

Subjective Wellbeing in Colombia

Some Insights on Vulnerability, Job Security,
and Relative Incomes

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Abstract

A burgeoning literature explores the extent to which consumption or income inadequately reflect people's subjective wellbeing, just as GDP at times can provide an incomplete and misleading picture of national wellbeing. Scholars are increasingly using data on subjective wellbeing to complement traditional welfare indicators and to enrich our understanding of wellbeing and quality of life. The paper builds on the present research but it analyzes a much broader, more interdisciplinary, and more policy-relevant range of potential determinants simultaneously than currently existing in the literature on subjective wellbeing. It first analyzes the relative importance of a wide range of characteristics and conditions at the individual, household, regional and macro levels on levels of subjective wellbeing in Colombia in 2010/11; and second, assesses the marginal effects of a number of factors on perceived changes in levels of subjective wellbeing over time for the same respondents from 2008/09 to 2010/11. Findings show

that increasing the quality of life of Colombians is largely conditional on minimizing risks and vulnerabilities: reducing the rate and duration of unemployment; improving the delivery of public health services; increasing the share of people with health and pension plans; enhancing safety and security in communities; and reducing levels of discrimination. It finds that job loss has particularly strong effects on levels of satisfaction that are larger than those for increased income, while also controlling for a decrease in income that is often related to being unemployed, suggesting that the human welfare (non-pecuniary) costs of unemployment are driving the strong effects. Moreover, any job, even a low-quality job, is overall better for one's subjective wellbeing than being unemployed. Finally, policy aimed at improving people's subjective wellbeing will likely have the greatest impact if focused on mitigating vulnerabilities and negative shocks that people face.

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Some insights on vulnerability, job security, and relative incomes

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1. Introduction¹

A wide body of research on subjective wellbeing has resulted in corresponding interest among policymakers to identify ways to incorporate the research findings into policy. An increasing number of governments are concerned with measuring the subjective wellbeing of their citizens. The governments of both the UK and France have been exploring ways to gauge levels of subjective wellbeing in their societies. In Latin America, some countries are using multidimensional measures of wellbeing and happiness to better capture human wellbeing and development—in Colombia for example the ‘Quality of Life Index’ (CDHS 2005); in Brazil the government is incorporating happiness into its constitution. In the Arab world, governments are very much concerned about how to improve the conditions among unsatisfied citizens.² Even the U.S. government is considering the relevance of wellbeing metrics for its statistics.³

If citizens and policy makers strive to increase subjective wellbeing, there needs to be a good understanding of which characteristics have the most important influence on these outcomes. The paper takes advantage of a detailed data set from Colombia and explores the correlates of citizens’ subjective wellbeing and perceived changes in subjective wellbeing, as well as the channels through which policy responses can influence these. It thereby builds on the present research but it analyzes a much broader, more interdisciplinary, and more policy-relevant range of potential determinants simultaneously than currently existing in the literature on subjective wellbeing, including: people’s basic background traits (age, sex, income, geographic location etc.), supply variables such as levels of health and education service delivery, changes in their employment status and income levels, a number of factors affecting their health status, personal security, levels of public engagement, political voice, economic and political environment as well as policy instruments such as receiving cash transfers or a pension. The paper has two main objectives: we analyze, first, to which extent subjective wellbeing in Colombia is influenced by a wide range of characteristics and conditions at the individual, household, regional and macro level; and then, second, assess the marginal effects of a number of factors on perceived changes over time in the level of subjective wellbeing of the same respondents between the period 2008/09 and 2010/11 in Colombia.

2. Data and methods

The paper employs data from the latest round of survey data collected in Colombia from the Latin America Public Opinion Project (LAPOP). The 2011 survey uses a national probability sample design of adults age 18 and above, with a total number of 1,503 interviewed individuals. It applies a complex sample design, taking into account stratification and clustering. The sample comprises of six strata reflecting the six main geographical regions in the country and each stratum is sub-stratified by rural and urban areas. The sample consists of 56 primary sampling units and 370 final sampling units and represents 26 of the 32 departments, as the administrative regions (i.e. country subdivisions) are called in Colombia. LAPOP data has been collected each year in Colombia between 2004 and 2011 (for further information see: LAPOP 2011). All findings are presented (unless otherwise indicated)

¹ We are thankful for comments from Corinna Peters, Jordan Solomon and two anonymous journal referees.

² This statement was made by Nandini Krishnan, World Bank economist for the Middle East and North Africa, during a poverty conference held at the World Bank in Washington DC on the 4th of May 2012.

³ There is a National Academy of Sciences panel tasked with exploring this question for the U.S; Graham is a member of that panel.

merging 2010 and 2011 data together to allow for a larger number of observations, a total of 3,009.⁴

While panel data has much utility in helping to explain patterns of subjective wellbeing among the same respondents over time, and allows for controls of unobservable traits that are distinct to individuals such as naturally cheerful or curmudgeonly dispositions, it is difficult to find. The cross-sectional data from LAPOP is particularly rich in detail and, among other things, queries the respondents about levels of subjective wellbeing two years ago, allowing for an exploration of perceived changes in levels over time. Genes and personality remain ‘unobserved’ in our cross-section, at least for the analysis at one point of time. We then analyze perceived changes in the same respondents over time. We recognize that the findings, in addition to reflecting actual changes in wellbeing levels, may be correlated with unobservable personality traits and/or affected by recall bias.⁵ Accepting these potential limitations, we felt it worth the opportunity that we have to analyze reported changes in wellbeing, controlling for the usual socio-economic and demographic traits in the cross-section while analyzing a much broader range of potential determinants as well.

We use a question in the survey about the worst and best possible life as our measure of wellbeing. This question was originally introduced by sociologist Howard Cantril and is broadly known as the Cantril ladder question. For the survey, respondents are given a card with a picture of a ladder with steps numbered 0 to 10 that have equal distances, 0 being the lowest step and representing *the worst life possible* while 10 being the highest step and representing *the best life possible*. They are then asked ‘on what step of the ladder do you feel these days?’⁶ This helped to counter potentially different conceptions of a 0-10 ordinal scale and relative differences between the numbers. Thus when we refer to subjective wellbeing scores in this analysis, we are referring to answers to the best life possible question, rather than to life satisfaction or happiness questions, which, although similar, are more open-ended and correlate less consistently with income than does the best possible life question.⁷

There is a large literature cited throughout this paper on the theory and empirical determinants of subjective wellbeing, and in its various dimensions (evaluative and hedonic). Our objective in this paper is to build on that existing literature, but focus distinctly on external factors which are particularly relevant in Colombia and Latin America, and which can be influenced by policy. While, as such, our objectives may appear narrow, we hope that they are directly relevant to policy discussions and we understand the limitations of what can be achieved in a single study.

Thus, although *personal factors* are important correlates of subjective wellbeing (age and family relations, for example) and we take those into account in our paper, our primary

⁴ This is a common approach in the literature, see also LAPOP reports.

⁵ See Kahneman *et al.* 2004; Peeters *et al.* 2012.

⁶ This definition is possibly the most widely applied in the literature, also by Gallup World Poll, and uses Cantril’s self-anchoring scale, see Figure 4 in the annex. Respondents are asked this question at the beginning of the survey so that their responses are not influenced by other questions later in the survey. It is worth noting that this definition allows some degree of openness among respondents, some of whom may have contentment in mind while others the overall concept of their lives and opportunities (Graham 2010). This paper therefore assesses subjective wellbeing in its evaluative sense which does not necessarily reflect changes in one’s daily emotional state and which (as the analysis shows) is very closely linked to life’s objective circumstances. For a discussion on the methodology behind the use of happiness indicators, see for example: Helliwell and Wang 2012.

⁷ See Graham 2011.

interest here is the broad range of *external factors* that are found in people's environment and can be influenced by policy (employment, fostering strong communities with low levels of crime and reducing poverty, for example).

The statistical models applied here consider the coefficients of many factors simultaneously. The paper controls for both personal and external influences and assesses their relative effects. For our analysis, we largely use ordered probit regressions, for which the dependent variable is the level of subjective wellbeing, taking values 0 (the worst life possible) to 10 (the best life possible). An ordered probit model is appropriate as the dependent variable has a natural order but no cardinal rank (see Table 1 for a list of all variables applied).

3. Results and discussion

For policy makers it is critical to know what objective features that policy can influence are most important for people's subjective wellbeing. The first model presented below (a basic model of background traits) assesses the effects of demand variables in influencing people's levels of subjective wellbeing in Colombia, while all other models take into account supply variables: the degree to which public health and education services are well or poorly delivered. The regression results of the econometric models are presented in Table 1 below; the last column reflects basic descriptive statistics of the explanatory variables employed.⁸

More education is associated with improved wellbeing. Much literature provides evidence of the importance of education in underpinning economic production and welfare but education independently also matters for people's quality of life, even after controlling for the higher income it brings. The results in Table 1 show that in comparison to those who have not completed primary education (the reference group), Colombians who complete secondary and especially university/superior education are more satisfied, with everything else (individual, household, community and supply factors) being equal. This is likely partly because higher levels of education not only help to improve people's lives in areas like health and increase civic and political participation but it also facilitates skills, knowledge and competences which are needed to effectively participate within society and the labor market and make one more likely to find a good job and earn sufficient income (Krauss 2012).

*People falling into the second (and especially) third income tercile are more satisfied with their lives compared to those in the poorest tercile (all other things equal).*⁹ Yet the income effect drops by more than half if the poor (those in the poorest tercile) are omitted from the sample, which could be seen as a potential proxy for the remaining sample meeting their basic needs.¹⁰ Results are similar when using self-reported, subjective measures of poverty: the positive effect of being in the second or richest income tercile on subjective wellbeing is significantly reduced if respondents, who reported that their salary/wage and total household income were insufficient, were omitted from the sample (results not shown in table).

⁸ For information on descriptive statistics, see not only the basic descriptive data averages in the last column of each table presenting the regression results, but also table 4 in the annex.

⁹ For a discussion on the relationship between income and subjective wellbeing see: Easterlin 1974; Easterlin *et al.* 2010; Hagerty and Veenhoven 2003; Stevenson and Wolfers 2008.

