.193*** (0.038)	0.187*** (0.037)
social networks			-0.055 (0.032)
employed			-0.038** (0.017)
health problems			0.038 (0.026)
religion is important	0.057** (0.023)	0.057** (0.023)	0.057** (0.023)
married	-0.079*** (0.016)	-0.079*** (0.016)	-0.083*** (0.016)
widow	-0.064* (0.036)	-0.064* (0.036)	-0.062 (0.036)
depressed	0.152*** (0.021)	0.152*** (0.021)	0.140*** (0.020)
income individual (as brackets)	yes	yes	yes
income country	no	yes	yes
Number of observations	24.613	24.613	24.239
R2	0.021	0.021	0.022

note: .01 - ***; .05 - **; .1 - *;

Notes: OLS, standard errors clustered at country level; Country and year fixed effects are included; income individual uses Gallup brackets; income country: countries grouped in 6 categories (high_income_OECD; high_income_nonOECD; low_income; lower_middle_income; upper_middle_income); age groups dummies included.

**Table 3.14: SD of life satisfaction and nutritional insecurity (“gone hungry”)
(Gallup, Individual data, LAC 2006, 2007)**

	1	2	3
NI_hungry	0.116*** (0.034)	0.116*** (0.034)	0.105*** (0.033)
social networks			-0.063* (0.033)
employed			-0.043** (0.018)
health problems			0.047* (0.027)
religion is important	0.063** (0.024)	0.063** (0.024)	0.063** (0.024)
married	-0.085*** (0.016)	-0.085*** (0.016)	-0.088*** (0.016)
widow	-0.064 (0.037)	-0.064 (0.037)	-0.062 (0.037)
depressed	0.172*** (0.024)	0.172*** (0.024)	0.158*** (0.022)
income individual (as brackets)	yes	yes	yes
income country	no	yes	yes
Number of observations	24.604	24.604	24.230
R2	0.017	0.017	0.018

note: .01 - ***; .05 - **; .1 - *;

Notes: OLS, standard errors clustered at country level; Country and year fixed effects are included; income individual uses Gallup brackets; income country: countries grouped in 6 categories (high_income_OECD; high_income_nonOECD; low_income; lower_middle_income; upper_middle_income); age groups dummies included.

**Table 3.15: Perception of standard of living and nutritional insecurity (“not enough money”)
(Gallup, Individual data, LAC 2006, 2007)**

	1	2	3
NI_money	-0.196*** (0.014)	-0.196*** (0.014)	-0.183*** (0.014)
social networks			0.134*** (0.011)
employed			0.025*** (0.006)
health problems			-0.051*** (0.006)
religion is important	0.065*** (0.008)	0.065*** (0.008)	0.060*** (0.009)
married	0.024*** (0.007)	0.024*** (0.007)	0.026*** (0.008)
widow	0.027 (0.016)	0.027 (0.016)	0.034* (0.016)
depressed	-0.152*** (0.011)	-0.152*** (0.011)	-0.129*** (0.010)
income individual (as brackets)	yes	yes	yes
income country	no	yes	yes
Number of observations	24.966	24.966	24.569
R2	0.081	0.081	0.093

note: .01 - ***; .05 - **; .1 - *;

Notes: OLS, standard errors clustered at country level; Country and year fixed effects are included; income individual uses Gallup brackets; income country: countries grouped in 6 categories (high_income_OECD; high_income_nonOECD; low_income; lower_middle_income; upper_middle_income); age groups dummies included.

**Table 3.16: Perception of standard of living and nutritional insecurity (“gone hungry”)
(Gallup, Individual data, LAC 2006, 2007)**

	1	2	3
NI_hungry	-0.195*** (0.011)	-0.195*** (0.011)	-0.175*** (0.010)
social networks			0.137*** (0.013)
employed			0.029*** (0.006)
health problems			-0.053*** (0.007)
religion is important	0.060*** (0.008)	0.060*** (0.008)	0.055*** (0.009)
married	0.024*** (0.007)	0.024*** (0.007)	0.026*** (0.008)
widow	0.026 (0.016)	0.026 (0.016)	0.034* (0.017)
depressed	-0.159*** (0.013)	-0.159*** (0.013)	-0.136*** (0.012)
income individual (as brackets)	yes	yes	yes
income country	no	yes	yes
Number of observations	24.962	24.962	24.565
R2	0.067	0.067	0.079

note: .01 - ***; .05 - **; .1 - *;

Notes: OLS, standard errors clustered at country level; Country and year fixed effects are included; income individual uses Gallup brackets; income country: countries grouped in 6 categories (high_income_OECD; high_income_nonOECD; low_income; lower_middle_income; upper_middle_income); age groups dummies included.

