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**Working Paper**

## The Distance between Perception and Reality in the Social Domains of Life

IDB Working Paper Series, No. IDB-WP-423

**Provided in Cooperation with:**

Inter-American Development Bank, Washington, DC

Suggested Citation: Lora, Eduardo (2013) : The Distance between Perception and Reality in the Social Domains of Life, IDB Working Paper Series, No. IDB-WP-423, Inter-American Development Bank (IDB), Washington, DC

This Version is available at:

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**IDB WORKING PAPER SERIES No. IDB-WP-423**

# **The Distance between Perception and Reality in the Social Domains of Life**

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August 2013

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Inter-American Development Bank

2013

Cataloging-in-Publication data provided by the  
Inter-American Development Bank  
Felipe Herrera Library

Lora, Eduardo.

The distance between perception and reality in the social domains of life / Eduardo Lora.

p. cm. (IDB working paper series ; 423)

Includes bibliographical references.

1. Social surveys. 2. Latin America—Social conditions. I. Inter-American Development Bank.

Research Dept. II. Title. III. Series.

IDB-WP-423

<http://www.iadb.org>

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## Abstract\*

The distance between perception and reality with respect to the social domains of life is often striking. Using survey data collected on Latin American countries, this paper provides an overview of the main empirical findings on the gaps between perception and reality in four social domains—health, employment, the perception of security, and social ranking. The overview emphasizes the psychological biases that may explain the gaps. Biases associated with cultural values are very relevant with respect to health and job satisfaction. Cultural differences across countries are pronounced in perceptions of health, while cultural differences across socioeconomic groups are more apparent with respect to job satisfaction. Affect and availability heuristics are the dominant sources of bias in the case of perceptions of security. The formation of subjective social rankings appears to be less culturally dependent but more dependent on the socioeconomic development in the country. The gaps between objective and subjective indicators in the social domains of life are a rich source of data to help understand how perceptions are formed, identify important aspects of people's lives that do not appear in official indicators, inform public debate on social policy, and shed light on public attitudes on key social issues.

**JEL Codes:** I19, J28, Z13

**Keywords:** Perception and reality, Social domains, Perception of health, Perception of security, Job satisfaction, Heuristics

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\* This paper was prepared for *Handbook of Happiness Research in Latin America*, Mariano Rojas, editor, forthcoming from Springer. The author acknowledges valuable comments and suggestions by Juan Camilo Cárdenas, Juan Camilo Chaparro, Ana Corbacho, Guillermo Cruces, Carol Graham, and Mariano Rojas, and careful editorial review by Leslie Hunter and Juan Manuel Lora.

## 1. Introduction

The object of study of the fast-growing science of “subjective well-being” is not just happiness and life satisfaction in general, but also all those aspects of people’s lives that influence how they view themselves and their role in society. As occurs with sensory perception, the way individuals perceive the social domains of their lives is the result of complex interactions between some aspects of reality and the mental models and shortcuts used to process and interpret that reality (Pinker, 1997, 2002).

Since perceptions are not direct reflections of reality, they do not necessarily correspond to the objective measures used to describe reality.<sup>1</sup> Mismatches between perception and reality in the social domains of life are extremely common but, as is the case with sensory mismatches with reality, they tend to follow certain patterns. These patterns are beginning to emerge from the incipient but promising research in this area.

This paper focuses on four social domains where some inroads have been made, mainly by economists, psychologists, and sociologists, to measure and explain the gaps between perception and reality: health, employment, the sense of security, and social ranking. The main sources of data used by the researchers are opinion surveys administered by international organizations such as Gallup and Latinobarometer and by national statistical offices and research institutions (often complemented and contrasted with objective data from other sources). Although Latin America is the main focus in this paper, references are made to findings elsewhere, especially to emphasize common patterns.

The distance between perception and reality is often striking. For instance, the percentages of individuals who respond “yes” to the question, “Are you satisfied with your health?” across countries (in Latin America or elsewhere) bear almost no relation to the most widely accepted health indicators, such as life expectancy and infant mortality rates. Similarly, a vast majority of Latin American workers—81 percent, according to Gallup data<sup>2</sup>—respond affirmatively to the question, “Are you satisfied with your job?” despite (objectively) bad working conditions, as measured by indicators such as informality rates and coverage of social security. Although as few as 42 percent of all Latin Americans affirm that they “feel secure

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<sup>1</sup> Furthermore, some “objective measures” may also be subjective inasmuch as they are constructs based on the subjective criteria of experts.

<sup>2</sup> All of the perception data mentioned in this paragraph come from the Gallup World Poll of 2006 for Latin America. Further details are presented in the relevant sections below.

walking at night in [their] neighborhood,” which sounds reasonable given the high crime rates in the region, feelings of insecurity are stronger in some of the more secure countries and, even at the neighborhood level, those feelings usually bear no resemblance to objective crime data. Equally striking is the fact that, in rich and poor countries alike, the vast majority of people consider themselves to belong to the middle class, while fewer than 6 percent classify themselves among the richest third of the population.<sup>3</sup>

Although there may be myriad possible reasons for the mismatches between subjective and objective data, relatively few factors are found to have strong explanatory power, and those can be linked almost invariably to some type of psychological bias. Many of the reasons that are *not* important in explaining the gaps are those favored by statisticians and economists. Self-reported data are often dismissed as lacking reliability for four main reasons (Chan, 2009): (1) systemic reporting errors (in one variable), due to wording or order of questions and various types of response tendencies (acquiescence, central tendency); (2) correlation between those reporting errors in the dependent and explanatory variables intervening in the model; (3) social desirability responding; and (4) the supposed superiority of data collected from non-self-report measures vis-à-vis self-reported data. As argued by Chan, although each of these reasons contains kernels of truth, each has been elevated to a myth without sufficient regard to the importance of the problem and the possible solutions. In most cases, problems (1) and (2) can be handled with standard econometric techniques. Problem (3), the tendency to intentionally respond in a way that is considered socially desirable (or in other strategically biased ways), has been demonstrated not to be as pronounced as the proponents of the social desirability theory initially held, and can also be mitigated with appropriate survey designs and econometric techniques (Krosnick, 1999; Schaeffer and Presser, 2003). With respect to reason (4), self-reported data are necessary to study perceptions and how they are formed, and to understand why they may differ from objective data. When discussing self-reported data it is “important to explicate the possible cognitive, affective, or motivational mechanisms underlying the response process” (Chang, 2009, p. 331) in order to identify the gaps with objective (non-reported) data, the possible measurement problems, and the biases that may contribute to the gaps.

Expectations that depend on cultural values condition how individuals judge many aspects of their lives. What is good or poor health, or a good or a bad job, depends on how much

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<sup>3</sup> See the exact wording of this question below.

saliency, or weight, the “objective” health or working conditions have in a person’s judgments and on the reference levels used by individuals to compare their situation with what they consider to be achievable or acceptable. Those weights and reference levels may vary substantially across nations and across socioeconomic groups within nations, as they are influenced by tradition and by the norms and roles assigned by society to each gender, class, or group. The ensuing cultural differences (often erroneously called biases)<sup>4</sup> may be more pronounced in some social domains, like health across nations, or job satisfaction across socioeconomic groups within a country.

Many of the objective factors that intervene in people’s judgments about their health, jobs, and other aspects of their lives may not be captured by the indicators regularly used by governments or analysts (which are often constructs based on criteria established by experts or by convention).<sup>5</sup> And many factors that influence individuals’ perceptions in the social domains of their lives may be entirely subjective, in the sense that they cannot be verified by an external observer. Feelings of identity and trust, for example, which pervade perceptions of job quality and personal security, among others, cannot be inferred externally. Such feelings may radically alter the way some objective conditions influence satisfaction in some social domains. For example, workers who identify with their employer derive satisfaction from exerting more work effort, while those who do not identify with their firms lose utility when exerting effort (Akerlof and Kranton, 2005, 2010).