¹⁰ Analysing the poor as those falling into the bottom tercile seems appropriate as the national poverty line was 37.2 percent in 2010 (World Development Indicators Database 2012). It is worth mentioning that 9 percent of survey respondents who are working did not provide their income levels, reflecting a degree of reluctance in providing income information.

Simple descriptive data analysis here illustrates that increased household income has diminishing subjective wellbeing returns once a threshold of monthly household income of about 1 million pesos (about US\$526 using 2010 exchange rates) is met. This suggests, at least in aggregate terms, that relative income matters more for subjective wellbeing than absolute income after a certain point. It is important to mention that the higher tail of the income distribution has both the largest portions of the ‘very satisfied’ in the country and an increasing share of ‘very unsatisfied’ (a higher standard deviation in subjective wellbeing). This could be due to the expectations of the wealthy (see Graham 2009).

The results indicate that being married is positively associated with greater subjective wellbeing compared to being single (the reference group). This positive relationship between marriage and greater subjective wellbeing has been found worldwide (Layard *et al.* 2012). An explanation is that an intimate partnership is accompanied with trust, can ease stress levels for instance from one’s job and likely increases self-esteem (Mavridis 2010). It could also partly be due to selection effects, as happier people are more likely to marry each other, and we lack panel data to test the over-time effects. Other studies find the effects of marriage—beyond personality trait matching—to be short-lived.¹¹ In contrast, being divorced or widowed has a non-significant effect on one’s subjective wellbeing and may provide an indication of the human capability of adapting to different circumstances.

Children require resources (time and money, among others) and are associated with reduced subjective wellbeing among adults, at least among the non-wealthy. Having children (one, two or more) seems to reduce subjective wellbeing levels incrementally—which is consistent with the international literature (Layard *et al.* 2012). This is possibly due to more obligations, less leisure and especially having fewer resources multiplied by each additional child. Yet when the same regression model is run for only the rich (those falling into the third tercile) the adverse effect of having children disappears and becomes statistically non-significant.

Unlike in most places in the world where migrants have been studied, they are more satisfied than non-migrants in Colombia despite often leaving their close networks behind (Table 1). This is a surprising finding as one would assume that those who remain in the same department where they were born would share a common identity and values, have networks of family and friends as well as have more time to build up trust within their neighborhood (Layard *et al.* 2012). It may be that many migrants in Colombia are escaping violence related to the internal conflict, and the effects of finding peace in their destination location eclipses the usual factors in other places. The subjective wellbeing return to migration in Colombia is therefore an important difference to the basic finding in the existing literature, which shows that non-migrants are typically more satisfied with their lives.¹²

¹¹ For an exploration of asymmetries in happiness levels predicting divorce, see Guven *et al.* 2012.

¹² In terms of geographic location, descriptive data on levels of subjective wellbeing in Colombia vary from 6.3 in the capital Bogota to 5.3 in the National Territories (where the Amazonia and other remote areas are located). Across Latin American countries, for instance, an analysis of the spatial distribution of levels of subjective wellbeing in 2010 shows that Brazilians are overall much more satisfied with their lives (7.2) than Haitians (3.5) and trends are consistent over time, helping to provide evidence that subjective wellbeing is likely in part shaped by the social, political, economic and institutional environment. These spatial disparities within Colombia and across the region provide some empirical evidence, first, against an inherent, universal human set-point to which people return once time passes after certain events and, second, in favour of policy being able to influence people’s subjective wellbeing. Third, our regression results show that differences in objective life measures help to explain variations in life evaluations. And fourth, the consistent U-shape distribution of life evaluations found in Figure 3 in the annex (and also found in other populations around the world) illustrates that people’s age and circumstances in life also shape their wellbeing—for an analysis on age and life satisfaction around the world, see: Graham 2009.

The internal conflict that has displaced several million Colombians has relocated (pushed) people into less hostile areas, typically cities, where the displaced/migrants are less likely to be directly affected by the conflict.¹³ Basic descriptive data indicates that of the 25.3 percent of migrants one third has either lost a family member due to the armed conflict or has a family member who had to abandon their residency due to the conflict. Also, our cross-tabulations indicate that migrants are more likely to state that armed conflict, (lack of) security, kidnapping and narco-traffic are the most important issues facing the country. In addition, the Government of Colombia has implemented pro-active policies to assimilate migrants which may have additional positive effects.

Unemployment has a stronger effect on levels of satisfaction than increased income, other things constant. Compared to those who did not lose their job (the reference group), subjective wellbeing levels decrease strongly and significantly among those who lost their job in the past two years and have not found a new one, while the adverse effect of job loss remains very strong for those who lost their job but have now found a new one. This could illustrate the enduring impact of job loss even after finding employment. It is likely because work helps to give people meaning in life. Work can benefit individuals by connecting them to other people, colleagues, their community and the greater society; through social recognition, self-worth and providing identity; by means of building up know-how and capacities; and in the form of income (Krauss 2012; Di Tella, MacCulloch and Oswald 2001).

Longer-term unemployment can also lead to skill loss that can even reduce the likelihood of employability. Not only does the effect of losing your job remain nearly as strong and significant when controlling for a decrease of income that is likely related to being unemployed (data not shown in table), but the effect of job loss on a reduced quality of life is also greater than the effect of an increase of household income on an improved quality of life. This finding here is consistent with Layard *et al.* 2012.

The results therefore provide evidence that it is not income loss that is driving the very important negative effect of unemployment on people's subjective wellbeing levels but rather the human welfare cost of being unemployed (the non-pecuniary parameters), possibly social stigma associated with being unemployed, lower self-esteem, deprivation of social relationships at work, even potentially a loss of meaning in life offered by a fulfilling job or likely a combination of these. These results are consistent with a study in the US finding that among the unemployed the subjective wellbeing effects derived from non-income factors are five times larger than those from income (Helliwell and Huang 2011). Further data findings here reveal that the large effect of losing your job on lower subjective wellbeing becomes smaller if another household member lost their job in the past two years. Thus, the effect of unemployment on one's subjective wellbeing is higher if less people are unemployed (social stigma) and lower if more people are unemployed (social norm).

Stable jobs would likely also stabilize household income flows, which in turn have effects on both subjective wellbeing and poverty reduction. In about one quarter of households, income reduced in the past two years, among which 59.3 percent stated that an issue directly related to labor was the principal cause for the income reduction (with job loss in the family at 32 percent, reduced salary at 17.2 percent and 'business going bad' at 10.2 percent). Labor

¹³ About 3.9 million people were officially registered as internally displaced persons as of late 2011 (DPS 2011; cf. UNHCR 2013).

policy seems therefore to be critical in mitigating negative shocks in both income and wellbeing, an issue discussed in the conclusion.

Any job is overall better for one's subjective wellbeing than no job. It is important to also ask if it is enough for the government to simply reduce unemployment irrespective of the quality or type of jobs. This data set allows disaggregation by 15 occupational types relative to being un/employed to explore this question. Regression results here indicate that there is no single profession that explains as much of a reduction in one's subjective wellbeing as being unemployed, not even those types of occupations known to be of low quality such as work as non-farm owning laborers in the agriculture sector. That is, any type of job (from professional and technician occupations to domestic service, street vending and on-the-farm jobs) is better for one's subjective wellbeing than remaining unemployed.

Public sector workers are more satisfied than those in the private sector. With non-farm owning farmers as the reference group, people who are currently working in any of the fourteen other occupations categorized in the survey using ILO classifications are more satisfied with their lives (11 of which are statistically significant). In analyzing different occupational groups, the relative importance of one's level of completed education on their quality of life reduces as workers' levels of skills and competencies are being captured in their profession. The most satisfied workers in the country are government officials, then public workers in security (e.g. police and firepersons) followed by professionals and intellectuals, whereas non-farm owning farmers, domestic service workers, *obrerros* and then all other types of agriculture workers are the least satisfied (in that order)—with all other factors such as their income held constant. Lower job standards and less social recognition could possibly be driving the lower subjective wellbeing associated with the latter jobs. Job security appears to also be an important component. Being a public sector wage worker has a strong and significant effect on one's quality of life relative to those in the private sector (see also Luechinger *et al.* 2008) and even more so than the self-employed, while controlling for the other metrics.

Good health and access to water and sanitation are associated with people being more satisfied with their lives, all else equal including income levels. Having poor public health service delivery in your municipality has a strong, negative effect on subjective wellbeing (more so than poor public education service delivery) as shown in Table 1. This may be because good health can help minimize negative feelings and experiences like pain and worry. Being a member of a health plan makes people more satisfied, likely given that those without health insurance are more prone to be affected by medical costs while illness can lead to economic insecurity and debt. Having potable water at home and, in particular, a toilet inside the home help to increase the quality of people's lives. A lack of improved water and toilet facilities is known to cause a higher incidence of sickness and disease, including diarrhea, typhoid and cholera. Other studies have shown that health is more strongly correlated to happiness than income (Graham 2009; Layard *et al.* 2012).

Personal security can affect people's wellbeing. Nineteen point eight percent of survey respondents reported being a victim of delinquency in the past 12 months.¹⁴ As in most places in the world, being a victim of delinquency in the past year, or feeling unsafe at home or in your community from possibly being a victim of an assault or robbery, significantly reduces subjective wellbeing in Colombia. This is likely since crime, muggings and the like

¹⁴ 2010 data from Latinobarometer (2010) shows that 31.5% of respondents reported that they or a family member have been a victim of delinquency in Colombia.

can cause physical pain, trauma and feelings of vulnerability and anxiety as well as a loss of property. Another channel through which crime and lack of security can affect general wellbeing is by constricting personal freedoms and behavior as well as social trust. International studies show that the extent of trust that people have in other people within their communities and work environment influences subjective wellbeing (Bjørnskov 2003; Graham 2009; Helliwell and Wang 2011).

People's public engagement has a limited effect on wellbeing. Humans are social beings and thus in general greater contact with other people is correlated with higher levels of wellbeing. Yet results show that the effect of participating in community meetings is small and non-significant. Individuals who report that they are willing to pay more taxes if the additional revenue is used to give more to the less fortunate are slightly more satisfied with their lives although the effect is also not statistically significant. In terms of correlations between social engagement with others and personal contentment, they may reflect a component of reversed causality as more satisfied people may be more likely to participate in social and community events and be more in favor of giving to charity and reducing inequalities in society. There may also be some reverse causality in aspects of political voice.