**Table 3.17: Proxy of perceived well-being
Encuesta Social, waves 2005 and 2006**

	2005		2006	
	Households	Percent	Households	Percent
0	152	8.18	32	1.72
1	879	47.31	462	24.77
2	509	27.40	1081	57.96
3	222	11.95	272	14.58
4	96	5.17	18	0.97
Total	1858		1865	
Mean	1.586		1.833	
SD	0.977		0.698	

**Table 3.18: Perceived well-being and Nutritional insecurity (proxy NI_money)
Encuesta Social, waves 2005 and 2006**

	Pooled_OLS	RE	FE	Pooled_OLS	RE	FE	Pooled_OLS	RE	FE
NI_money	-0.334*** (0.038)	-0.333*** (0.038)	-0.259*** (0.070)	-0.314*** (0.045)	-0.314*** (0.046)	-0.254*** (0.077)	-0.305*** (0.045)	-0.305*** (0.045)	-0.248*** (0.074)
married head							-0.023 (0.040)	-0.022 (0.039)	0.108 (0.126)
widow head							0.010 (0.059)	0.008 (0.060)	0.023 (0.177)
social security head							0.001 (0.045)	-0.002 (0.046)	-0.060 (0.120)
expenditure per capita							0.026 (0.023)	0.027 (0.024)	0.085** (0.040)
head employed							0.071 (0.067)	0.074 (0.066)	0.118 (0.121)
head weeks worked							0.003** (0.001)	0.003*** (0.001)	0.004 (0.003)
head formal contract							0.002 (0.037)	0.004 (0.038)	0.021 (0.099)
controls		no	yes		yes				
Number of observations	3.723	3.723	2.918	3.691	3.691	2.894	3.684	3.684	2.887
R2	0.015	0.010	0.005	0.057	0.058	0.064	0.059	0.061	0.067

note: .01 - ***, .05 - **, .1 - *;

Notes: RE=Random effects estimator; FE=Fixed effects estimator; "social security head" is a dummy with 1 if head has been affiliated to any social security institutions in the last year; "head weeks worked" refer to last 12 months; Controls include: education level of household head, number of children (in each household) that receive meals at school, number of assets owned by the household, dummies for city (Bogota), Bucaramanga and Cali), and for socio-economic stratum; Standard errors clustered at city and stratum level.

Table 3.19: Perceived well-being and Nutritional insecurity (proxy NI_meat)
Encuesta Social, waves 2005 and 2006

	Pooled OLS	RE	FE	Pooled OLS	RE	FE	Pooled OLS	RE	FE
NI_meat	-0.240*** (0.028)	-0.238*** (0.028)	-0.169** (0.067)	-0.228*** (0.041)	-0.228*** (0.041)	-0.183** (0.073)	-0.221*** (0.040)	-0.221*** (0.039)	-0.188** (0.073)
married head							-0.013 (0.037)	-0.013 (0.036)	0.112 (0.121)
widow head							0.010 (0.060)	0.008 (0.061)	0.042 (0.180)
social security head							0.009 (0.046)	0.007 (0.047)	-0.049 (0.119)
expenditure per capita							0.011 (0.022)	0.013 (0.022)	0.082** (0.039)
head unemployment status							0.056 (0.065)	0.059 (0.065)	0.113 (0.121)
head weeks worked							0.003** (0.001)	0.003** (0.001)	0.004 (0.003)
head formal contract							0.006 (0.038)	0.008 (0.039)	0.009 (0.103)
controls		no		yes					
Number of observations	3.723	3.723	2.918	3.691	3.691	2.894	3.684	3.684	2.887
R2	0.016	0.015	0.005	0.058	0.59	0.065	0.059	0.060	0.068

note: .01 - ***, .05 - **, .1 - *;

Notes: RE=Random effects estimator; FE=Fixed effects estimator; "social security head" is a dummy with 1 if head has been affiliated to any social security institutions in the last year; "head weeks worked" refer to last 12 months; Controls include: education level of household head, number of children (in each household) that receive meals at school, number of assets owned by the household, dummies for city (Bogota, Bucaramanga and Cali), and for socio-economic stratum; Standard errors clustered at city and stratum level.

Table 3.20: Change patterns in nutritional insecurity
Encuesta Social, waves 2005 and 2006

Change pattern	NI_money		NI_meat	
	HHS	Percent	HHS	Percent
from 0 to 0	1215	83.28	843	57.78
from 1 to 0	96	6.58	186	12.75
from 0 to 1	62	4.25	146	10.01
from 1 to 1	86	5.89	284	19.47
Total	1459		1459	

**Table 3.21: Perceived well-being and change patterns in nutritional insecurity
(proxy NI_money)
Encuesta Social, waves 2005 and 2006**

change pattern	compared to		
increase in NI (from 0 to 1)	1.stable no NI (0 to 0)	0.107 (0.085)	-0.012 (0.120)
	2.stable yes NI (1 to 1)	-0.104 (0.098)	-0.193 (0.147)
	3.decrease in NI (1 to 0)	-0.233 (0.138)	-0.441** (0.171)
	1+2	0.054 (0.080)	-0.083 (0.110)
	1+3	0.046 (0.085)	-0.105 (0.127)
	2+3	-0.155 (0.109)	-0.312** (0.142)
	decrease in NI (from 1 to 0)	1.stable no NI (0 to 0)	0.341*** (0.087)
2.stable yes NI (1 to 1)		0.129 (0.084)	0.155 (0.107)
3.increase in NI (0 to 1)		0.233 (0.138)	0.441** (0.171)
1+2		0.288*** (0.092)	0.341*** (0.081)
1+3		0.325*** (0.092)	0.434*** (0.077)
2+3		0.165 (0.098)	0.273* (0.131)
		control	no

Notes: Coefficients reported here are estimated in separate regressions, OLS. Controls included in all the regression are: dummies for head married, widow, affiliated to social security, employed, head has a formal contract; head weeks worked, education level of household head, number of children (in each household) that receive meals at school, number of assets owned by the household, dummies for city (Bogota', Bucaramanga and Cali), and for socio-economic stratum; Standard errors clustered at city and stratum level.