Mental shortcuts, or heuristics, are a psychological resource used by individuals to deal with difficult questions (Kahneman, 2011), such as some of the standard satisfaction questions to be discussed in this paper.<sup>6</sup> In particular, safety perceptions, and risk assessments in general, are strongly influenced by the affect and availability heuristics: instead of responding to a question such as, “How safe is this neighborhood?” interviewees substitute a related and easier question, such as, “Do I often see gangs in my neighborhood?” or “Have I heard of any crimes recently?” Evidence of biases consistent with the affect and availability heuristics in safety perceptions is compelling in Latin America and elsewhere. Evidence for other potentially important biases,

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<sup>4</sup> Since culture—as well as personality—refers to those factors that construct what individuals are and how they see themselves and the world around them, perception is necessarily shaped by those factors.

<sup>5</sup> And, as such, may be said to be “subjective” or “culturally biased.”

<sup>6</sup> For a broader psychological perspective of survey response issues see Tourangeau, Rips, and Rasinski (2000). A brief overview of the literature on the psychology of survey response is provided by Farrall, Jackson, and Gray (2009, pp. 53-59).



however, is merely suggestive. The so-called “endowment effect,” loosely defined as the universal tendency to attach to one’s belongings a higher value than to those same belongings when they are not in our possession (Kahneman, Knetsch and Thaler, 1990; Kahneman and Tversky, 1986; Kahneman, 2011) and the related tendency to value highly those life aspects that demand effort, are costly, or painful (Aronson and Mills, 1959; Gerard and Mathewson, 1966; Tavis and Aronson, 2007) are two sources of bias suggested by the implicit valuations given by individuals to many of their assets when assessing their social ranking.

Apart from these psychological biases, two other closely related biases—optimism and self-enhancement—are especially relevant to understanding the distance between perception and reality in all the social domains of life. If optimism can be defined as the tendency to see everything through a positive lens, self-enhancement is people’s tendency to see themselves as better than the average (Alicke, 1985; Guenther and Alicke, 2010; Thaler and Sunstein, 2008). The influence of optimism in perceptions of the social domains of life has often been corroborated using survey data, including by some of the studies of Latin America discussed below.<sup>7</sup> However, since the measure of optimism most commonly used is relative (that is, the individual’s tendency to respond in a more, or less, positive way than the average of the interviewees), this bias does not help to explain any systematic differences between subjective and objective indicators. Furthermore, almost invariably, the inclusion of optimism as an explanatory variable in perception regressions does not substantially alter the influence of other variables.

Since self-enhancement is a pervasive psychological tendency, it is surprising that it does not show up in the social domain where it might be most likely to appear, that is, perceived social ranking. Perceived social rankings are strongly skewed toward the middle of the scale, not the top. However, in other social domains, some evidence of self-enhancement is found when comparing individuals’ assessment of their own conditions with their assessment of the situation of the country as a whole in the same domain (IDB, 2008). For instance, while 81 percent of Latin Americans express satisfaction with their jobs, only 35 percent are satisfied with what their government is doing to “increase the number and quality of jobs available.” Similarly, while 85

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<sup>7</sup> In my own econometric studies, I have assessed the influence of optimism on job satisfaction (Chaparro and Lora, 2013), on health satisfaction (Lora, 2011), and on subjective social rankings (Lora and Fajardo, 2013).

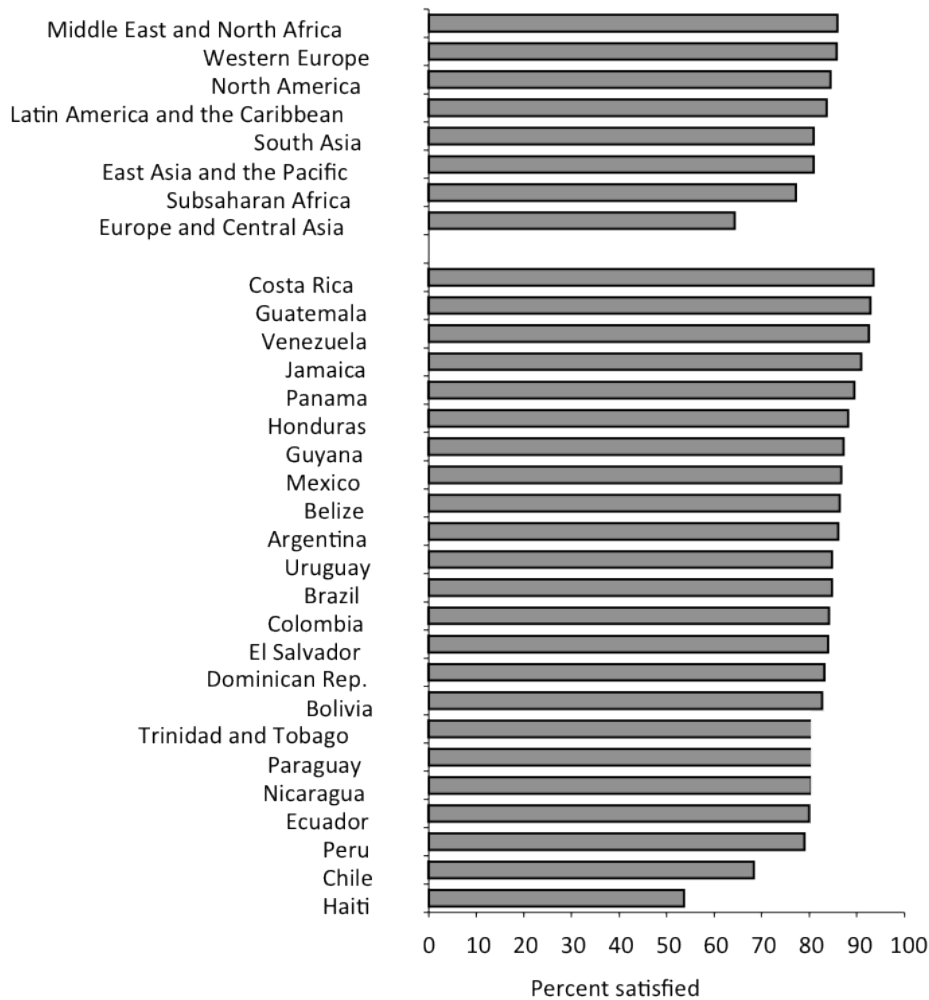
percent of Latin Americans are satisfied with their health, only 61 percent are satisfied with the availability of quality health care in the city or area where they live.

Without exception, people in all world regions and in all Latin American countries covered by the Gallup World Poll hold a higher average opinion of their own personal situation than they do of the situation of society as a whole in the five aspects of life assessed by the IDB study (general satisfaction, economic satisfaction, health satisfaction, job satisfaction, and housing satisfaction). This can be taken as suggestive of the presence and importance of self-enhancement biases in the social domains of life under examination, even though the questions asked to assess satisfaction at the personal and the societal level are not strictly equivalent.

## **2. Health Perceptions**

The percentage of Latin Americans who say they are satisfied with their health is very high—85 percent—according to the 2007 Gallup World Poll. This is not significantly different from other regions of the world, with the notable exception of Eastern Europe and Central Asia (see Figure 1). The surprising homogeneity in percentages of satisfaction in the large regions of the world and the large differences between countries of similar levels of development challenge simplistic interpretations of how health perceptions are formed.

**Figure 1. Health Satisfaction**



Source: Author 's calculations based on Gallup (2006 y 2007)

Countries with very different income levels or with appreciably different objective health conditions report similar percentages of health satisfaction. The simple correlations (without controlling for other variables) in country-level data between health satisfaction and income levels or life expectancy are low (0.22 and 0.19, respectively). In Latin America, Guatemala is one of the countries with the highest levels of health satisfaction, despite its poor mortality indicators and enormous disparities in various health indicators, especially between the indigenous and non-indigenous populations. With a 94 percent satisfaction coefficient, Guatemalans rate their health better than almost any other country in the world, with only two exceptions: Kuwait and Costa Rica. Among the countries of Latin America covered by the 2007 poll, Chileans are the least satisfied with their health, even though objective health indicators in

Chile are among the best in the region. Beyond Latin America, it is even more intriguing that health satisfaction in some of the countries most affected by the HIV-AIDS epidemic—such as Tanzania, Zimbabwe, Botswana, South Africa and Kenya—report health satisfaction coefficients of 70 percent or more. The satisfaction coefficient for Kenya (82 percent) is equal to Britain and is one percentage point higher than the United States (Deaton, 2010).