One's ability to exercise political voice is associated with subjective wellbeing. People's perceived wellbeing levels are positively and significantly correlated with having voted in the 2010 presidential elections. People who requested assistance from, or presented a petition to, a congressman or any local or federal authority were however significantly less satisfied with their lives. Yet such actions reveal the needs and deprivations of citizens and can help ensure greater accountability of public officials and public institutions (Stiglitz *et al.* 2009). It may be that a certain degree of frustration or unhappiness is necessary prior to citizens taking such public action and/or to participate in political demonstrations.¹⁵

One potential proxy indicator for the degree of equality in society is if citizens practice mutual respect for each other. Having been discriminated or treated unjustly (due to one's economic status, physical appearance or gender) in the past 5 years has a very strong negative effect on being satisfied (all things equal)—with 28 percent of respondents reporting having been discriminated. Once again, some reverse causality could be at play, with less satisfied respondents more likely to report discrimination. A few channels through which one's quality of life may be negatively affected by discrimination are a lack of respect from other members of society, social tensions and fewer possibilities for social and economic mobility.

Perceived poor economic management has no significant effect on people's subjective wellbeing. For a society to function well a certain degree of mutual trust is required between citizens and the government, with results in Table 1 illustrating that people who have trust in the national government are significantly more satisfied. Yet there is no significant effect on people's wellbeing who believe that the current government is managing the economy poorly, or who believe that Juan Manuel Santos—the President—is in general doing a poor job. It is important to mention that results of perceptions (e.g. political views) on perceptions (e.g. of subjective wellbeing) should be read with caution as they can run in unison and the

¹⁵ Graham and Markowitz (2011), for example, show that respondents that intend to migrate from Latin America are wealthier and more educated than the average, but also less satisfied with their lives and with their economic conditions. Graham and Chattopadhyay (2011) show that those cohorts that were likely to participate in the Arab Spring protests were significantly less optimistic about their future happiness than were similar cohorts that did not participate in protests.

direction of causality is difficult if not impossible to disentangle without panel data (later we explore different solutions to this issue).

Vulnerability and shocks can help reduce people's subjective wellbeing, with reduced income having much larger negative effects than the positive effects of increased income. With an individual's subjective wellbeing in life positively and significantly affected by an increase in income (as illustrated earlier), this could provide some evidence that when the economy is growing people perceive this as conditions are improving and their levels of reported subjective wellbeing increase. However, if one's level of income decreased over the past two years (which happened to 24.6 percent of the population), this had a negative effect on people's subjective wellbeing that was about three times as strong as the positive effect of increased income, illustrating individuals' vulnerability and the relatively large effect of such economic shocks. This helps support the view that people are better able to adapt to unpleasant certainty than they are to uncertainty, particularly that which is associated with losses (Graham 2009).

Policy instruments such as pension or health plans have a strong and significant effect on the quality of people's lives. If an individual has a pension plan, the likelihood that they are satisfied increases strongly (with other things equal). This is likely because they would have less anxiety of not being able to mitigate economic insecurities and vulnerabilities later in life once they leave the labor market. Being able to reduce uncertainties is likely also why having a health plan makes people more satisfied. Conversely, recipients of Familias en Accion—Colombia's largest social safety net and conditional cash transfer program—or any other monthly financial assistance program from the government report lower subjective wellbeing. This could possibly be in part explained by the social stigma of falling into the group of very marginalized households targeted for subsidies and/or by its household grant amounts not being able to sufficiently mitigate beneficiaries' perceived risks and shocks.¹⁶

¹⁶ Recent work from Namrata Chindarkar in Peru shows that the subjective wellbeing effects of receiving conditional cash transfers are not significant, while the effects of being a micro-credit loan recipient are positive. She uses propensity score matching techniques as a means to get around the usual direction of causality issues, see Chindarkar 2012.

Table 1: Ordered probit regression results: influencers of subjective wellbeing in Colombia, 2010/11

Subjective wellbeing	Basic background traits w/ supply variables																				Basic descriptive data avg.
	Basic background traits		Labor		Health		Personal security		Public engagement		Political voice		Economic and political environment		Policy instruments		Complete model				
Independent variables	coef	tstat	Coef	tstat	coef	tstat	coef	tstat	coef	tstat	coef	tstat	coef	tstat	coef	Tstat	coef	tstat	coef	tstat	6.3
Male (ref. female)	-0.179***	-4.199	-0.171***	-3.919	-0.183***	-4.037	-0.171***	-3.885	-0.165***	-3.695	-0.169***	-3.789	-0.169***	-3.797	-0.194***	-4.262	-0.209***	-4.697	-0.203***	-4.067	49.7
Age 26-35 (ref. 18-25)	0.00685	0.121	-0.00673	-0.117	0.0229	0.391	-0.00795	-0.138	-0.000168	-0.00287	-0.0290	-0.499	-0.0288	-0.477	0.00607	0.102	-0.0303	-0.525	-0.00680	-0.106	28.2
Age 36-45	-0.194***	-2.781	-0.207***	-2.916	-0.199***	-2.746	-0.224***	-3.150	-0.219***	-3.040	-0.230***	-3.176	-0.253***	-3.385	-0.166**	-2.254	-0.238***	-3.319	-0.278***	-3.434	18.9
Age 46-55	-0.136	-1.502	-0.105	-1.128	-0.126	-1.315	-0.124	-1.324	-0.131	-1.369	-0.157	-1.625	-0.204**	-2.122	-0.109	-1.114	-0.157*	-1.661	-0.333***	-3.155	11.5
Age 56-65	0.0199	0.201	0.0312	0.305	0.0344	0.320	-0.0133	-0.129	0.0271	0.259	-0.0280	-0.271	0.00770	0.0711	0.0482	0.442	-0.0361	-0.348	-0.138	-1.140	9.0
Age 66+	0.122	0.951	0.0629	0.477	...	...	-0.00211	-0.0159	0.0752	0.577	0.00567	0.0421	-0.0978	-0.666	0.0902	0.614	0.00113	0.00844	-0.243	-1.454	6.0
Completed primary (ref. no edu.)	0.000455	0.00569	0.0420	0.514	0.0842	0.954	0.0228	0.278	0.104	1.264	0.0435	0.513	0.0453	0.519	0.104	1.164	0.0347	0.422	0.143	1.444	27.0
Completed secondary	0.118	1.433	0.168**	1.992	0.191**	2.152	0.115	1.349	0.237***	2.787	0.159*	1.827	0.208**	2.323	0.234***	2.579	0.114	1.339	0.219**	2.168	42.9
Completed university/superior	0.248***	2.661	0.313***	3.253	0.300***	2.974	0.233**	2.369	0.381***	3.910	0.309***	3.100	0.360***	3.562	0.367***	3.563	0.202**	2.039	0.295**	2.562	14.7
Income tercile 2 (ref. tercile 1)	0.418***	7.559	0.414***	7.330	0.388***	6.576	0.363***	6.320	0.389***	6.721	0.397***	6.934	0.387***	6.569	0.412***	6.834	0.398***	6.990	0.266***	4.025	31.6
Income tercile 3	0.655***	10.96	0.657***	10.74	0.600***	9.266	0.573***	9.049	0.649***	10.37	0.655***	10.54	0.632***	10.607	0.660***	10.23	0.602***	9.636	0.457***	6.377	36.8
Catholic (ref. Oriental religion)	0.161*	1.696	0.150	1.501	0.131	1.271	0.134	1.347	0.128	1.266	0.163	1.605	0.0953	0.961	0.113	1.099	0.152	1.518	0.0668	0.620	80.4
Protestant	0.276**	2.039	0.300**	2.153	0.255*	1.759	0.277**	1.989	0.301**	2.164	0.272*	1.933	0.264*	1.838	0.241*	1.670	0.324**	2.347	0.190	1.263	3.9
Evangelical/Pentecostal	0.323**	1.983	0.407**	2.439	0.284*	1.666	0.394**	2.352	0.378**	2.186	0.390**	2.322	0.367**	2.149	0.345*	1.947	0.366**	2.205	0.216	1.163	3.6
No religion	0.0811	0.691	0.0454	0.373	0.0435	0.348	0.0314	0.259	0.000906	0.00737	0.0697	0.566	0.0111	0.0920	-0.0502	-0.404	0.0544	0.442	-0.0887	-0.680	7.4
Married (ref. single)	0.143**	2.266	0.179***	2.792	0.150**	2.241	0.164**	2.545	0.150**	2.251	0.166**	2.558	0.135**	2.036	0.116*	1.681	0.168***	2.608	0.0697	0.963	55.1
Divorced	0.0155	0.150	0.0359	0.340	0.0434	0.398	0.0175	0.164	0.0421	0.390	0.0167	0.158	0.0700	0.648	0.00440	0.0397	0.0168	0.158	0.0471	0.411	6.2
Widowed	-0.0330	-0.216	0.0151	0.0957	-0.0657	-0.353	-0.0184	-0.116	-0.0725	-0.453	0.00869	0.0530	0.0243	0.147	-0.0838	-0.477	-0.0226	-0.142	-0.163	-0.857	3.6
Number of children, 1-2 (ref. 0)	-0.207***	-2.953	-0.214***	-3.009	-0.193***	-2.628	-0.202***	-2.831	-0.207***	-2.815	-0.193***	-2.684	-0.172**	-2.372	-0.175**	-2.329	-0.225***	-3.154	-0.144*	-1.862	39.2
Number of children, 3-5	-0.241***	-2.854	-0.263***	-3.055	-0.223**	-2.479	-0.250***	-2.898	-0.266***	-3.005	-0.224**	-2.569	-0.172**	-1.962	-0.235**	-2.556	-0.260***	-3.008	-0.133	-1.396	25.9
Number of children, 6+	-0.328**	-2.303	-0.270*	-1.869	-0.130	-0.794	-0.254*	-1.736	-0.289*	-1.958	-0.235	-1.585	-0.156	-1.036	-0.232	-1.480	-0.234	-1.599	-0.0632	-0.373	5.4
Caribe (ref. Territorios Nacionales)	0.318***	3.028	0.304***	2.845	0.285***	2.600	0.293***	2.664	0.254**	2.296	0.317***	2.867	0.288**	2.539	0.347***	3.132	0.345***	3.248	0.288**	2.317	21.6
Bogota	0.258**	2.390	0.254**	2.326	0.237**	2.114	0.172	1.496	0.270**	2.367	0.284**	2.527	0.278**	2.396	0.324***	2.865	0.256**	2.355	0.277**	2.147	15.4
Central	0.439***	4.197	0.406***	3.804	0.398***	3.647	0.312***	2.772	0.368***	3.324	0.421***	3.833	0.384***	3.364	0.483***	4.323	0.414***	3.906	0.348***	2.719	23.5
Oriental	0.346**	3.355	0.320***	3.047	0.304***	2.830	0.251**	2.282	0.275**	2.524	0.340***	3.143	0.341***	3.064	0.379***	3.467	0.340***	3.266	0.290**	2.348	18.3
Pacifica	0.369***	3.418	0.372***	3.370	0.370***	3.269	0.255**	2.175	0.355***	3.093	0.405***	3.577	0.386***	3.293	0.484***	4.183	0.381***	3.467	0.378***	2.857	17.7
Urban (ref. rural)	-0.0411	-0.761	-0.0466	-0.838	0.0217	0.378	-0.123**	-2.088	-0.00687	-0.120	-0.0319	-0.561	-0.0297	-0.513	-0.0234	-0.398	-0.0613	-1.088	-0.0211	-0.314	73.7
Migrant (ref. non-migrant)	0.0910*	1.887	0.0977**	1.968	0.103**	1.974	0.0877*	1.764	0.117**	2.299	0.0964*	1.930	0.0965*	1.905	0.0718	1.385	0.0993**	1.993	0.0784	1.429	25.3
Has poor public health service delivery			-0.201**	-4.229	-0.193***	-3.967	-0.186***	-3.925	-0.164***	-3.406	-0.195***	-4.058	-0.179***	-3.705	-0.156***	-3.158	-0.204***	-4.288	-0.164***	-3.189	27.3
Has poor public education service delivery			-0.156**	-2.100	-0.103	-1.342	-0.161**	-2.158	-0.0987	-1.261	-0.146*	-1.948	-0.115	-1.514	-0.0922	-1.162	-0.155**	-2.044	-0.0258	-0.309	9.3
Lost job but found new one (ref. no lost job)					-0.231***	-3.768													-0.125*	-1.895	14.1
Lost job and has not found a new one					-0.263***	-3.792													-0.199***	-2.638	10.1
Doesn't have job (disability or own decision)					0.0238	0.290													0.0317	0.358	8.1
Household income increased in past 2 yrs.					0.207***	4.010													0.144**	2.562	23.8
Used public medical services in past yr.							-0.0168	-0.392											-0.00281	-0.0583	44.2
Member of a health plan							0.154***	3.249											0.0620	1.096	51.0
Has potable water inside home							0.147**	2.063											0.130*	1.677	85.0
Has bathroom inside home							0.207**	2.561											0.216**	2.381	87.2
Been a victim of delinquency in past yr.									-0.166***	-2.934									-0.0900	-1.514	19.8
Lost a family member due to armed conflict									-0.0169	-0.339									0.0416	0.754	24.1
Feel unsafe in your community									-0.108**	-2.335									-0.115**	-2.340	34.9
Trustworthy people in your community									0.0652	1.363									0.0212	0.411	70.9
Has trust in the police									0.206***	4.834									0.145***	2.971	50.4
Helped solve community problem in past yr.											0.0485	0.690							0.0352	0.470	10.6
Participate in community meetings											0.0778	1.124							0.0772	1.038	10.8
Joined a public gathering/demo in past yr.											-0.0190	-0.257							0.0560	0.693	6.9
Willing to pay more taxes to help the poor											0.0609	1.428							0.0283	0.612	41.7
Believe public opinion matters to the gov.													0.226***	5.012					0.191***	3.941	35.3
Voted in the 2010 presidential elections													0.105**	2.129					0.105**	2.018	64.3
Participates politically*													-0.0868*	-1.776					-0.0672	-1.264	27.0
Have been discriminated in past 5 yrs.													-0.340***	-7.217					-0.289***	-5.686	28.0
Neg. view of national economic situation															-0.247***	-4.904			-0.189***	-3.529	33.6
Poor economic management of current gov.															-0.0776	-1.552			-0.00747	-0.143	36.4
Believes Pres. Santos is doing a poor job															-0.0805	-0.0863			0.0659	0.647	6.7
Has trust in the national government															0.0961**	2.038			0.0167	0.330	57.1