**Table 3.22: Perceived well-being and change patterns in nutritional insecurity
(proxy NI_meat)
Encuesta Social, waves 2005 and 2006**

change pattern	compared to		
increase in NI (from 0 to 1)	1.stable no NI (0 to 0)	0.107 (0.085)	-0.012 (0.120)
	2.stable yes NI (1 to 1)	-0.104 (0.098)	-0.193 (0.147)
	3.decrease in NI (1 to 0)	-0.233 (0.138)	-0.441** (0.171)
	1+2	0.054 (0.080)	-0.083 (0.110)
	1+3	0.046 (0.085)	-0.105 (0.127)
	2+3	-0.155 (0.109)	-0.312** (0.142)
	decrease in NI (from 1 to 0)	1.stable no NI (0 to 0)	0.341*** (0.087)
2.stable yes NI (1 to 1)		0.129 (0.084)	0.155 (0.107)
3.increase in NI (0 to 1)		0.233 (0.138)	0.441** (0.171)
1+2		0.288*** (0.092)	0.341*** (0.081)
1+3		0.325*** (0.092)	0.434*** (0.077)
2+3		0.165 (0.098)	0.273* (0.131)
		control	no

Notes: Coefficients reported here are estimated in separate regressions, OLS. Controls included in all the regression are: dummies for head married, widow, affiliated to social security, employed, head has a formal contract; head weeks worked, education level of household head, number of children (in each household) that receive meals at school, number of assets owned by the household, dummies for city (Bogota', Bucaramanga and Cali), and for socio-economic stratum; Standard errors clustered at city and stratum level.

Table 3.23: Perceived well-being and change patterns in nutritional insecurity (proxy NI_money) with victimization proxies Encuesta Social, waves 2005 and 2006

	1	2	3	4	5	6
NI_money	-0.199*** (0.039)	-0.193*** (0.042)	-0.212*** (0.048)	-0.208*** (0.049)	-0.215*** (0.046)	-0.210*** (0.048)
married head					-0.009 (0.035)	-0.009 (0.036)
widow head					0.058 (0.066)	0.055 (0.066)
social security head					-0.059 (0.039)	-0.057 (0.040)
expenditure per capita					0.022 (0.030)	0.024 (0.030)
head unemployment status					-0.064 (0.120)	-0.072 (0.127)
head weeks worked					0.000 (0.003)	0.000 (0.003)
head formal contract					0.016 (0.033)	0.015 (0.033)
controls	no		yes		yes	
victimization vars	no	yes	no	yes	no	yes
Number of observations	1.865	1.865	1.849	1.849	1.846	1.846
R2	0.007	0.008	0.052	0.053	0.055	0.056

note: .01 - ***; .05 - **; .1 - *;

Notes: OLS, "social security head" is a dummy with 1 if head has been affiliated to any social security institutions in the last year; "head weeks worked" refer to last 12 months; Controls include: education level of household head, number of children (in each household) that receive meals at school, number of assets owned by the household, dummies for city (Bogota', Bucaramanga and Cali), and for socio-economic stratum; Standard errors clustered at city and stratum level.

Table 3.24: Perceived well-being and change patterns in nutritional insecurity (proxy NI_meat) with victimization proxies Encuesta Social, wave 2006

	1	2	3	4	5	6
NI_meat	-0.109*** (0.023)	-0.106*** (0.025)	-0.102*** (0.031)	-0.100*** (0.032)	-0.096** (0.037)	-0.094** (0.037)
married head					-0.001 (0.032)	-0.002 (0.034)
widow head					0.055 (0.067)	0.052 (0.068)
social security head					-0.051 (0.040)	-0.049 (0.041)
expenditure per capita					0.016 (0.032)	0.018 (0.032)
head unemployment status					-0.050 (0.120)	-0.059 (0.126)
head weeks worked					0.001 (0.003)	0.001 (0.003)
head formal contract					0.020 (0.035)	0.019 (0.034)
controls	no		yes		yes	
victimization vars	no	yes	no	yes	no	yes
Number of observations	1.865	1.865	1.849	1.849	1.846	1.846
R2	0.005	0.006	0.048	0.049	0.051	0.052

note: .01 - ***; .05 - **; .1 - *;

Notes: OLS, "social security head" is a dummy with 1 if head has been affiliated to any social security institutions in the last year; "head weeks worked" refer to last 12 months; Controls include: education level of household head, number of children (in each household) that receive meals at school, number of assets owned by the household, dummies for city (Bogota', Bucaramanga and Cali), and for socio-economic stratum; Standard errors clustered at city and stratum level.