### ***2.1 Understanding Health Perceptions***

A fundamental problem with subjective assessments of health is that they depend on personal expectations of good health. These, in turn, depend on social and cultural environments, which may render cross-national and other intergroup comparisons invalid. The interpretation of the scales used in the surveys may also vary across cultures and groups.<sup>8</sup> Nonetheless, subjective assessments of health are valuable sources of information. In some aspects of health, such as pain and discomfort, the subjective perception is the only valid source of information. In other aspects, external observation and individual perception can coincide or provide complementary information. Other health problems or deficiencies, such as hypertension, cannot be perceived and are only detectable by external observation. Consequently, to fully characterize any individual's health, both self-perception and external observation are essential, which is also the case for summary measures of population health. Health perceptions are relevant for understanding the importance individuals assign to various aspects of their health, their aspirations, and their understanding of what is or is not good health. Therefore, they are also useful for public health policy design, monitoring, and evaluation.

Given the strong influence of values and expectations that vary across cultures, international comparability of health satisfaction measures is problematic. People of different cultures may rate their health on the basis of different criteria. These differences can be highlighted by comparing across countries the responses to two similar questions that were

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<sup>8</sup> Sommerfeld et al. (2002); Salomon, Tandon and Murray (2004). Jürges (2007) has found that an important part of cross-country differences in self-reported health in 10 European countries can be attributed to differences in response styles, possibly reflecting differences in beliefs, values, and expectations. Lindeboom and van Doorslaer (2004) and van Doorslaer and Gerdtham (2003) have found evidence of reporting differences across age-sex groups but not across socioeconomic groups in Sweden and Canada, while Milcent and Etile (2006) provide evidence of reporting differences by income but only in the middle categories of self-rated health. Groot (2000) analyzes the impact of age biases in the United States and finds that the scale of reference of a subjective health measure changes with age.

included in the Gallup Poll of 2007 for the Latin American countries: “Are you satisfied with your health?” which can be responded to with Yes or No (henceforth “health satisfaction”), and “Using a scale from 0 to 10, in which the best state you can imagine is marked 10 and the worst state you can imagine is marked 0, indicate how good or bad your own health is today” (henceforth “health status”). Although the results of both questions across countries are correlated, the match is far from perfect, as can be seen in Table 1. It should be expected that the lower an individual rates herself on the health status scale, the higher the probability that she will declare herself unsatisfied with her health. But if individuals in one country are much more tolerant of their health problems than those of another country, more individuals from the low rungs of the scale in the first country will declare themselves satisfied with their health.

Consider Figure 2, which compares Guatemala and Chile. The figure shows the estimated probabilities with a probit regression (for the individuals of each country) of the health satisfaction variable (which only takes values from 0 or 1 for each individual), where the explanatory variable is health status (which takes discrete values from 0-10). In Guatemala, tolerance of health problems is higher than in Chile, so the probability of being satisfied with health is substantially higher from low levels of the 0-10 scale. In order to compare levels of tolerance among all countries with a simple measure, the steepest part of the curve for each country can be taken as a “critical tolerance level” because this is the point where an increase (or decrease) of a level on the 0-10 scale has the highest impact on the probability of being satisfied (or dissatisfied) with one’s health. (The width of the confidence ranges, which also appear in the figure, reflects how heterogeneous tolerance to health problems is among the populations of each country).

Figure 3 gives the measures of intolerance for all Latin American countries. Chile is the country with the highest intolerance, followed by the other countries in the extreme south of the continent (Argentina, Brazil, Uruguay, and Paraguay) and Mexico. At the other extreme, the most tolerant countries are all Central American (Costa Rica, Guatemala, Honduras, and Panama). These results suggest the influence of cultural differences in assumptions and beliefs about health, which render cross-national comparisons invalid. Comparisons of individuals *within* countries are also more reliable in some countries than in others, as suggested by the heterogeneity of responses reflected in the confidence intervals for Chile and Guatemala.

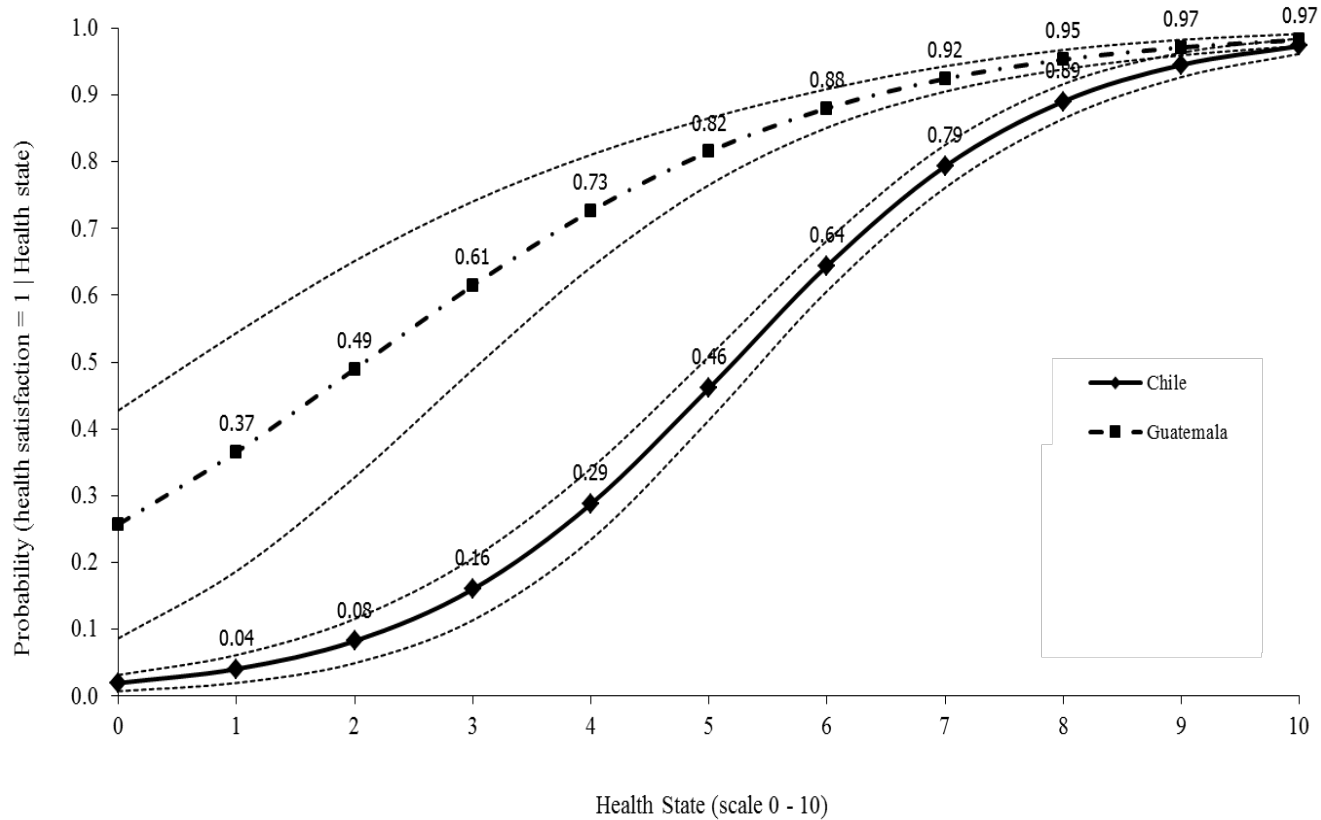
**Table 1. Health Satisfaction Measurements**  
National averages

	Health satisfaction [0,1]	Health state [0,10]
Costa Rica	0.936	8.467
Guatemala	0.930	7.894
Venezuela	0.926	n.a.
Panama	0.895	8.006
Honduras	0.883	7.466
Guyana	0.873	7.381
Mexico	0.867	7.809
Belize	0.864	7.528
Argentina	0.860	7.496
Uruguay	0.848	7.294
Brazil	0.847	7.739
Colombia	0.842	7.647
El Salvador	0.841	7.239
Dominican Republic	0.833	7.599
Bolivia	0.826	6.566
Paraguay	0.807	7.312
Nicaragua	0.805	7.199
Ecuador	0.800	6.510
Peru	0.790	6.381
Chile	0.684	6.662

Note: the correlation between the two measures is 0.778.