Running split regression models and including additional variables confirm the robustness of the findings. Split models are tested here using all the control variables in the complete model (in Table 1). In an income split model, when the rich (those in the third tercile) are dropped from the complete model, one variable in particular shows strong variance while the rest remain relatively similar: the effect of religion on being satisfied with life is very strong and significant among the non-wealthy. The wealthy appear therefore more inclined to determine their own meaning in life and not derive such a large share of their subjective wellbeing in life through religion. Also, the positive effect of being married increases among the non-wealthy. Religion and family—which can be seen as safety nets for the poor—therefore are more closely correlated with the subjective wellbeing of the poor while social variables such as being discriminated are more closely related to the subjective wellbeing of the non-poor.¹⁷ In an urban/rural split model, differences between urban and rural areas were very small for all explanatory variables with two exceptions in rural areas: the (already large) effects of unemployment as well as poor public health service delivery on reduced quality of life increased strongly. In terms of gender differences, we run the regression model separately for females and for males using the same control variables. Two noteworthy differences emerge. The satisfaction returns to education at each incremental level are stronger and more significant for females than males. And, job loss has overall a stronger and more significant effect on reducing females' satisfaction relative to males, which is a departure from many other studies on the wellbeing effects of unemployment that are typically stronger for males (see Eggers, Gaddy and Graham 2006).

With all other effects remaining largely similar, when the regression is conducted without levels of household welfare to test whether its exclusion affects the parameters of the other variables, it is established that there is nearly no change at all in the remaining parameters, with the exception of an increase in the relative importance of an individual's level of education which is highly correlated with their earnings. In addition, other variables are added to the complete model to test their potential importance. In terms of internet, for example, it was assumed that having daily internet access (reflecting 19.9 percent of the population) as a potential proxy for also having an international comparison group could possibly affect one's perception of their quality of life relative to people not only in but also outside Colombia, but results reveal no significant effect of daily internet use on one's subjective wellbeing. Estimations of these various sub-samples and additional variables (with the exception of the variations noted here) verify on a whole the robustness of the findings.

As regression results on the relationships between perceptions (e.g. one's trust in the government) and other perceptions (e.g. one's subjective wellbeing) should be read with caution as they can run in unison at times, we run the identical ordered probit regressions (as in Table 1) but only include objective indicators as control variables to test the robustness of the findings. When no independent variables capturing perceptions or subjective views of respondents are included in the regressions, all effects are nearly the same for the remaining variables, with the only exception being that the relative importance of education decreases (see Table 3 in the annex). Therefore, the potential of multicollinearity among independent variables that could reduce the predictive power of the model or of individual predictors does not appear to be a pressing issue here.

¹⁷ Similarly, Graham and Lora (2009), in a region-wide study, find that the effects of religion and friendships are more important to the subjective wellbeing of the poor, while work and health are more important to the subjective wellbeing of the non-poor.

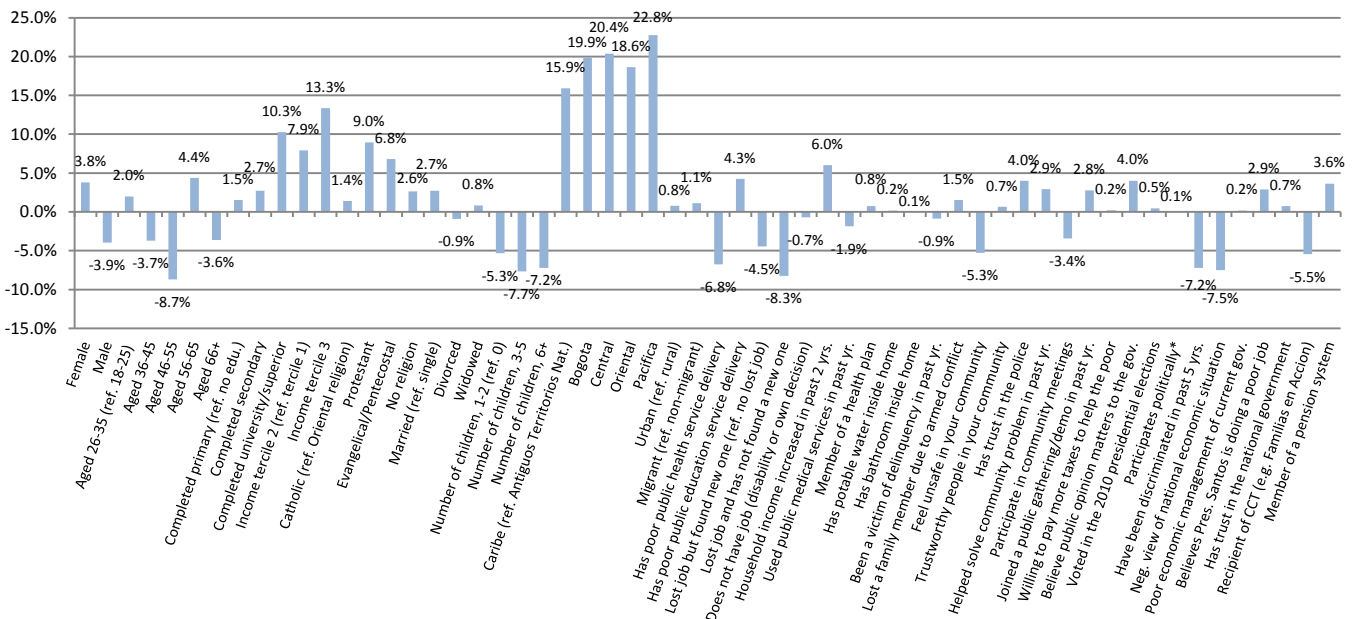
The best life versus the worst life. An additional exercise is conducted here using a probit regression model for the ‘ultra satisfied’—reflecting 1 for those who reported 9 or 10 on the ladder-of-life (13.7 percent of the population) and 0 for all others. An interesting finding is that being a migrant has a very large, positive and significant influence on the ‘ultra satisfied’ (relative to the effects in the complete model above). In running a probit regression model for the ‘ultra unsatisfied’—those who reported 0 to 3 on the ladder-of-life (9.6 percent of the population)—results show a similar age pattern with a peak in the lowest reported subjective wellbeing for those age 46-55, although the magnitude of one’s age on perceived wellbeing increases strongly. Being a widow has a significant and very strong correlation with falling into the group of ultra unsatisfied. Policy-relevant factors for which the explanatory value of being ultra unsatisfied increases (relative to the complete model above) are having poor delivery of public education services, losing one’s job, not having a health or pension plan, and not having toilet facilities at home. Policy makers concerned about improving the conditions of very unsatisfied and discontented citizens and reducing potential social tensions may consider giving particular focus to such areas. In addition, there is female bias among the ultra satisfied while a male bias exists among the ultra unsatisfied. In the following, another econometric exercise is conducted by analyzing the data in a different way.