Table 4.1: Life satisfaction and nutritional insecurity by age groups
Gallup

Sample	1		2		3		4		5		6	
	All, only 2006		All in 2006 + LAC in 2007		LAC, 2006, 2007		LAC, 2006, 2007		LAC, 2006, 2007		LAC, 2006, 2007	
	Money	Hungry	Money	Hungry	Money	Hungry	Money	Hungry	Money	Hungry	Money	Hungry
NI	-0.553***	-0.437***	-0.627***	-0.535***	-0.779***	-0.720***	(0.038)	(0.045)	(0.040)	(0.053)	(0.082)	(0.114)
NI X age15-19	-0.026	-0.172**	-0.021	-0.246***	0.110	-0.285**	(0.061)	(0.086)	(0.057)	(0.080)	(0.127)	(0.118)
NI X age20-29	0.102**	-0.071*	0.112***	-0.072	0.140*	-0.132	(0.043)	(0.042)	(0.041)	(0.044)	(0.079)	(0.101)
NI X age30-39 (omitted)												
NI X age40-49	0.076*	0.098**	0.049	0.066	0.047	-0.009	(0.039)	(0.045)	(0.041)	(0.046)	(0.063)	(0.119)
NI X age50-59	-0.102**	0.002	-0.103**	-0.030	-0.080	-0.057	(0.050)	(0.049)	(0.048)	(0.052)	(0.089)	(0.128)
NI X age 60-69	-0.078	-0.031	-0.076	-0.005	0.023	0.135	(0.059)	(0.082)	(0.055)	(0.078)	(0.097)	(0.141)
NI X age70 plus	-0.172**	-0.213*	-0.207**	-0.272**	-0.170	-0.429***	(0.086)	(0.110)	(0.084)	(0.105)	(0.130)	(0.114)
social networks	0.506***	0.532***	(0.030)	0.569***	0.696***	0.696***	(0.032)	(0.032)	0.128***	(0.031)	(0.054)	(0.053)
employed	0.087***	0.092***	(0.026)	0.138***	0.221***	0.240***	(0.026)	(0.027)	-0.261***	(0.026)	(0.039)	(0.039)
health problems	-0.251***	-0.269***	(0.023)	-0.279***	-0.297***	-0.298***	(0.023)	(0.024)	0.465***	(0.023)	(0.045)	(0.045)
age 15-19	0.390***	0.441***	(0.055)	0.539***	0.684***	0.795***	(0.060)	(0.059)	0.135***	(0.056)	(0.073)	(0.068)
age 20-29	0.115***	0.170***	(0.026)	0.195***	0.250***	0.337***	(0.027)	(0.028)	-0.132***	(0.026)	(0.054)	(0.050)
age 30-39 (omitted)												
age 40-49	-0.140***	-0.135***	(0.021)	-0.128***	-0.159***	-0.140**	(0.022)	(0.021)	-0.133***	(0.021)	(0.057)	(0.059)
age 50-59	-0.125***	-0.146***	(0.033)	-0.147***	-0.172**	-0.187***	(0.035)	(0.035)	-0.060	(0.033)	(0.068)	(0.062)
age 60-69	-0.018	-0.019	(0.046)	-0.061	-0.265***	-0.262***	(0.048)	(0.051)	-0.002	(0.049)	(0.078)	(0.078)
age 70 plus	0.049	0.063	(0.053)	0.014	-0.164*	-0.113	(0.053)	(0.051)	0.543***	(0.051)	(0.084)	(0.078)
Number of observations	81.937	82.003	94.278	94.332	26.245	26.238						
R2	0.360	0.354	0.331	0.324	0.181	0.178						

note: .01 - ***, .05 - **, .1 - *;

Notes: OLS, standard errors clustered at country (columns 1 and 2) and year level (columns 3 to 6); "social networks" is a dummy taking value 1 if respondents thinks there are friends that can help in case of need. Controls included: dummies for individual is married, widow, depressed, thinks religion is important, country and time effects, income (as Gallup brackets), income at country level (as IDB classification)

Table 4.2: Life satisfaction and nutritional insecurity by sex, employment status and position within the household
Gallup

	included category									
	Male		Employed		Head		Head is male		Son/Daughter	
	Money	Hungry	Money	Hungry	Money	Hungry	Money	Hungry	Money	Hungry
NI	-0.667***	-0.650***	-0.631***	-0.572***	-0.780***	-0.885***	-0.859***	-0.844***	-0.826***	-0.794***
	(0.034)	(0.046)	(0.041)	(0.055)	(0.077)	(0.157)	(0.113)	(0.140)	(0.117)	(0.188)
NI X included category	0.082**	0.127***	0.005	-0.047	-0.227**	-0.083	-0.037	-0.124	0.035	-0.313**
	(0.038)	(0.035)	(0.036)	(0.055)	(0.104)	(0.096)	(0.098)	(0.102)	(0.177)	(0.110)
dummy for included cat	-0.152***	-0.143***	0.125***	0.143***	-0.155***	-0.222***	0.005	0.050	-0.056	0.019
	(0.021)	(0.019)	(0.025)	(0.026)	(0.039)	(0.041)	(0.048)	(0.048)	(0.073)	(0.087)
omitted	female	unemployed	all other components of the household	head is female	all other components of the household					
Observations	94.278	94.332	94.278	94.332	11.631	11.623	11.620	11.614	6.590	6.599
R2	0.331	0.325	0.330	0.324	0.191	0.183	0.189	0.182	0.170	0.166
Sample	All countries 2006 + LAC in 2007					LAC in 2007				

note: .01 - ***, .05 - **, .1 - *;

Notes: OLS, standard errors clustered at country and year level; Controls included: dummy for presence of social networks, employment status, presence of health problems, age groups, dummies for individual is married, widow, depressed, thinks religion is important, country and time effects, income (as Gallup brackets), income at country level (as IDB classification)

Table 4.3: Life satisfaction and nutritional insecurity by woman power index
Gallup, individual, LAC countries wave 2007