Source: Lora (2011).

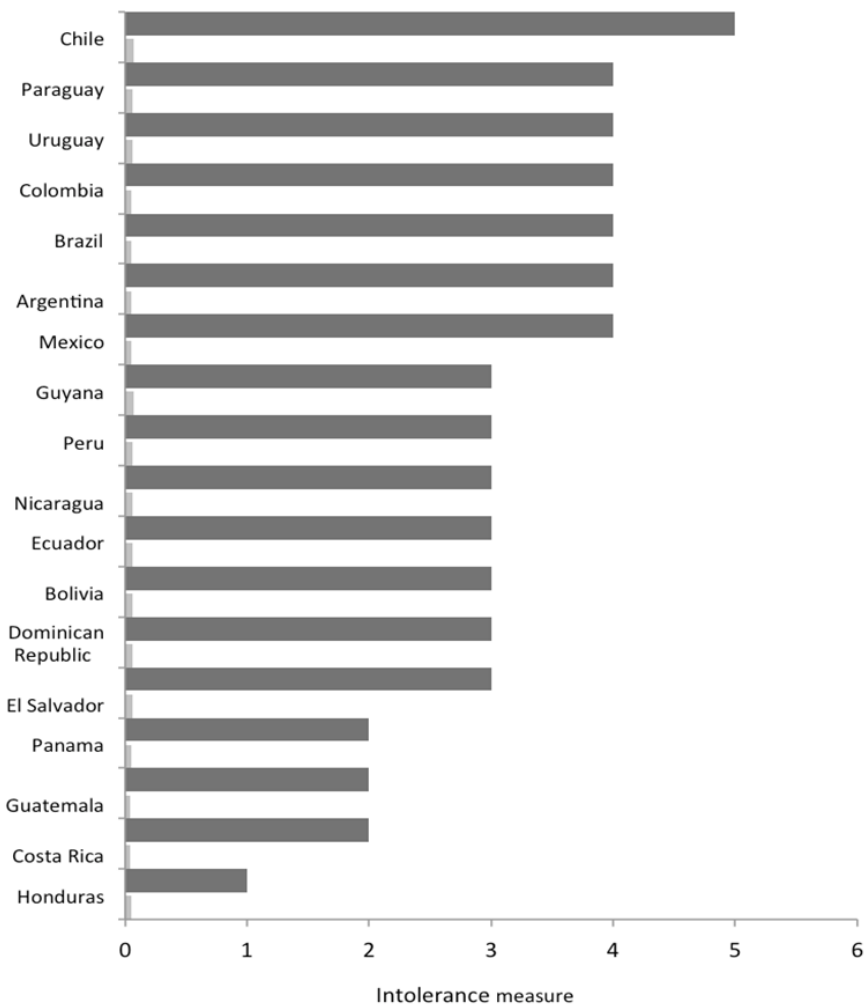
**Figure 2. Relation between Health Satisfaction and Self-Rated Health Status, Chile and Guatemala**



Source: Lora (2011).

Note: dotted lines are 95% confidence intervals. The Y-axis predicts the effect of a person's self-reported health status on the likelihood that they will report they are satisfied with their health.

**Figure 3. A Measure of Health Intolerance**



Source: Lora (2003).

Note: The intolerance measure is the interval in which the slope of the relation between health satisfaction and health status reaches a maximum.

Since comparability between countries is limited by cultural factors that are difficult to isolate and measure, a cross-country analysis provides at best a blurry picture of the factors that influence perceptions of health. As discussed in Deaton (2010) and Lora (2011), health satisfaction across countries is *not* associated (in a statistically significant way) with any of the best-known objective health indicators. It is associated with income per capita, but the effect is very modest, and it is *inversely* associated with economic growth.



However, health perceptions at the individual level (within countries) do reflect health conditions in a remarkably clear and consistent way. The Gallup World Poll of 2007 for Latin American countries included the set of questions on health conditions known as EuroQol 5D, or EQ-5D, a standardized instrument that inquires about the presence of health problems in five dimensions: mobility, self-care, usual activities, pain/discomfort, and anxiety/depression. This method of self-assessment reveals that the most common health problems reported by Latin Americans are pain and anxiety (see Table 2): when polled, 25 percent of the respondents said they suffered pain (22.2 percent moderate, 2.8 percent extreme), 18.3 percent mentioned anxiety (15.8 percent moderate, 2.5 percent extreme), 10 percent said they had mobility problems (9.6 percent moderate, 0.4 percent extreme), 9.5 percent mentioned physical limitations in their daily activities (9 percent moderate, 0.5 percent extreme), and 3.8 percent referred to problems with looking after themselves (3.5 percent moderate, 0.3 percent extreme). According to the econometric estimates in Lora (2011), the conditions that most affect the rating that individuals give their own health (on a 0-10 scale) are, in descending order: extreme pain, moderate pain, extreme anxiety, and extreme limitations on performing daily activities. These are followed in importance by moderate limitations on performing daily activities, moderate anxiety problems, and moderate mobility problems. Other conditions do not have a statistically significant effect (possibly because of the low number of people in the sample with those conditions).

**Table 2. Moderate and Extreme Health Conditions (EQ-5D Components) by Income Quintile**  
(Percentages of people declaring each condition)

Health Condition	Income Quintile					Totals for individuals with income information	Totals for whole sample
	Lowest	2nd	3rd	4th	Highest		
<b>Mobility problems</b>	13.3	11.4	9.6	8.3	7.6	10.1	9.9
Moderate	13.0	11.0	9.4	8.0	6.9	9.7	9.6
Extreme	0.3	0.4	0.3	0.3	0.7	0.4	0.4
<b>Self care problems</b>	4.8	3.6	4.2	2.3	2.8	3.6	3.8
Moderate	4.7	3.4	3.9	2.1	2.4	3.3	3.5
Extreme	0.1	0.2	0.3	0.2	0.5	0.2	0.3
<b>Limitations to perform usual activities</b>	13.4	11.2	9.1	7.7	6.4	9.6	9.5
Moderate	12.8	10.6	8.7	7.4	5.9	9.1	9.0
Extreme	0.6	0.6	0.5	0.3	0.5	0.5	0.5
<b>Pain</b>	31.5	28.7	25.8	23.7	19.6	26.0	24.9
Moderate	26.9	25.6	23.2	20.9	18.2	23.1	22.2
Extreme	4.6	3.1	2.6	2.8	1.4	2.9	2.8
<b>Anxiety</b>	21.9	21.4	18.9	17.0	16.4	19.2	18.3
Moderate	18.5	18.5	16.5	15.1	14.2	16.6	15.8
Extreme	3.5	2.8	2.3	1.9	2.1	2.5	2.5

Source : Lora (2011).