Simulated net effect of background features on subjective wellbeing in Colombia

Figure 1 illustrates the predicted values (probabilities) for different combinations of values of independent variables after running a probit regression model. The results here estimate the effect of each background feature on people’s quality of life *ceteris paribus* (i.e. the simulated net effect of each independent variable) and includes all the control variables for respondents applied in Figure 1. The dependent variable is high subjective wellbeing—reflecting 1 for those reporting 7 to 10 on the latter-of-life (representing about half of the population) and 0 for all others. This econometric exercise illustrates the relative importance of specific background features in a different way to the ordered probit regression results in Table 1 above and verifies their robustness.

The simulated net probability of an individual being highly satisfied with their life is 8.3 percent lower if they lost their job in the past two years and have not found a new one, whereas it is 4.5 percent lower if they lost their job but found a new one—relative to those who did not lose their job (the reference group). These percentages are the likelihood for a simulated person who would have the same age, access to health and education facilities, physical location, wealth, level of education etc. as an average Colombian but who would have lost their job and either not found a new one or found a new one, respectively (Figure 1). If people feel unsafe in their community or have been discriminated or treated unjustly (due to one’s economic status, physical appearance or gender) in the past 5 years, then they are 5.3 and 7.2 percent less likely (respectively) to be satisfied with their lives, independent of individual, household, community and departmental level factors. An individual who has poor delivery of public health services in their municipality is 6.8 percent less likely to be satisfied with their life, providing some evidence that the government has leverage in improving people’s subjective wellbeing by increasing the efficiency and effectiveness of health provision in the country.

Figure 1: Simulated net effect of a range of factors shaping subjective wellbeing in Colombia, 2010/2011



Source: Author's calculations of predicted probabilities after running probit regression based on LAPOP data. Note: Results here are derived from using the 'prtab' command after estimating the complete probit regression model. The same 'note' applies as in Table 1.

It is important to stress that part of our subjective wellbeing in life is also influenced by our genes and personality traits, but these are unobserved and so captured in the regression error term as it is not possible to control for such idiosyncratic characteristics. Cross-sectional survey data can, for example, at times overestimate the household income effect on subjective wellbeing as it can include reverse effects of being happy on generating more household income. To help overcome this, the next section assesses the relative importance of perceived changes in subjective wellbeing over time, after having looked above at the correlates of a good life at one point in time. Thus, the econometric methods conducted in the following can help neutralize such latent heterogeneity.¹⁸

Changes in levels of perceived subjective wellbeing between 2008/09 and 2010/11

It is possible, given the nature of this data set, to draw potential conclusions about what caused shifts in an individual's perceived wellbeing over the past two years. This is not a panel design with data on the same respondents in 2008/09 and 2010/11 but rather reflects data collected in 2010/11 on respondents' current levels of subjective wellbeing and their levels two years ago, i.e. they were asked 'on what step of the ladder were you two years ago, in 2008 (for those asked in 2010) and 2009 (for those asked in 2011)?' This survey data therefore offers an alternative to panel data and helps to overcome idiosyncratic differences between people (psychological drive, personality etc.) by capturing information on the same respondents over this two year period. Between 2008/09 and 2010/11, 49.4 percent of Colombians reported an increase in their own levels of subjective wellbeing, while 24.9 percent reported a decline and 25.7 percent the same level. While this data provides potentially valuable information on the influences of changes, it is also important to keep in mind that they are perceived changes and that baseline subjective wellbeing levels and/or

¹⁸ For a discussion on latent heterogeneity, see Ravallion 2012.

unobservable personality traits can influence respondents' propensity to report changes, positive or negative.¹⁹

Figure 2 below graphically illustrates the marginal effects of a wide-range of independent variables on a positive change in respondents' assessment of their own subjective wellbeing over the two year period 2008/09 to 2010/11.²⁰ A number of interesting findings emerge. Getting older, losing your job and perceived poor economic management of the government adversely and significantly affects an improvement in respondents' level of subjective wellbeing in the past two years; whereas a reported improvement in respondents' subjective wellbeing is positively and significantly explained by an increase in income, more education and having migrated. The probability of an individual improving their quality of life reduced by 8.1 percent if they lost their job in the past two years but found a new one and by 14.1 percent if they have not yet found a new one (relative to the reference group who did not lose their job), with everything else (individual, household, community and national factors) being equal (Figure 2). In terms of basic descriptive data, about one third (32 percent) of people who lost their job in the past two years reported being two or more steps lower on the ladder of life compared to two years ago, illustrating the impact of job loss on how people evaluate their lives.

Current levels of household income did not play a significant role in explaining shifts in respondents' subjective wellbeing. While the income tercile one falls into had a limited effect on shifts in levels of subjective wellbeing, a relative increase in the initial level of income over the past two years improves one's wellbeing although less than factors like being young. Migrating (often from a conflict zone) seems to have a strong (6%) effect on changes in subjective wellbeing in Colombia.

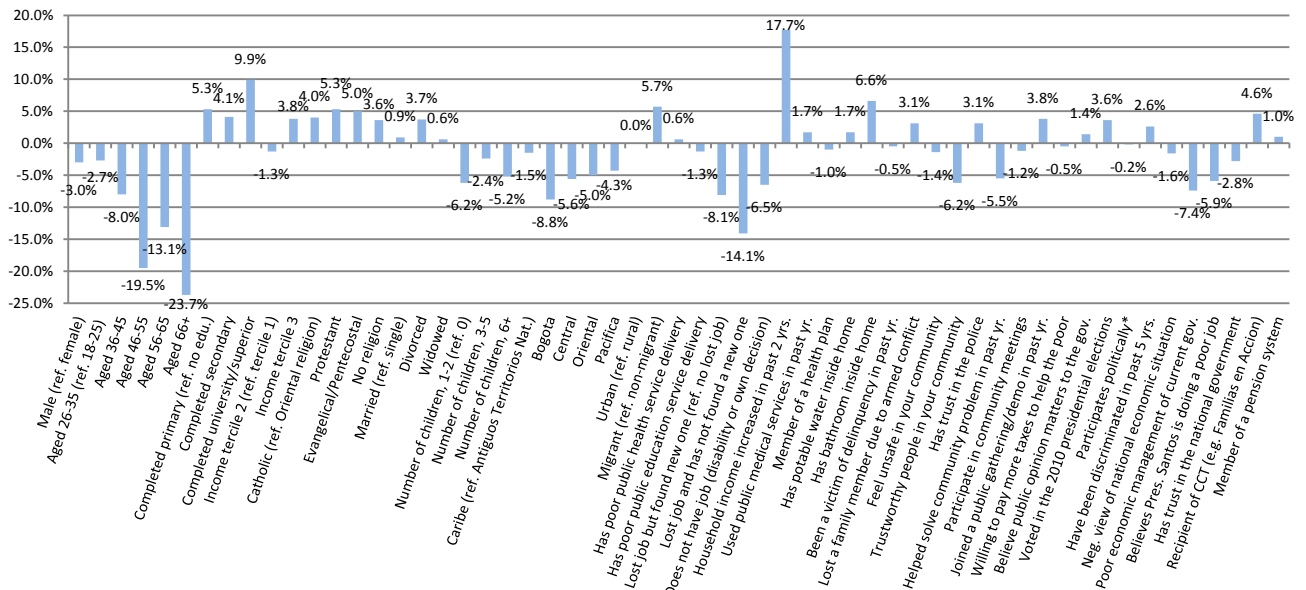
Although both can shape subjective wellbeing, there is a stronger relative importance of economic factors among the poor and of social factors among the wealthier. It is an important finding that other aspects of life besides income are significant. When the poor (those in the poorest tercile) are omitted from the sample, which may indirectly reflect that basic needs are being met, the relative influence of an increase in income over the past two years has a more limited effect on a positive change in subjective wellbeing in the past two years, while the wellbeing effect of falling into the richest income tercile remains non-significant (with the middle income tercile as the reference group).

Another interesting finding is that when the data is disaggregated to measure the effect of (current levels of household income or) an increase of household income in the past two years on an improvement in subjective wellbeing relative to appropriate comparator groups (such as for individuals with the same level of education), unemployment was relatively more important in explaining perceived changes in people's quality of life over the past two years compared to changes in (and current levels of) household income (data not shown in figure).

¹⁹ Kahneman *et al.* 2004; Peeters *et al.* 2012.

²⁰ These results for the complete model are also found within Table 2 in the annex, including significance levels.

Figure 2: Marginal effects of probit regression results: influencers of an improvement in respondents' subjective wellbeing in Colombia over the two year period 2008/09-2010/11



Source: Author's calculations of marginal effects after running probit regression based on LAPOP data. Note: The marginal effects here are derived using the 'mfx' command after estimating the complete probit regression model. The same 'note' applies as in Table 1.