	1	2	3	4	5	6
	if age 15-19					
	Money		Hungry		Money	Hungry
NI	-1.042***	-1.019***	-1.031***	-1.012***	-1.060*	-0.946
	(0.148)	(0.150)	(0.212)	(0.235)	(0.532)	(0.579)
NI X women role index	0.130		0.079			
	(0.083)		(0.106)			
NI X women role index cat 0 (omitted)						
NI X women role index cat 1		0.073		0.033	0.210	-0.830
		(0.164)		(0.243)	(0.657)	(0.681)
NI X women role index cat 2		0.244		0.144	0.516	-0.064
		(0.168)		(0.236)	(0.500)	(0.619)
women role index	0.077**		0.098**			
	(0.034)		(0.035)			
Women role index cat 0 (omitted)						
Women role index cat 1		0.121*		0.113	0.211	0.323
		(0.069)		(0.086)	(0.194)	(0.205)
Women role index cat 2		0.167**		0.200**	0.173	0.276*
		(0.064)		(0.071)	(0.144)	(0.146)
Number of observations	8.555	8.555	8.555	8.545	1.057	1.065
R2	0.186	0.186	0.186	0.180	0.153	0.167

note: .01 - ***; .05 - **; .1 - *;

Notes. OLS, standard errors clustered at country and year level; Controls included: dummy for presence of social networks, employment status, presence of health problems, age groups, dummies for individual is married, widow, depressed, thinks religion is important, country and time effects, income (as Gallup brackets), income at country level (as IDB classification)

Table 4.4: Nutritional insecurity and objective nutritional outcomes by age groups
ENSIN, 2005

	1	2
	log kilocal	log protein per cal
NI	-0.076***	-0.073***
	(0.022)	(0.015)
NI X age 0-4	-0.065**	0.050***
	(0.029)	(0.019)
NI X age 5-9	-0.063**	0.036**
	(0.026)	(0.016)
NI X age 10-14	-0.051**	0.048***
	(0.026)	(0.016)
NI X age 15-19	0.035	0.042**
	(0.029)	(0.017)
NI X age 20-29	0.015	-0.007
	(0.035)	(0.023)
NI X age 30-45 (omitted)		
NI X age 46-60	0.037	-0.019
	(0.045)	(0.030)
NI X age 60 plus	0.341**	0.039
	(0.139)	(0.079)
female status index	0.023	-0.035*
	(0.031)	(0.021)
employed	0.141***	-0.013
	(0.013)	(0.008)
attendance to <i>hogares comunitario</i>	-0.009	-0.011
	(0.012)	(0.009)
age 0-4	-0.168***	0.008
	(0.024)	(0.015)
age 5-9	0.005	-0.035**
	(0.022)	(0.014)
age 10-14	0.161***	-0.057***
	(0.020)	(0.012)
age 15-19	0.138***	-0.048***
	(0.020)	(0.012)
age 20-29	0.075***	-0.004
	(0.020)	(0.012)
age 30-45 (omitted)		
age 46-60	-0.066**	0.014
	(0.028)	(0.017)
age 60 plus	-0.185	0.040
	(0.113)	(0.059)
Number of observations	17.971	17.971
R2	0.218	0.095

note: .01 - ***; .05 - **; .1 - *;

Notes: OLS, Standard errors cluster at the household level; Controls included: education level of spouse, dummy for any female is pregnant within the households, household size, BMI and its square, health status (index from 0 (bad) to 5 (good)), dummy for urban/rural locality, dummies for states (departamentos); availability of electricity, natural gas, water pipe, number of assets, material of floor, walls and number of rooms in the house.

**Table 4.5: Degree of nutritional insecurity and objective nutritional outcomes by age groups
ENSIN, 2005**

	1	2	3	4	5	6
	log kcal		log protein x kcal			
	NI_cat 1	NI_cat 2	NI_cat 3	NI_cat 1	NI_cat 2	NI_cat 3
NI		-0.083*** (0.022)			-0.074*** (0.015)	
NI X age 0-4	0.017 (0.032)	-0.193*** (0.037)	-0.237*** (0,074)	0,056*** (0,021)	0,056* (0,029)	-0,022 (0,054)
NI X age 5-9	0.008 (0.027)	-0.158*** (0.033)	-0,347*** (0,070)	0,050*** (0,017)	0,027 (0,025)	-0,057 (0,048)
NI X age 10-14	0.018 (0.027)	-0.157*** (0.033)	-0,202*** (0,065)	0,050*** (0,017)	0,056** (0,022)	-0,001 (0,043)
NI X age 15-19	0.079** (0.032)	-0.024 (0.039)	-0,124 (0,082)	0,048*** (0,018)	0,038 (0,026)	0,011 (0,050)
NI X age 20-29	0.061* (0.037)	-0.049 (0.055)	-0,221** (0,101)	0,006 (0,025)	-0,036 (0,035)	-0,025 (0,083)
NI X age 30-45 (omitted)						
NI X age 46-60	0.083* (0.049)	-0.052 (0.065)	-0,113 (0,145)	0,004 (0,031)	-0,063 (0,051)	-0,086 (0,113)
NI X age 60 plus	0.363*** (0.138)	0.396* (0.229)	-0,282** (0,126)	0,021 (0,090)	0,072 (0,076)	0,139* (0,074)
female status index		0.029 (0.030)			-0.035* (0.021)	
employed		0.141*** (0.013)			-0.013 (0.008)	
hogares comunitario		-0.006 (0.012)			-0.010 (0.009)	
age 0-4		-0.172*** (0.023)			0.007 (0.015)	
age 5-9		0.003 (0.022)			-0.035** (0.014)	
age 10-14		0.160*** (0.020)			-0.057*** (0.012)	
age 15-19		0.137*** (0.020)			-0.048*** (0.012)	
age 20-29		0.074*** (0.020)			-0.004 (0.012)	
age 30-45 (omitted)						
age 46-60		-0.064** (0.028)			0.014 (0.017)	
age 60 plus		-0.182 (0.113)			0.040 (0.059)	
Number of observations		17.971			17.971	
R2		0.229			0.097	