Importantly, the frequency of health problems across income groups reveals “normal” gradients, with poorer individuals reporting more health problems (although some extreme problems do not have a well-defined gradient, which could be due to the low number of people who reported them).<sup>9</sup> A more careful econometric analysis confirms the existence of significant

<sup>9</sup> Health perceptions of the general populations of Latin American countries have been the subject of very few studies. Suárez-Berenguela (2000) calculated socioeconomic gradients of health-assessed health status in Brazil, Jamaica, and Mexico and of self-reported symptoms of illness or accident in those same countries, plus Ecuador and Peru. He found normal gradients, although they were substantially less steep than the objective indicators of morbidity or mortality. Dachs et al. (2002) studied inequalities in self-reported health problems in 11 Latin

normal gradients for all moderate conditions and for extreme conditions of pain and anxiety, after controlling for age, sex, and fixed country effects. Therefore, within Latin American countries, the poor, much more than the rich, suffer from and *recognize* a range of deficiencies. In only two cases—extreme problems of mobility and looking after oneself—the opposite result is obtained. These are cases in which cultural differences could play a role in making the poor less aware of certain ailments, but the result must be taken as very tentative as it could be due to the small size of the sample of people with these ailments.

The fact that the socioeconomic gradients of most of the conditions reported in EQ-5D are normal and significant does not rule out the possibility that lower socioeconomic groups may have a greater tendency to tolerate certain health deficiencies, even if they recognize their presence. Contrary to this widely held view, the lowest levels are not more tolerant to their health ailments and problems. If anything, the opposite holds, according to the econometric analysis in Lora (2011). The Latin American poor seem to suffer more when they have limitations on performing their daily activities and when they feel extreme anxiety, which may reflect the greater demands of physical work in low income levels and increased access to treatment or help at high income levels.

Furthermore, health satisfaction depends on individuals' income level, even after taking into consideration the impact of health conditions. Not only do the poor experience and recognize ailments with higher frequency than the rich, but, after taking into account the impact of those ailments on their health satisfaction, poorer individuals are also found to be *less* satisfied with their health and to place themselves lower on the health status scale.

Therefore, the empirical evidence for Latin America does not provide support for the widely held hypothesis that the poor are more tolerant of their health problems; if anything, the opposite holds. Although there may be some cultural differences across socioeconomic groups *within countries*, those differences have a rather limited influence on how self-perceived morbidities are reflected in health satisfaction and self-rated health status. While international comparability of health perceptions is problematic due to important differences in health values and expectations, comparability within countries is clearly possible.

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American countries. They found that inequalities (by quintiles) were small, which they attributed to cultural and social differences across socioeconomic groups in the perception of health.

Health perception data may have several important uses. They can help identify health inequalities within populations, as shown in this section. Health perception data may also be useful for policymakers to help them monitor changes in the health of a given population (along with objective indicators, such as mortality rates). Comparability across time may be prevented by changes in health beliefs, aspirations and expectations. However, these changes are likely to have more influence on health satisfaction and self-rated health than on the health problems surveyed by the EQ-5D instrument.

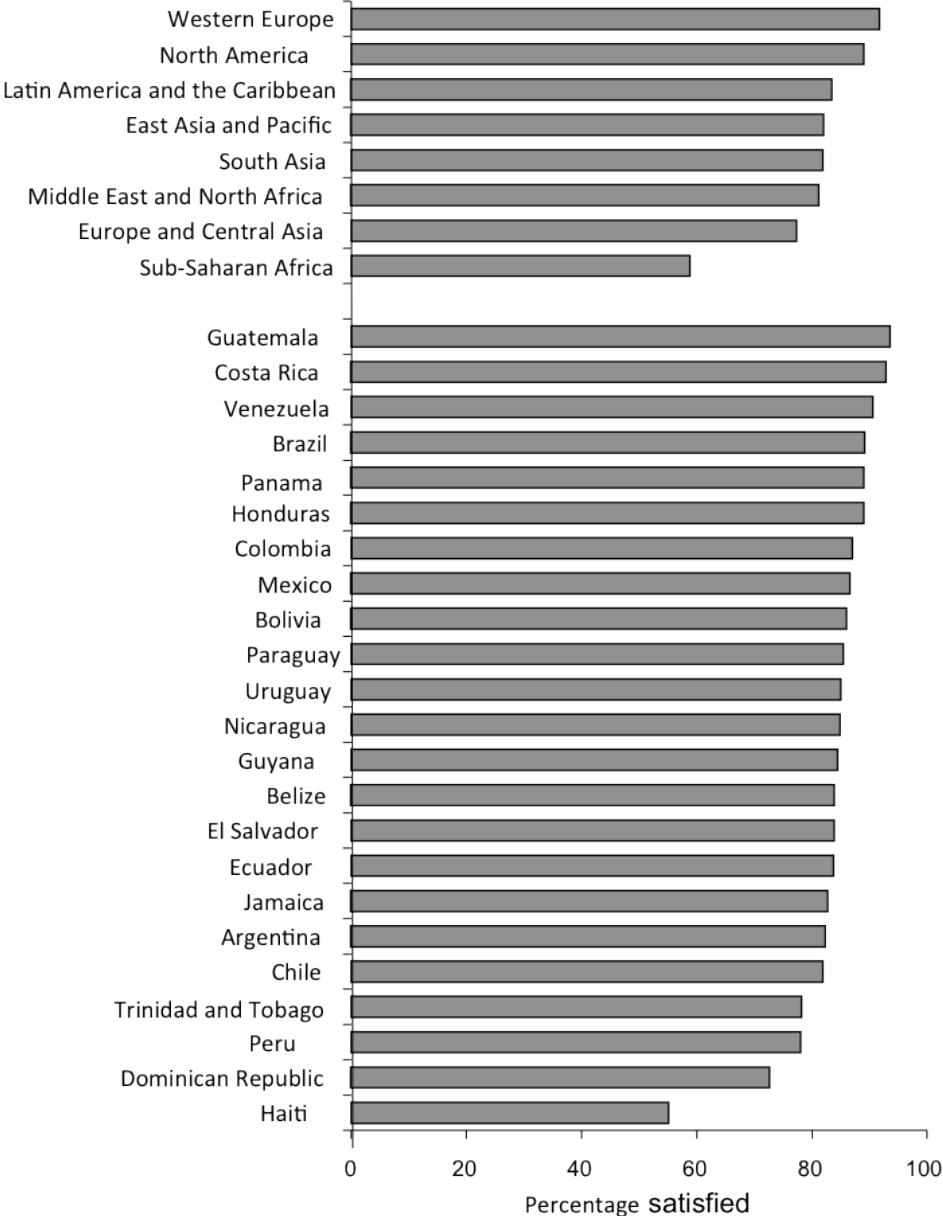
The cost of collecting data on all these dimensions of health through surveys that are representative of the entire population of a country is very low (especially if the questions are attached to a regular household survey). The uses of those data for health policy decisions should make the initial investment worth pursuing. The health profiles provided by the EQ-5D instrument may inform debates on priorities for health service delivery and may help rebalance health expenditures to address problems, such as anxiety and pain, which show high prevalence rates and exact a heavy toll on quality of life (Graham, Higuera and Lora, 2011). Simple measures of population health, such as indices based on the EQ-5D instrument (see Lora, 2011 for actual computations), could help focus the public discussion on health policy on a regular basis, in the same way that data on GDP growth, price inflation, or unemployment do for macroeconomic and labor policies. What have made these economic indicators relevant and visible are not their refinement and technical soundness, but their conceptual simplicity and regular computation and discussion. Because of their relevance, they have attracted scrutiny and research efforts, which have contributed to their gradual improvement and comparability across countries and time.

### **3. Job Satisfaction**

Workers in Latin America report high levels of job satisfaction. According to data from the 2006 Gallup World Poll, on average 81 percent of the workers in the region are satisfied with their jobs, a percentage slightly lower than that in Western Europe and North America but higher than in the other world regions (Figure 3). The countries with the highest job satisfaction in Latin America are Guatemala, Costa Rica, and Venezuela, where the percentages of those satisfied with their jobs are higher than in many developed nations like the United States or the United Kingdom. Although, as a general tendency, the higher a country's income per capita, the higher

the percentage of workers that declare themselves to be satisfied with their jobs, work satisfaction in Latin America is significantly higher than what that pattern would imply (IDB, 2008).