4. Conclusion and policy implications

Our results—while acknowledging that there are unobservables influencing some of our findings—suggest that policy can go a long way in raising subjective wellbeing and particularly in mitigating shocks in subjective wellbeing. There are six strong, significant and policy-relevant factors associated with subjective wellbeing in Colombia. As a result, policy responses that would likely have the largest influence on subjective wellbeing include:

- i. minimizing the rate and duration of unemployment, for example, through job search and placement facilities (with any job better than no job) and through skills development programs for the unemployed;
- ii. improving the delivery of public health services and providing universal access to toilet facilities in homes (currently in 87.2 percent of households) as these would help reduce the incidence of sickness, infection and disease and improve physical health;
- iii. ensuring that every child completes at least the compulsory 9 years of schooling in Colombia, while raising levels of upper secondary and higher education which can help increase individual opportunities and freedoms;
- iv. ensuring that people are able to acquire a minimum level of household income needed to meet basic needs;
- v. improving levels of safety and security in communities and reducing levels of discrimination, by fostering strong communities with mutual trust and cooperation via inclusive participatory policies, and;
- vi. increasing the current share of members of a pension plan (23.8 percent of the population) as well as members of a health plan (51 percent), as insurance schemes can help reduce economic insecurities, anxiety and vulnerabilities.

While personal factors including family relations, religion and age are also important for subjective wellbeing, they are not the purview of policy and the focus of this paper.

In an additional effort, national statistical offices could consider increasingly adding questions to their household surveys, in which respondents themselves are asked about the factors that affected their quality of life, which is a unique feature of this data set. For example, employment issues seem to be the most important factor affecting subjective wellbeing in Colombia when asking respondents themselves. When people 18-25 years of age were asked which issues or problems do you worry about frequently, the majority (55.9 percent) stated employment related issues (work, employment, salary, income, economic or labor stability). The second most likely reported cause of being worried was security, crime and gangs at 15.9 percent, followed by issues related to education (obtaining, completing or paying for education) at 8.6 percent. Unemployment was cited by about one quarter of all respondents in the country (23.6 percent) as the single most important problem facing their municipality/community. When respondents were asked to which extent do you believe that the current government combats unemployment, 45.6 percent of respondents stated poorly to not at all while 31.1 percent indicated well to very well (the remaining 23.2 percent reported neither poor nor well).

In sum, our findings on the correlates of wellbeing in Colombia provide important complements to our understanding of income-based welfare, and can help inform policies and programs that aim to improve subjective wellbeing and important objective indicators of welfare. Many of the policies that we posit would likely help reduce the prevalence of negative shocks and vulnerabilities that affect people's subjective wellbeing. Having data on both objective and subjective indicators, and changes in those indicators, gives policymakers a broader basis of understanding from which to tackle the challenge of improving human wellbeing in a developing country as complex and challenging as the Colombian context. At the same time, given that some baseline findings for Colombia are similar to those in other countries around the world, some of our findings could be relevant for other developing countries in Latin America and beyond.

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Annex

Table 2: Marginal effects of probit regression results: influencers of an improvement in subjective wellbeing in Colombia over the two year period 2008/09-2010/11

Positive change in subjective wellbeing	Basic background traits		Basic background traits w/ supply variables		Labor		Health		Personal security		Public engagement		Political voice		Economic and political environment		Policy instruments		Complete model		Basic descriptive data avg.
	coef	tstat	coef	tstat	coef	tstat	coef	tstat	coef	tstat	coef	tstat	coef	tstat	coef	tstat	coef	tstat	coef	tstat	
Male (ref. female)	-0.030	-1.41	-0.025	-1.16	-0.024	-1.04	-0.023	-1.08	-0.020	-0.92	-0.028	-1.30	-0.028	-1.27	-0.029	-1.27	-0.027	-1.22	-0.030	-1.20	49.7
Age 26-35 (ref. 18-25)	-0.041	-1.39	-0.043	-1.43	-0.037	-1.21	-0.041	-1.36	-0.034	-1.11	-0.040	-1.32	-0.045	-1.43	-0.044	-1.41	-0.047	-1.55	-0.027	-0.78	28.2
Age 36-45	-0.084**	-2.44	-0.092***	-2.62	-0.090**	-2.51	-0.090***	-2.58	-0.089**	-2.48	-0.088**	-2.47	-0.105***	-2.88	-0.086**	-2.34	-0.097***	-2.76	-0.080**	-1.97	18.9
Age 46-55	-0.163***	-4.18	-0.166***	-4.16	-0.186***	-4.55	-0.168***	-4.20	-0.175***	-4.34	-0.164***	-4.01	-0.173***	-4.13	-0.186***	-4.46	-0.167***	-4.16	-0.195***	-4.15	11.5
Age 56-65	-0.123***	-2.73	-0.112***	-2.41	-0.112***	-2.23	-0.117***	-2.49	-0.106**	-2.21	-0.112***	-2.36	-0.134***	-2.75	-0.123**	-2.47	-0.110**	-2.31	-0.131**	-2.35	9.0
Age 66+	-0.233***	-4.63	-0.233***	-4.49	...	...	-0.238***	-4.60	-0.232***	-4.36	-0.222***	-4.13	-0.271***	-5.13	-0.236***	-4.19	-0.224***	-4.19	-0.237***	-3.60	6.0
Completed primary (ref. no edu.)	0.095***	2.78	0.097***	2.78	0.067*	1.77	0.092***	2.64	0.098***	2.74	0.091**	2.55	0.085**	2.34	0.089**	2.38	0.093***	2.65	0.053	1.28	27.0
Completed secondary	0.103***	2.85	0.094**	2.55	0.063	1.61	0.086**	2.29	0.096**	2.55	0.081**	2.15	0.079**	2.06	0.078**	1.98	0.086**	2.30	0.041	0.93	42.9
Completed university/superior	0.191***	4.64	0.177***	4.16	0.120***	2.61	0.171***	3.90	0.179***	4.11	0.166***	3.80	0.159***	3.56	0.155***	3.44	0.159***	3.57	0.099*	1.88	14.7
Income tercile 2 (ref. tercile 1)	0.018	0.71	0.016	0.62	-0.006	-0.23	0.013	0.49	0.023	0.84	0.018	0.67	0.018	0.65	0.014	0.51	0.021	0.78	-0.013	-0.42	31.6
Income tercile 3	0.070**	2.48	0.073**	2.53	0.017	0.56	0.067**	2.25	0.078***	2.66	0.073**	2.50	0.078***	2.63	0.075**	2.50	0.073**	2.46	0.038	1.12	36.8
Catholic (ref. Oriental religion)	0.034	0.72	0.028	0.57	0.034	0.68	0.023	0.47	0.027	0.55	0.033	0.67	0.021	0.42	0.027	0.53	0.039	0.79	0.040	0.75	80.4
Protestant	0.046	0.68	0.040	0.58	0.032	0.45	0.027	0.39	0.045	0.63	0.045	0.64	0.039	0.55	0.062	0.85	0.056	0.80	0.053	0.70	3.9
Evangelical/Pentecostal	0.078	1.08	0.071	0.96	0.054	0.70	0.071	0.96	0.037	0.48	0.074	0.98	0.076	1.00	0.079	1.02	0.092	1.24	0.050	0.61	3.6
No religion	0.023	0.40	0.021	0.35	0.033	0.53	0.016	0.26	0.015	0.24	0.024	0.39	0.018	0.30	0.029	0.47	0.035	0.58	0.036	0.55	7.4
Married (ref. single)	0.029	0.94	0.028	0.90	0.014	0.43	0.027	0.88	0.016	0.51	0.022	0.70	0.035	1.11	0.028	0.85	0.025	0.80	0.009	0.27	55.1
Divorced	0.026	0.51	0.028	0.55	0.051	0.98	0.032	0.62	0.031	0.59	0.020	0.39	0.027	0.51	0.022	0.41	0.025	0.48	0.037	0.65	6.2
Widowed	0.029	0.45	0.048	0.74	0.082	1.10	0.047	0.71	0.008	0.11	0.037	0.54	0.056	0.81	0.010	0.13	0.046	0.70	0.006	0.07	3.6
Number of children, 1-2 (ref. 0)	-0.064*	-1.87	-0.063*	-1.83	-0.049	-1.38	-0.063*	-1.83	-0.057	-1.63	-0.065*	-1.85	-0.069*	-1.96	-0.066*	-1.82	-0.071**	-2.04	-0.062	-1.61	39.2
Number of children, 3-5	-0.027	-0.67	-0.033	-0.81	-0.008	-0.19	-0.034	-0.81	-0.029	-0.68	-0.029	-0.70	-0.044	-1.03	-0.040	-0.92	-0.045	-1.07	-0.024	-0.51	25.9
Number of children, 6+	-0.056	-0.92	-0.064	-1.03	-0.033	-0.46	-0.064	-1.01	-0.036	-0.56	-0.068	-1.07	-0.056	-0.85	-0.069	-1.04	-0.073	-1.17	-0.052	-0.72	5.4
Caribe (ref. Territorios Nacionales)	0.017	0.31	0.008	0.15	-0.004	-0.07	0.009	0.17	-0.007	-0.12	-0.021	-0.36	0.012	0.21	0.006	0.09	-0.002	-0.04	-0.015	-0.23	21.6
Bogota	-0.085	-1.50	-0.087	-1.52	-0.095	-1.56	-0.094	-1.61	-0.083	-1.41	-0.110*	-1.88	-0.077	-1.29	-0.077	-1.24	-0.093	-1.62	-0.088	-1.27	15.4
Central	-0.046	-0.84	-0.055	-1.00	-0.067	-1.14	-0.064	-1.13	-0.060	-1.07	-0.081	-1.43	-0.037	-0.64	-0.043	-0.70	-0.064	-1.15	-0.056	-0.82	23.5
Oriental	-0.022	-0.40	-0.030	-0.54	-0.061	-1.04	-0.038	-0.67	-0.038	-0.67	-0.057	-1.00	-0.023	-0.40	-0.016	-0.27	-0.038	-0.68	-0.050	-0.75	18.3
Pacifica	-0.048	-0.87	-0.047	-0.84	-0.051	-0.86	-0.057	-0.98	-0.055	-0.95	-0.073	-1.26	-0.040	-0.69	-0.016	-0.27	-0.056	-1.00	-0.043	-0.63	17.7
Urban (ref. rural)	-0.016	-0.64	-0.017	-0.65	0.001	0.02	-0.028	-1.02	-0.005	-0.20	-0.019	-0.69	-0.002	-0.09	-0.005	-0.19	-0.013	-0.47	0.000	0.01	73.7
Migrant (ref. non-migrant)	0.067***	2.84	0.068***	2.81	0.068***	2.64	0.067***	2.72	0.064**	2.55	0.069***	2.82	0.067***	2.66	0.065**	2.55	0.068***	2.76	0.057**	2.11	25.3
Has poor public health service delivery			-0.000	-0.01	-0.001	-0.04	0.001	0.06	0.003	0.13	-0.006	-0.24	0.003	0.12	0.016	0.65	-0.001	-0.03	0.006	0.24	27.3
Has poor public education service delivery			-0.045	-1.28	-0.008	-0.22	-0.044	-1.26	-0.062*	-1.70	-0.042	-1.19	-0.043	-1.20	-0.021	-0.57	-0.039	-1.10	-0.013	-0.32	9.3
Lost job but found new one (ref. no lost job)					-0.087***	-2.94													-0.081**	-2.54	14.1
Lost job and has not found a new one					-0.131***	-3.82													-0.141***	-3.75	10.1
Doesn't have job (disability or own decision)					-0.055	-1.25													-0.065	-1.43	8.1
Household income increased in past 2 yrs.					0.201***	8.22													0.177***	6.70	23.8
Used public medical services in past yr.							0.024	1.12											0.017	0.72	44.2
Member of a health plan							0.015	0.65											-0.010	-0.36	51.0
Has potable water inside home							0.005	0.15											0.017	0.46	85.0
Has bathroom inside home							0.046	1.29											0.066	1.61	87.2
Been a victim of delinquency in past yr.									-0.009	-0.31									-0.005	-0.17	19.8
Lost a family member due to armed conflict									0.015	0.61									0.031	1.13	24.1
Feel unsafe in your community									-0.016	-0.70									-0.014	-0.55	34.9
Trustworthy people in your community									-0.038	-1.61									-0.062**	-2.42	70.9
Has trust in the police									0.050**	2.33									0.031	1.22	50.4
Helped solve community problem in past yr.											-0.026	-0.74							-0.055	-1.44	10.6
Participate in community meetings											-0.023	-0.67							-0.012	-0.32	10.8
Joined a public gathering/demo in past yr.											0.019	0.47							0.038	0.89	6.9
Willing to pay more taxes to help the poor											0.003	0.16							-0.005	-0.21	41.7
Believe public opinion matters to the gov.													0.028	1.28					0.014	0.59	35.3