note: .01 - ***; .05 - **; .1 - *;

Notes: : OLS, Standard errors cluster at the household level; Controls included: education level of spouse, dummy for any female is pregnant within the households, household size, BMI and its square, health status (index from 0 (bad) to 5 (good)), dummy for urban/rural locality, dummies for states (departamentos); availability of electricity, natural gas, water pipe, number of assets, material of floor, walls and number of rooms in the house.

**Table 4.6: Degree of nutritional insecurity and objective nutritional outcomes by female
ENSIN, 2005**

	log kilocal	log protein per cal
NI	-0.128*** (0.013)	-0.039*** (0.009)
NI X male (omitted)		
NI X female. not pregnant	0.052*** (0.014)	-0.004 (0.010)
NI X female pregnant	-0.350 (0.244)	0.031 (0.070)
female status index	0.011 (0.030)	-0.033 (0.021)
employed	0.007 (0.013)	0.013 (0.008)
hogares comunitario	-0.024** (0.012)	-0.007 (0.009)
Male (omitted)		
Female. not pregnant	-0.209*** (0.009)	(0.127) 0.029***
Female pregnant	-0.130 (0.156)	(0.006) 0.002
Number of observations	17.971	17.971
R2	0.233	0.093

note: .01 - ***; .05 - **; .1 - *;

Notes: OLS, Standard errors cluster at the household level; Controls included: education level of spouse, dummy for any female is pregnant within the households, household size, BMI and its square, health status (index from 0 (bad) to 5 (good)), dummy for urban/rural locality, dummies for states (departamentos); availability of electricity, natural gas, water pipe, number of assets, material of floor, walls and number of rooms in the house.

Table 4.7: Degree of nutritional insecurity and objective nutritional outcomes by child age < 12

ENSIN, 2005		
	log kilocal	log protein per cal
NI	-0.060*** (0.013)	-0.053*** (0.009)
NI X Child>12 (omitted)		
NI X Child<=12 male	-0.089*** (0.018)	0.019* (0.011)
NI X Child<=12 female	-0.059*** (0.018)	0.024* (0.013)
female status index	0.019 (0.031)	-0.034 (0.021)
employed	0.080*** (0.013)	0.002 (0.008)
hogares comunitario	-0.026** (0.012)	-0.007 (0.009)
Child>12 (omitted)		
Child<=12 male	0.051*** (0.016)	-0.024** (0.010)
Child<=12 female	-0.037** (0.016)	-0.016 (0.010)
Number of observations	17.971	17.971
R2	0.207	0.092

note: .01 - ***, .05 - **, .1 - *;

Notes: OLS, Standard errors cluster at the household level; Controls included: education level of spouse, dummy for any female is pregnant within the households, household size, BMI and its square, health status (index from 0 (bad) to 5 (good)), dummy for urban/rural locality, dummies for states (departamentos); availability of electricity, natural gas, water pipe, number of assets, material of floor, walls and number of rooms in the house.

Table 4.8: Degree of nutritional insecurity and objective nutritional outcomes by adult working status

ENSIN, 2005		
	log kilocal	log protein per cal
NI	-0.106*** (0.011)	-0.038*** (0.008)
NI X not working(omitted)		
NI X adult working. male	0.029 (0.023)	-0.032** (0.016)
NI X adult working. female	0.044 (0.034)	-0.003 (0.022)
female status index	0.022 (0.031)	-0.034* (0.021)
hogares comunitario	-0.025** (0.012)	-0.007 (0.009)
Not working(omitted)		
Adult working. male	0.222*** (0.017)	-0.007 (0.011)
Adult working. female	-0.217*** (0.019)	0.050*** (0.012)
Number of observations	17.971	17.971
R2	0.229	0.094

note: .01 - ***, .05 - **, .1 - *;

Notes: OLS, Standard errors cluster at the household level; Controls included: education level of spouse, dummy for any female is pregnant within the households, household size, BMI and its square, health status (index from 0 (bad) to 5 (good)), dummy for urban/rural locality, dummies for states (departamentos); availability of electricity, natural gas, water pipe, number of assets, material of floor, walls and number of rooms in the house.