**Figure 4. Job satisfaction**



Source: Author's calculation based on Gallup 2006-2007

Worldwide job satisfaction is more strongly associated with productivity than per capita income. The simple correlations between job satisfaction and two national-level productivity measures are 0.66 and 0.73,<sup>10</sup> respectively, which are remarkably high in light of the low correlations often found between perceptions and objective indicators on other dimensions of well-being, such as health. Furthermore, the association between job satisfaction and productivity is robust to a large set of controls (Chaparro and Lora, 2013).

Job satisfaction across countries worldwide is not correlated in a robust way with any aspect of the labor legislation codes considered in Botero et al. (2004), the most comprehensive compilation of labor legislation available in the literature. In Latin American countries, job satisfaction is not at all associated with the share of the working population that is either self-employed or employed in firms of fewer than 10 workers, often considered synonymous with informality and poor-quality employment.<sup>11</sup>

### ***3.1 The Value of Independence***

Since cultural differences with respect to what constitutes a good job may obscure the relationship between job satisfaction and objective employment conditions, most empirical literature on the subject uses individual-level data, rather than national averages, to explore the determinants of job satisfaction. Thanks to the growing influence of the “science of happiness,” economists have recently devoted considerable attention to understanding how working conditions influence job satisfaction.<sup>12</sup> Blanchflower and Oswald (1999) found that job satisfaction is higher among the self-employed, supervisors, and those with secure jobs. Using quit data in a household panel, Clark (2001) established the following ranking of job characteristics in job satisfaction: “job security and pay are the most important, followed by use of initiative, the work itself, and hours of work. This ranking differs markedly across different labor market groups” (p. 223). Frey (2008) found that self-employed workers are more satisfied with their jobs. Since his regressions control for a number of important aspects of work (such as income and working hours) and his results hold for individuals who change between self-employment and wage employment, he attributes the result to procedural benefits from being

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<sup>10</sup> The two measures are, respectively, total factor productivity computed as a residual from a Cobb-Douglas production function with capital and education-augmented labor, and a measure of labor productivity where labor is augmented by education. These productivity calculations come from Daude and Fernández-Arias (2010).

<sup>11</sup> The correlation is -0.004 for the 18 Latin American countries with data on self-employment and employment in firms of less than 10 workers in 2007 (or closest year) computed by SEDLAC from official household survey data.

<sup>12</sup> Warr (2003) provides an excellent summary of this literature.

independent. In his view, individuals prefer independence to being subject to hierarchical decision-making. Hierarchy generates procedural disutility because it interferes with innate needs for self-determination (Frey, 2008).

Studies for Latin America confirm that self-employed workers are no less satisfied with their work than their counterparts in salaried positions. Using detailed data for Chile, Ecuador, El Salvador, and Honduras, the IDB (2008) found that self-employed workers are equally or more likely to declare themselves satisfied with their jobs than salaried workers of similar characteristics (age, education, gender, health, and marital status). In a separate study for Argentina, no significant differences in job satisfaction were found between formal and informal workers of similar characteristics, using several definitions of informality, not just self-employment (Pratap and Quintin, 2006). Only in Chile are salaried workers more likely to be satisfied with their job than the self-employed. In agreement with these findings, in the countries included in the IDB study, micro-entrepreneurs are less likely to want to switch jobs than salaried workers. Quite starkly, while a large majority of salaried workers report a preference for self-employment, only a minority of self-employed workers would like to move to salaried positions. Salaried workers provide three main reasons why they would prefer to be self-employed: higher earnings, more flexibility, and not having a boss.

Judging by their job satisfaction levels, preference for self-employment among salaried workers is stronger in poor countries (Guatemala and Honduras) and among those working in small firms. It is unclear what makes small-firm workers less satisfied with their jobs (in comparison to both the self-employed and large-firm workers of similar characteristics), but it is not due to differences in wages or working conditions such as job stability, work schedule, or mandatory benefits. As the IDB study concludes, “These results strongly suggest that the relationship between job satisfaction, firm size, and access to benefits does not always correspond to the conventional wisdom, and the results can vary considerably from country to country” (IDB, 2008, p. 157). Similarly, after discussing the differences in job satisfaction between different types of workers in the Dominican Republic and Colombia, Perry et al. “caution against simpleminded generalizations across countries and highlight that voluntariness or levels of job satisfaction can vary among both the informal self-employed and the informal salaried sectors across and within countries” (2007, p. 96).

### ***3.2 Feeling Good at Work***

Objective working conditions do not map directly to higher or lower job satisfaction because subjective judgments on what is a good or a bad job are strongly influenced by psychological factors. Three hypotheses have been put forward to explain the discrepancy. First, cultural differences in the way people perceive subjective questions about satisfaction may make simple cross-country comparison misleading, as Kristensen and Johansson (2006) have demonstrated for seven European Union countries using anchoring vignettes.<sup>13</sup> Second, the lower-and-upper-bounds hypothesis states that people's evaluations of the quality of their jobs are influenced by what they consider to be minimum acceptable working conditions and by what they perceive as the best working conditions they can aspire to reach in the labor market. Both the lower and the upper bounds are probably used as references to judge the quality of the jobs, as found by Poggi (2010) in a study using data for European countries and by Mas (2006) using police force data in the United States. Although these bounds are not independent of the objective working conditions, they are strongly influenced by other factors, such as society's prescriptions about the role of each gender or of different social groups (Akerlof and Kranton, 2000). For instance, in the United Kingdom, women's job satisfaction is more influenced by work-life balance than men's (Asadullah and Fernandez, 2008). But such prescriptions may differ from one country to the next. For the United Kingdom the effect of hours worked on job satisfaction is negative, while in France no such effect is found (Clark and Senik, 2006). And third, according to the identity hypothesis, workers judge their jobs more positively when they identify themselves with their organization. Insiders—those who identify with their firm—lose utility when they put low effort rather than high effort, and the opposite happens to outsiders, who do not identify with the firm (Akerlof and Kranton, 2005, 2010). It follows that insiders are more likely to be engaged in their work and to be more productive than outsiders. Insiders require less monetary compensation and less supervision than outsiders to exert effort. A related literature by organizational psychologists and business consultants has emphasized the importance of engagement for job satisfaction and productivity (Buckingham and Coffman, 1999; Harter, Schmidt and Keyes, 2002). According to this view, engagement can be measured with a small number of dimensions of the quality of the work environment, as perceived by the employees.

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<sup>13</sup> While in the standard ordered probit model, Denmark and Finland are ranked at the top of the seven countries, when vignettes are used as anchors to re-scale the model, Scandinavian countries are ranked lower and the Netherlands is found to have the highest level of job satisfaction.



Empirical studies for Latin America lend credence to the lower-and-upper-bounds hypothesis and to the identity hypothesis, although much more research is still needed. (No study has addressed the cultural hypothesis.) In a study for Honduras, López Bóo, Madrigal and Pagés (2010) found that, in contrast to developed countries, where job satisfaction is higher among women working part-time, Honduran women are more satisfied with their jobs when they work full-time rather than part-time. In a poor country such as Honduras, working part-time is considered a luxury, as evidenced by the fact that partnered women with children, poor women, or women working in the informal sector, when working full-time, are more likely to report higher job satisfaction than single women, partnered women without children, non-poor women, or women working in the formal sector. These findings lend support to the hypothesis that people's evaluations of their jobs are conditioned by their aspirations and by the roles prescribed by society to different groups.

In general, perceived job insecurity damages job satisfaction, as found consistently in several studies (Chaparro and Lora, 2013; IDB, 2008; López Bóo, Madrigal and Pagés, 2010). However, aspirations of work stability have been found to differ across groups of workers in ways that do not reflect the actual probabilities of unemployment of those groups. For instance, the IDB study found that, in all countries, the perception of job insecurity is higher among salaried than self-employed workers, even after controlling for individual and job characteristics. It may well be that the self-employed feel more in control of their job situation than the wage earner, or that the self-employed do not aspire to, or ignore, the benefits associated with a secure job. However, another study using the Gallup World Poll data for the Latin American region found that salaried workers affiliated with social security declare themselves worried about losing their jobs more often than unaffiliated ones, and men do so more often than women. According to the same study, perceived job insecurity is not significantly correlated with the expected probability of unemployment of the individuals (Menezes-Filho, Corbi, and Curi, 2009). Expectations of access to social security and other labor benefits and the valuation that workers attach to those benefits also seem to reflect social norms and expectations. The IDB study found that having access to a pension plan contributes to higher job satisfaction but only for workers with education above a certain level, and depending on the country. Although more rigorous tests are wanting, taken together these findings lend support to the hypothesis that

aspirations and social norms condition workers' assessments about the quality of their jobs and the relative importance of objective working conditions.