Voted in the 2010 presidential elections							0.032	1.30				0.036	1.34	64.3
Participates politically*							0.003	0.12				-0.002	-0.08	27.0
Have been discriminated in past 5 yrs.							0.002	0.07				0.026	1.00	28.0
Neg. view of national economic situation									-0.022	-0.89				33.6
Poor economic management of current gov.									-0.087***	-3.49				36.4
Believes Pres. Santos is doing a poor job									-0.077**	-1.75				6.7
Has trust in the national government									-0.022	-0.91				57.1
Recipient of CCT (e.g. Familias en Accion)											0.058**	2.19	0.046	1.56
Member of a pension system											0.058**	2.17	0.010	0.30
Number of observations	2,601	2,502	2,339	2,495	2,412	2,442	2,394	2,311			2,490		2,106	
Pseudo R2	0.036	0.034	0.054	0.035	0.037	0.033	0.035	0.041			0.037		0.068	

Source: Author's calculations of marginal effects after running probit regression based on LAPOP data. Note: The marginal effects here are derived using the 'mfx' command after estimating the complete probit regression model. The same 'note' applies as in Table 1.

Table 3: Ordered probit regression results: objective* influencers of subjective wellbeing in Colombia, 2010/11

Subjective wellbeing	Basic background traits		Labor		Health		Personal security		Public engagement		Political voice		Policy instruments		Complete model		Basic descriptive data avg. 6.3
	coef	tstat	coef	tstat	coef	tstat	coef	tstat	coef	tstat	coef	tstat	coef	tstat	coef	tstat	
Male (ref. female)	-0.179***	-4.199	-0.189***	-4.265	-0.177***	-4.131	-0.171***	-4.023	-0.179***	-4.178	-0.178***	-4.164	-0.217***	-4.986	-0.197***	-4.405	49.7
Age 26-35 (ref. 18-25)	0.00685	0.121	0.0334	0.579	0.00634	0.112	-0.00795	-0.140	0.00357	0.0628	-0.0145	-0.247	-0.0158	-0.278	-0.0156	-0.260	28.2
Age 36-45	-0.194***	-2.781	-0.183**	-2.560	-0.209***	-2.993	-0.206***	-2.958	-0.200***	-2.851	-0.244***	-3.371	-0.222***	-3.163	-0.264***	-3.579	18.9
Age 46-55	-0.136	-1.502	-0.150	-1.613	-0.153*	-1.675	-0.159*	-1.749	-0.162*	-1.749	-0.180*	-1.934	-0.186**	-2.021	-0.259***	-2.656	11.5
Age 56-65	0.0199	0.201	0.0396	0.380	-0.0205	-0.206	-0.00500	-0.0506	-0.000147	-0.00148	-0.0397	-0.392	-0.0442	-0.442	-0.152	-1.443	9.0
Age 66+	0.122	0.951	...	...	0.0606	0.469	0.0709	0.555	0.0856	0.658	-0.00828	-0.0612	0.0609	0.470	-0.191	-1.351	6.0
Completed primary (ref. no edu.)	0.000455	0.00569	0.0387	0.449	-0.0198	-0.248	0.00655	0.0820	-0.00362	-0.0448	-0.00643	-0.0787	-0.00720	-0.0896	-0.0186	-0.224	27.0
Completed secondary	0.118	1.433	0.138	1.577	0.0662	0.800	0.129	1.573	0.111	1.333	0.130	1.548	0.0664	0.803	0.0626	0.729	42.9
Completed university/superior	0.248***	2.661	0.238**	2.417	0.170*	1.789	0.271***	2.902	0.244***	2.582	0.271***	2.864	0.138	1.445	0.130	1.313	14.7
Income tercile 2 (ref. tercile 1)	0.418***	7.559	0.401***	6.930	0.369***	6.563	0.414***	7.456	0.409***	7.361	0.383***	6.850	0.401***	7.194	0.313***	5.418	31.6
Income tercile 3	0.655***	10.96	0.605***	9.565	0.572***	9.223	0.653***	10.92	0.653***	10.89	0.604***	10.07	0.600***	9.821	0.467***	7.252	36.8
Catholic (ref. Oriental religion)	0.161*	1.696	0.140	1.422	0.148	1.563	0.146	1.523	0.159*	1.670	0.123	1.275	0.167*	1.754	0.0920	0.936	80.4
Protestant	0.276**	2.039	0.226	1.596	0.259*	1.917	0.277**	2.015	0.238*	1.755	0.255*	1.829	0.303**	2.259	0.206	1.441	3.9
Evangelical/Pentecostal	0.323**	1.983	0.220	1.310	0.314*	1.918	0.324**	1.991	0.325**	2.000	0.312*	1.901	0.289*	1.789	0.215	1.298	3.6
No religion	0.0811	0.691	0.0760	0.625	0.0718	0.611	0.0718	0.609	0.0821	0.699	0.0827	0.697	0.0964	0.812	0.0604	0.499	7.4
Married (ref. single)	0.143**	2.266	0.112*	1.706	0.127**	2.007	0.129**	2.029	0.140**	2.212	0.121*	1.890	0.133**	2.093	0.0739	1.142	55.1
Divorced	0.0155	0.150	0.00458	0.0431	-0.00229	-0.0221	0.00679	0.0649	0.0195	0.189	0.0110	0.105	-0.00353	-0.0341	-0.0199	-0.185	6.2
Widowed	-0.0330	-0.216	-0.118	-0.649	-0.0680	-0.441	-0.0237	-0.156	-0.0502	-0.323	-0.0205	-0.131	-0.0671	-0.433	-0.0968	-0.606	3.6
Number of children, 1-2 (ref. 0)	-0.207***	-2.953	-0.180**	-2.496	-0.196***	-2.789	-0.197***	-2.812	-0.207***	-2.949	-0.195***	-2.793	-0.217***	-3.101	-0.169**	-2.403	39.2
Number of children, 3-5	-0.241***	-2.854	-0.199**	-2.248	-0.229***	-2.693	-0.231***	-2.720	-0.236***	-2.776	-0.204**	-2.392	-0.238***	-2.812	-0.155*	-1.790	25.9
Number of children, 6+	-0.328**	-2.303	-0.173	-1.062	-0.309**	-2.147	-0.307**	-2.158	-0.310**	-2.110	-0.283**	-1.978	-0.293**	-2.044	-0.192	-1.301	5.4
Caribe (ref. Territorios Nacionales)	0.318***	3.028	0.292***	2.720	0.304***	2.810	0.310***	2.917	0.330***	3.111	0.269**	2.470	0.361***	3.476	0.306***	2.746	21.6
Bogota	0.258**	2.390	0.229**	2.077	0.177	1.565	0.272**	2.485	0.277**	2.546	0.242**	2.172	0.264**	2.478	0.241**	2.063	15.4
Central	0.439***	4.197	0.418***	3.921	0.345***	3.120	0.440***	4.178	0.452***	4.285	0.379***	3.495	0.449***	4.347	0.337***	2.978	23.5
Oriental	0.346***	3.355	0.321***	3.048	0.280**	2.589	0.338***	3.239	0.364***	3.491	0.323***	3.018	0.370***	3.627	0.291***	2.616	18.3
Pacifica	0.369***	3.418	0.363***	3.284	0.253**	2.211	0.380***	3.485	0.378***	3.483	0.340***	3.041	0.380***	3.557	0.292**	2.480	17.7
Urban (ref. rural)	-0.0411	-0.761	0.0211	0.377	-0.113**	-1.984	-0.0197	-0.361	-0.0250	-0.460	-0.0407	-0.747	-0.0537	-0.983	-0.0721	-1.203	73.7
Migrant (ref. non-migrant)	0.0910*	1.887	0.0943*	1.865	0.0818*	1.691	0.0978**	2.035	0.0886*	1.833	0.112**	2.322	0.0914*	1.889	0.0930*	1.894	25.3
Lost job but found new one (ref. no lost job)			-0.234***	-3.922											-0.157***	-2.585	14.1
Lost job and has not found a new one			-0.242***	-3.501											-0.178**	-2.539	10.1
Doesn't have job (disability or own decision)			0.0274	0.342											0.0198	0.253	8.1
Household income increased in past 2 yrs.			0.207***	4.102											0.180***	3.540	23.8
Used public medical services in past yr.					-0.0121	-0.287									0.00519	0.118	44.2
Member of a health plan					0.154***	3.285									0.0671	1.294	51.0
Has potable water inside home					0.147**	2.095									0.133*	1.867	85.0
Has bathroom inside home					0.188**	2.349									0.203**	2.455	87.2
Been a victim of delinquency in past yr.									-0.204***	-3.856					-0.149***	-2.762	19.8
Lost a family member due to armed conflict									-0.0470	-0.972					0.0111	0.221	24.1
Helped solve community problem in past yr.									0.0153	0.225					0.0409	0.590	10.6
Participate in community meetings									0.105	1.551					0.112	1.615	10.8
Joined a public gathering/demo in past yr.									-0.0608	-0.848					-0.0212	-0.291	6.9
Voted in the 2010 presidential elections											0.117**	2.486			0.108**	2.257	64.3
Participates politically*											-0.0846*	-1.792			-0.0495	-1.004	27.0
Have been discriminated in past 5 yrs.											-0.343***	-7.658			-0.290***	-6.322	28.0
Recipient of CCT (e.g. Familias en Accion)													-0.116**	-2.141	-0.126**	-2.248	22.2
Member of a pension system													0.232***	4.582	0.125**	2.210	23.8
Constant, cut 1	-1.761***	-10.16	-1.785***	-9.814	-1.662***	-9.222	-1.820***	-10.32	-1.746***	-9.997	-1.946***	-10.77	-1.870***	-10.60	-1.920***	-9.873	
Constant, cut 2	-1.354***	-8.328	-1.396***	-8.157	-1.249***	-7.342	-1.412***	-8.561	-1.338***	-8.161	-1.535***	-9.020	-1.451***	-8.773	-1.488***	-8.121	
Constant, cut 3	-1.068***	-6.751	-1.113***	-6.703	-0.956***	-5.767	-1.113***	-6.700	-1.051***	-6.584	-1.246***	-7.522	-1.164***	-7.235	-1.189***	-6.641	
Constant, cut 4	-0.661***	-4.276	-0.691***	-4.253	-0.545***	-3.352	-0.714***	-4.551	-0.643***	-4.119	-0.840***	-5.189	-0.749***	-4.762	-0.767***	-4.364	
Constant, cut 5	-0.280*	-1.817	-0.300**	-1.852	-0.158	-0.977	-0.330**	-2.112	-0.263*	-1.690	-0.450***	-2.797	-0.362**	-2.312	-0.368**	-2.106	
Constant, cut 6	0.381**	2.473	0.367**	2.264	0.509***	3.140	0.333**	2.130	0.397**	2.548	0.219	1.362	0.301*	1.922	0.309*	1.775	
Constant, cut 7	0.855***	5.525	0.850***	5.227	0.984***	6.056	0.808***	5.155	0.871***	5.574	0.698***	4.327	0.779***	4.964	0.795***	4.569	
Constant, cut 8	1.354***	8.676	1.367***	8.330	1.484***	9.071	1.308***	8.281	1.372***	8.707	1.208***	7.424	1.282***	8.105	1.319***	7.529	
Constant, cut 9	1.917***	12.12	1.946***	11.70	2.048***	12.39	1.870***	11.68	1.935***	12.11	1.781***	10.82	1.845***	11.53	1.894***	10.70	