**Table 5.1: Life satisfaction and Job security
Latinobarometro, wave 1997**

	1 Current	2 Past
Job security scale step 1 (omitted)		
step 2	0.019 (0.089)	-0.060 (0.046)
step 3	-0.067 (0.060)	-0.067** (0.026)
step 4	-0.084 (0.051)	-0.062 (0.038)
step 5	-0.151** (0.071)	-0.097* (0.046)
step 6	-0.256*** (0.074)	-0.164*** (0.051)
step 7	-0.243*** (0.081)	-0.120 (0.074)
step 8	-0.345*** (0.084)	-0.214** (0.085)
step 9	-0.346*** (0.080)	-0.219*** (0.072)
step 10	-0.435*** (0.098)	-0.270*** (0.072)
married	-0.037 (0.024)	-0.045* (0.025)
divorced	-0.072* (0.039)	-0.088* (0.042)
victim of a crime	-0.021 (0.019)	-0.048** (0.018)
social networks	0.225*** (0.040)	0.244*** (0.039)
satisfied with democracy	-0.117*** (0.014)	-0.135*** (0.014)
Number of observations	14.724	14.664
R2	0.158	0.140

note: .01 - ***; .05 - **; .1 - *;

Notes: OLS, standard errors clustered at country level; Job security scale goes from 1 (most secure) to 10 (least secure); "social networks" refer to a question asking whether the respondent trusts other people; Controls included: country fixed effects, socio-economic level of respondent (as reported by the interviewer), type of job of head, number of assets, dummy for whether respondent is interested in politics, scale of satisfaction with health status (from 0 to 9)

**Table 5.2: Life satisfaction and job security
(proxy "How worried you are of losing your job?")
Latinobarometro, waves 1999 to 2004**

	1	2	3	4
"Worried to lose your job" step 1 (omitted)				
step 2	-0.080*** (0.019)	-0.070*** (0.021)	-0.065*** (0.022)	-0.046 (0.030)
step 3	-0.124*** (0.021)	-0.115*** (0.024)	-0.149*** (0.022)	-0.129*** (0.031)
step 4	-0.116*** (0.026)	-0.111*** (0.031)	-0.122*** (0.022)	-0.100** (0.035)
married	-0.017* (0.009)	-0.016* (0.009)	-0.009 (0.014)	-0.008 (0.013)
divorced	-0.071*** (0.013)	-0.072*** (0.014)	-0.109*** (0.029)	-0.111*** (0.028)
social networks	0.097*** (0.011)	0.101*** (0.013)	0.084*** (0.017)	0.080*** (0.018)
satisfied with democracy	-0.042*** (0.007)	-0.044*** (0.007)	-0.042*** (0.010)	-0.040*** (0.010)
country fixed effect	yes	yes	yes	yes
year fixed effect	no	yes	no	yes
control for health satisfaction	no	no	yes	yes
Number of observations	59.367	59.367	18.958	18.958
R2	0.098	0.107	0.136	0.154

note: .01 - ***; .05 - **; .1 - *;

Notes: OLS, standard errors clustered at country and year level; Sample: all waves for column 1 and 2, only 2003 and 2004 for column 3 and 4; "Worried to lose your job" measure goes from 1 (least worried) to 4 (most worried); Control variable for health satisfaction is Q.25; "social networks" refer to a question asking whether the respondent trusts other people; Controls included: country fixed effects, socio-economic level of respondent (as reported by the interviewer), type of job of head, number of assets, dummy for whether respondent is interested in politics, scale of satisfaction with health status (from 0 to 9)

Table 5.3: Life satisfaction and job security
(proxy “how much do you feel protected by the labor regulation in this country?”)
Latinobarometro, waves 1997, 2000 and 2001

	1	2
Regulation protects workers (from 1 to 4) step 1 (omitted)		
step 2	-0.083** (0.037)	-0.082** (0.039)
step 3	-0.153*** (0.041)	-0.155*** (0.043)
step 4	-0.196*** (0.045)	-0.199*** (0.047)
married	-0.014 (0.011)	-0.013 (0.012)
divorced	-0.062*** (0.013)	-0.061*** (0.012)
social networks	0.092*** (0.012)	0.094*** (0.012)
satisfied with democracy	-0.037*** (0.007)	-0.039*** (0.007)
country fixed effect	yes	yes
year fixed effect	no	yes
Number of observations	46.300	46.300
R2	0.102	0.103

note: .01 - ***; .05 - **; .1 - *;

Notes. OLS, standard errors clustered at country and year level; “Regulation protects workers” measure goes from 1 (least protected) to 4 (most protected); “social networks” refer to a question asking whether the respondent trusts other people; Controls included: country fixed effects, socio-economic level of respondent (as reported by the interviewer), type of job of head, number of assets, dummy for whether respondent is interested in politics, scale of satisfaction with health status (from 0 to 9)

Table 5.4: Life satisfaction and income instability
(proxy “direct question about income stability”)
Encuesta Social, waves 2005 and 2006

	1	2	3	4
Income is quite or very unstable	-0.252*** (0.043)	-0.236*** (0.044)		
instability cat 1 “very stable” (omitted)				
cat 2			0.053 (0.119)	0.077 (0.121)
cat 3			-0.220 (0.127)	-0.198 (0.132)
cat 4			-0.204*** (0.052)	-0.153*** (0.059)
married head	-0.122* (0.064)	-0.119* (0.066)	-0.122* (0.065)	-0.119* (0.067)
widow head	-0.020 (0.123)	0.026 (0.120)	-0.016 (0.133)	0.032 (0.131)
social security head	0.082 (0.076)	0.094 (0.073)	0.084 (0.077)	0.099 (0.075)
expenditure per capita	-0.039 (0.055)	-0.054 (0.049)	-0.039 (0.057)	-0.052 (0.051)
fixed effects (households. wave)	no	yes	no	yes
Number of observations	955	955	955	955
R2	0.112	0.120	0.113	0.122

note: .01 - ***; .05 - **; .1 - *;

Notes: OLS, “social security head” is a dummy with 1 if head has been affiliated to any social security institutions in the last year; “head weeks worked” refer to last 12 months; Controls include: education level of household head, number of children (in each household) that receive meals at school, number of assets owned by the household, dummies for city (Bogota’, Bucaramanga and Cali), and for socio-economic stratum; Standard errors clustered at city and stratum level.