With respect to the identity/engagement hypothesis, López Bóo, Madrigal and Pagés (2010) found that job satisfaction in Honduras increases with the perception that the job offers opportunities for advancement and is well remunerated, and decreases if the job is considered stressful, monotonous, or unstable. Although they do not constitute proof, these findings are consistent with the hypothesis that engaged workers are more satisfied with their work. A more direct confirmation of the identity/engagement hypothesis is offered by Chaparro and Lora (2013), who found that, among a representative sample of salaried workers from 18 Latin American countries, job satisfaction, income, and productivity are higher for those workers who have the opportunity to do what they do best every day, who feel that someone at the workplace encourages their development, and who consider that their opinions count. These three dimensions of the work environment are part of the set of 12 questions used by the Gallup Organization to measure how conducive the work environment is to keeping employees engaged (Harter, Schmidt, and Keyes, 2002).

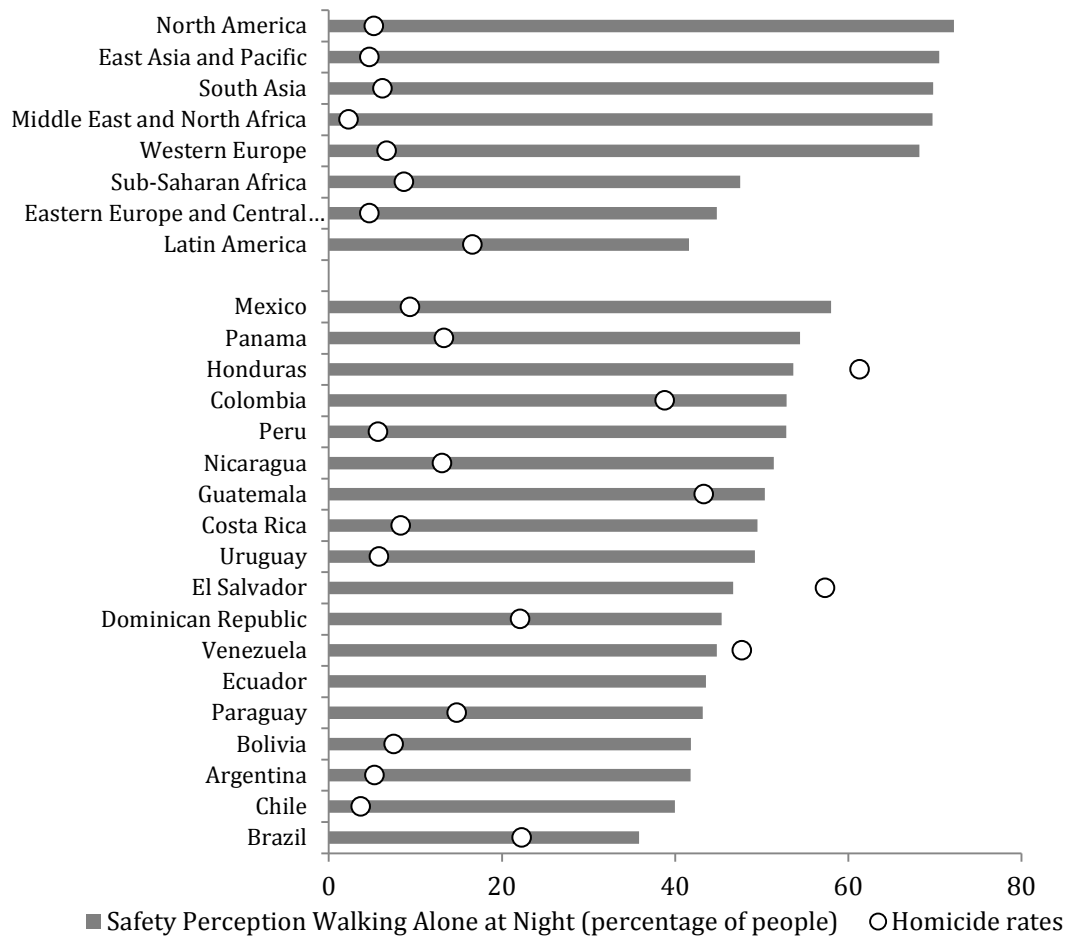
Understanding the reasons for the gaps often found between job satisfaction and the conventional indicators of job quality may be useful for policymakers, workers, and firms alike. Labor policies should put more emphasis on those aspects of the labor code that encourage workers to make use of their capabilities and talents (which, indirectly, will also encourage individuals to further their education and training, and to join and remain in the labor force), and not necessarily on those aspects that are conventionally associated with high-quality jobs. As empirical findings show, people's needs and aspirations may differ across countries and socioeconomic groups. This suggests a need for flexibility in legislation, which should allow for individual choice and should refrain from establishing mandatory benefits that may not be valued equally by all types of workers. However, labor policies should not be dictated by subjective data on job satisfaction, because low aspirations or myopia may operate as a barrier to enhance labor force capabilities, raise productivity, and prevent important risks, such as work accidents, illness, and destitution in old age. Establishing and enforcing minimum wages and minimum labor standards may be justified even if they initially reduce job satisfaction among those workers who do not immediately benefit from these measures.

Labor organizations can strengthen their bargaining muscle and their convening power by taking into consideration the factors that actually contribute to workers' wellbeing and not just those that raise wages and fringe benefits, or those that allow workers to reduce effort. Similarly, firms should tailor their human resource management practices to help workers feel more engaged and identified with the firm. Managers need not be concerned with how workers evaluate their job in general, but rather with those specific aspects of the work environment that contribute to engagement and identity. Thus, a good understanding of the factors that influence job satisfaction may help unions and firms find common ground for improving labor productivity and workers' wellbeing.

#### **4. Perception of Insecurity**

When urban areas of Latin America are compared with other regions of the world in various dimensions surveyed by the Gallup World Poll of 2006, an extended perception of insecurity appears as the weakest point in the region's cities (IDB, 2008). Only 41.6 percent of Latin Americans feel safe walking alone at night in their neighborhoods, a percentage not far from that of the former communist countries of Europe and Asia and the countries of Sub-Saharan Africa, but substantially lower than that of other regions of the world (Figure 5). Latin American countries have the highest homicide rates in the world, as shown in the same figure, and the second highest victimization rate after Sub-Saharan Africa (based on the Gallup World Poll responses of the percentage of people who report having had money stolen from them or having been mugged in the previous 12 months).

**Figure 5. Safety Perceptions vs. Homicide Rates**



Source: UNDOC (2011) and IDB (2008).

Perceptions of insecurity, which include the feeling that one is unsafe walking alone at night, the presence of gangs, and drug trafficking, have the largest impact on Latin Americans' satisfaction with their own cities, according to estimates reported by the IDB (2008) based on Gallup data. "The combination of high frequency and impact suggests that safety is the problem that most affects the quality of life in Latin American cities" (IDB, 2008, p. 193). This conclusion is supported by the assessments of life satisfaction determinants in several cities.

Reporting of crime victimization is higher among people with higher incomes, according to data from the Latinobarometer and the Gallup World Poll (Gaviria and Pagés, 2002; Di Tella and Ñopo, 2008). This pattern is not observed in the rest of the world, where victimization rates

are fairly similar across socioeconomic strata within countries (Di Tella and Ñopo, 2008, based on Gallup data).