Constant, cut 10	2.234***	14.00	2.265***	13.49	2.364***	14.19	2.188***	13.55	2.249***	13.94	2.106***	12.69	2.164***	13.40	2.213***	12.41
Number of observations	2,611		2,432		2,604		2,605		2,596		2,581		2,599		2,514	
Pseudo R2	0.0284		0.0349		0.0310		0.0299		0.0286		0.0343		0.0310		0.0418	

Source: Author's regression results based on data calculations from LAPOP. Note: * 'Objective influencers' implies that no perceptions or subjective views of respondents have been included as control variables. The same 'note' applies as in Table 1.

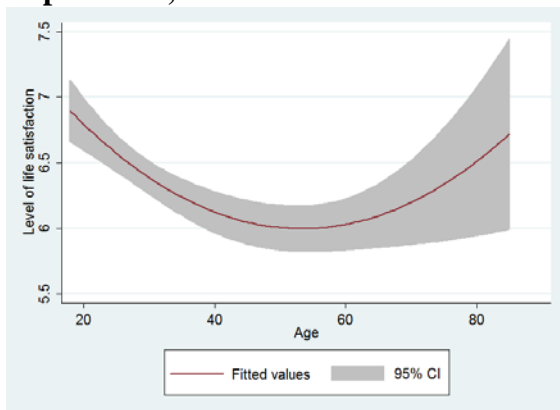
Table 4: Basic descriptive data on levels of subjective wellbeing (0-10 scale) in Colombia by various background traits, 2011

0 is the worst life and 10 is the best life

	least satisfied	(somewhat) satisfied	most satisfied	# of Obs.		least satisfied	(somewhat) satisfied	most satisfied	# of Obs.
	0-5	6-7	8-10			0-5	6-7	8-10	
Share of the population	34.3	34.5	31.2	1,496		34.3	34.5	31.2	1,496
<i>Sex</i>					<i>Religion</i>				
Male	33.65	36.34	30.01	743	Catholic	34.19	34.37	31.44	1,126
Female	34.93	32.67	32.40	753	Protestant	27.43	40.71	31.86	113
<i>Geographic location</i>					Evangelical and Pentecostal	39.42	28.85	31.73	104
Urban	30.31	36.84	32.85	1,102	No religion, agnostic or atheist	35.04	34.19	30.77	117
Rural	45.43	27.92	26.65	394	<i>Civil status</i>				
<i>Region</i>					Single	29.87	37.48	32.65	539
Caribe	37.19	34.38	28.44	323	Married or in a free union	35.82	32.40	31.78	818
Bogotá	28.57	45.89	25.54	231	Divorced or separated	42.86	39.56	17.58	91
Central	29.58	32.11	38.31	358	Widowed	41.67	27.08	31.25	48
Oriental	35.77	35.40	28.83	274	<i>Number of children</i>				
Pacífica	34.73	29.39	35.88	263	0	24.89	39.91	35.20	446
Territorios Nacionales	62.96	22.22	14.81	54	1-2	34.55	33.85	31.60	576
<i>Age groups</i>					3-5	41.86	31.01	27.13	387
18-25	26.42	39.01	34.57	405	6 or more	47.67	26.74	25.58	86
26-35	31.44	35.70	32.86	423	<i>Lost your job in the past 2 yrs?</i>				
36-45	40.64	31.10	28.27	283	Yes, but have found a new one	38.64	36.82	24.55	220
46-55	47.27	28.48	24.24	165	Yes, and haven't found a new one	48.00	28.80	23.20	125
56-65	35.04	30.66	34.31	137	No, did not lose job	31.85	34.92	33.23	1,008
66+	38.55	36.14	25.30	83	Did not have a job due to disability or own decision	32.56	33.33	34.11	129
<i>Your salary/wage and the total income of your household:</i>					<i>Sector of activity</i>				
Sufficient and can save	21.24	29.20	49.56	113	Agriculture	53.23	26.61	20.16	124
Just enough w/out large difficulties	20.13	39.77	40.10	616	Non-Agriculture	30.89	37.45	31.66	777
Not sufficient and have difficulties	41.40	32.51	26.09	529	<i>As a principal occupation, are you presently:</i>				
Not sufficient and have large difficulties	62.28	27.19	10.53	228	Working	33.71	36.20	30.09	884
<i>You would describe yourself as belonging to which class?</i>					Not currently working but have job	35.48	29.03	35.48	31
Highest	12.50	16.67	70.83	24	Actively searching for work	53.00	25.00	22.00	100
Second highest	19.32	32.95	47.73	88	A student	15.15	51.52	33.33	99
Middle	24.37	39.08	36.55	632	Taking care of household chores	36.58	29.19	34.23	298
Second lowest	37.59	36.89	25.52	431	Retired, pensioned or permanently disabled to work	29.31	31.03	39.66	58
Lowest	56.54	24.18	19.28	306	Not working and not searching for work	41.67	20.83	37.50	24
<i>Highest level of education completed</i>					<i>Used public medical services in the past 12 months?</i>				
None	46.84	23.63	29.54	36	No	31.23	34.79	33.98	871
Primary	45.31	30.21	24.48	377	Yes	38.75	33.76	27.49	622
Secondary	28.05	38.72	33.23	752					
University/Superior	20.47	41.40	38.14	327					

Source: Author's calculations based on data from LAPOP. Note: In terms of religion, data for traditional religions, Jehovah witnesses and Jews have been omitted due to limited number of observations. No education completed refers to individuals ranging from those without any schooling at all to those who may have reached class 4 but did not complete primary, while completing 5, 11 and 15 years of schooling refers to completion of primary, secondary and tertiary/superior education, respectively.

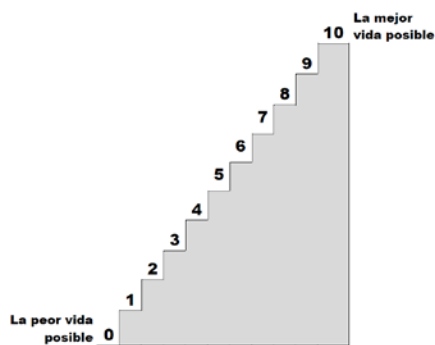
Figure 3: Average levels of subjective wellbeing in Colombia by age of adult respondents, 2011



Source: Author's illustration based on data calculations from LAPOP.

Figure 4: Card given to respondents asking 'on what step of the ladder do you feel these days' from 0 (worst life possible) to 10 (best life possible)

¿En qué escalón de la escalera se siente usted en estos momentos?



Source: LAPOP 2011a.