APPENDIX A – LIST OF RELEVANT QUESTIONS

Gallup World Poll

(Q.1) **Life satisfaction:** Please imagine a ladder with steps numbered from zero at the bottom to ten at the top. Suppose we say that the top of the ladder represents the best possible life for you and the bottom of the ladder represents the worst possible life for you. On which step of the ladder would you say you personally feel you stand at this time, assuming that the higher the step the better you feel about your life, and the lower the step the worse you feel about it? Which step comes closest to the way you feel?; On which step would you say you stood five years ago?; Just your best guess, on which step do you think you will stand in the future, say about five years from now?

(Q.2) **Standard of living:** Are you satisfied or dissatisfied with your standard of living, all the things you can buy and do?; Right now, do you feel your standard of living is getting better or getting worse?

(Q.3) **Perception of inequality:** Thinking about the differences in the standard of living of the poor and the rich in your country would you say those differences are: 1) Getting bigger. The rich are living better and the poor are living worse; 2) Getting smaller. The difference between the poor and the rich is no longer bigger

(Q.4) **State of personal health:** Using a scale from 0 to 10, on which the best state you can imagine is marked 10 and the worst is marked 0, indicate how good or bad your own health is today.

(Q.5) Have there been times in the past twelve months when you did not have enough money to buy food that you or your family needed

(Q.6) Have there been times in the past 12 months when you or your family have gone hungry?

Encuesta Social

(Q.7) Do you think this country offer enough opportunities for your own development and that of the other household members?

(Q.8) Did these opportunities improved, stay constant or get worse with respect to last year?

(Q.9) Are the members of this household are satisfied with living in this city?

(Q.10) Did this feeling (positive or negative) improved, stay constant or get worse with respect to last year?

(Q. 11) Did any member of the household not have breakfast, lunch or dinner because there was not enough money to buy food?

(Q. 12) Did this household not consume meat last week because there was not enough money to buy it?

(Q.13) Are you safe in this city?

(Q.14) In last 6 months were you or another member of the household victim of a crime?

(Q. 15) Do kids and teenagers receive any meals at school?

Gallup World Poll

(Q.16) Are you the household head? What's your relationship with the household head?

What's the gender of household head?

(Q.17) Woman role: Please tell me if you agree or disagree with the following opinions. A) In this country women and men have the same opportunities to realize their personal aspirations; B) Women who live with a male partner should manage the household's finance; C) It's easier for women to cope with the demands of work and family matters than it is for men; D) In recent years, the number of househusbands has increased.; E) Women in politics have done a better job than men

ENSIN: Encuesta Nacional de la Situación Nutricional en Colombia

(Q.18) In the last 30 days there wasn't enough money to buy food?

(Q.19) In the last 30 days the number of main meals was reduced because there was not enough money to buy food?

(Q.20) In the last 30 days foods essential for kids and teenager were not bought because there was not enough money?

(Q.21) In the last 30 days any kid or teenager within the household did not have breakfast, lunch or dinner because there was not enough money to buy food?

(Q.22) In the last 30 days the household had to reduce the quantity of food that was typically bought because there was not enough money?

(Q.23) In the last 30 days the household had to stop to buy a food that was typically consumed because there was not enough money?

Latinobarometro

(Q.24) Are you satisfied with your life? How much? 1)Very satisfied, 2) quite satisfied, 3) not much satisfied, 4) not satisfied at all

(Q.25) Are you satisfied with your health? How much? 1)Very satisfied, 2) quite satisfied, 3) not much satisfied, 4) not satisfied at all

(Q.26) How worried you are of losing your job or staying unemployed in the next 12 months? “Not worried”, “Just a bit worried”, “Worried”, “Very worried”

(Q.27) Do you think the labour regulation protects workers in this country? “Not protected at all”, “just a bit protected”, “Quite protected”, “Very protected”

(Q.28) Was any of the adult members of this household unemployed in the last 12 months?

(Q.29) Do you think women in this country have the same opportunities to earn the same income as men?

(Q.30) Do you think crime has increased, stayed constant or decreased in the last 12 months?

Encuesta Social

(Q.31) Income: How much is your income for your main and secondary job? How often do you receive your income?

(Q.32) Income stability: Do you consider your income: 1) very stable; 2) more or less stable; 3) more or less unstable, 4) very unstable

Latinobarometro

(Q.33) From 1 to 10 where 1 is “completely secure” “ and 10 is “no job security at all” how much job security do you feel you have currently? ... you had 5 years ago?

Gallup

(Q.34) If you were in trouble, do you have relatives or friends you can count on to help you whenever you need them, or not?

(Q.35) Do you have any health problems that prevent you from doing any of the things people your age normally can do?