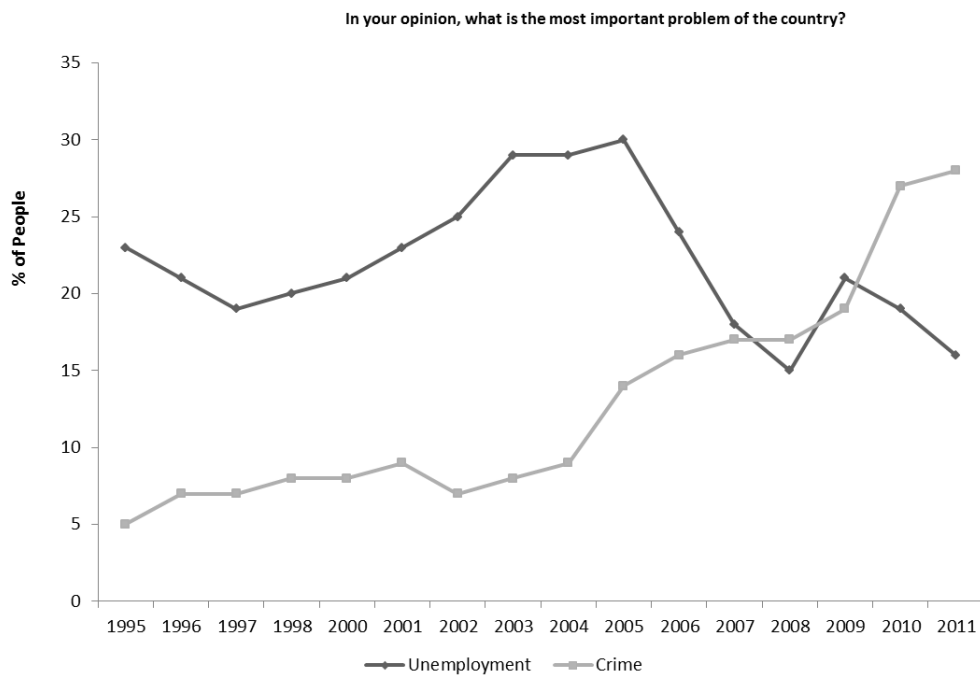
Patterns of self-reported victimization and perceptions of insecurity are directly linked to different aspects of individuals' perceptions of well-being, emotions, and beliefs. Di Tella and Ñopo (2008) pointed out that, in general, those who report being victimized and those who report the presence of gangs and drug dealing in their neighborhoods are less likely to have felt positive emotions (enjoyment and laughter) and are more likely to have felt negative emotions (anger, worry, sadness, boredom, or depression) or physical pain the day before. Those who have not been victimized trust the local police more, feel safer walking alone at night, have better perceptions of the educational opportunities offered by their country to children and to those who want to get ahead through hard work, are more satisfied with the efforts of their country to address the needs of the poor, and are more likely to think that their country is a good place to start a new business. Similarly, Corbacho, Philipp, and Ruiz-Vega (2013), using Gallup data and propensity score matching to control for observable characteristics and overt bias, found that having been mugged reduces trust in the local police (and, to a lesser and less robust extent, trust in the judicial system, in friends, and in business networks).

#### ***4.1 Are Safety Perceptions Based on Probabilistic Calculations?***

Although crime rates and the perception of insecurity are both very high in Latin America, safety perceptions are not significantly correlated with homicide rates across countries within the region. Some of the countries where the population feels the safest, such as Honduras and Colombia, have very high homicide rates, while feelings of insecurity are widespread in Chile, Argentina, and Bolivia, where the objective measures are less alarming. Simple cross-sectional correlations between perceptions of insecurity and victimization or crime rates using national averages are generally very low and not statistically significant (Maris and Ortega, 2013). Concern about crime has increased since the mid-1990s in the whole region. While 5 percent of the Latin Americans interviewed by Latinobarometer in 1995 considered crime to be the most important problem in their country by, in 2010 and 2011 it was considered the most important problem by over a quarter of those interviewed, ahead of unemployment, which used to be top on the list of concerns (Figure 6). The growing concern about crime contrasts with trends in actual crime rates in several countries. In Colombia, for example, where the share of individuals who

think crime is the most important problem has increased from below 5 percent in the early 2000s to more than 10 percent in 2010, homicide rates have fallen from 56.3 per 100,000 inhabitants in 2003 to 34 in 2010 (Sánchez, Díaz and Peláez, 2012).

Figure 6: Concern About Crime and Unemployment in Latin America



Source: *Latinobarometer* question "In your opinion, what is the most important problem in the country (closed list)?"

The apparent disconnect between perceptions and reality in security issues is also observed in local-level data. In a study on intra-urban differences in perceived risk for the metropolitan region of Belo Horizonte, Brazil, Rodrigues (2006) found that actual neighborhood crime rates (including homicides and assaults) had a positive effect on perceived risk of assault, but not on perceived risk of robbery or perceived nighttime insecurity. In a study of crime perceptions in Bogota, where robberies declined markedly between 2010 and 2012 and homicide rates dropped by half in a decade, Ardanaz et al. (2013) found that only 11 percent of people living in the city perceived that robberies had declined, and the percentage of people who reported being concerned about crime increased.

The gaps between risk perception and objective crime indicators are not unique to Latin America. In Germany, where police-recorded crime statistics show a decline in total offenses in the decade before 2003, surveys revealed the public's belief that crime had increased (Pfeiffer, Windzio and Kleimann, 2005). In Ireland, beliefs about crime prevalence have been found to be independent of official crime rates and personal experience of victimization (O'Connell and Whelan, 1996).

Heuristics, or mental shortcuts, exert a strong influence on the perception of insecurity. Four types of heuristics have been corroborated in empirical studies for Latin American countries: two of them are "affect heuristics" and two are "availability heuristics." As Kahneman (2011, p. 139) explains, the affect heuristic is "an instance of substitution, in which the answer to an easy question (How do I feel about it?) serves as an answer to a much harder question (What do I think about it?)." The two affect heuristics supported by empirical evidence on security perceptions are the heuristic due to proximal cues and the heuristic due to feelings of trust. The availability heuristic is defined by Kahneman (p. 129) as "the process of judging frequency by 'the ease with which instances come to mind.'" The two types of availability heuristics assessed empirically are availability due to recent direct or indirect victimization, and availability due to exposure to objective information. A summary of the empirical findings on these heuristics is provided below. In addition to heuristics (or in combination with them), the perception of insecurity is influenced by socio-demographic factors that are not discussed here (see Vilalta, 2012, for a survey).<sup>14</sup>

Judgments of risk, such as the perception of insecurity, are based on feelings that can be elicited by proximal cues that may or may not reflect real threats, as has been demonstrated in field experiments.<sup>15</sup> Reminders of risk act as proximal cues to elicit fear of crime. This is the basis of the "broken windows" theory of crime put forward by Wilson and Kelling (1982), which suggests that "incivilities" such as graffiti, trash, and gang presence elicit crime fears and erode

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<sup>14</sup> Essentially, the perception of insecurity is stronger among women and older people, presumably because they are more vulnerable, in spite of the fact that these groups are less prone to be crime victims. Individuals with more education and higher incomes are found in some studies for developed countries (but not for Latin America) to be less fearful of crime.

<sup>15</sup> To test the importance of proximal cues, Lee et al. (2010), at the peak of the flu pandemic fear of 2009, arranged for participants in a field experiment to encounter a sneezing person before answering a set of questions about different types of risk. Those exposed to the cue considered that the risk of an "average American" to die before the age of 50 from a crime or accident was 41.2 percent, while those not exposed to the cue estimated that risk at 27.9 percent.

trust. Abundant evidence for developed countries lends credence to the hypothesis that those who perceive or are exposed to more incivilities are more fearful.<sup>16</sup>

Using survey data from Gallup, Corbacho, Philipp, and Ruiz-Vega (2013) found that the presence of gangs has a strong impact on the feeling of safety in Latin America as a whole. In the case of Mexico, Vilalta (2012) confirmed that incivilities have a strong influence on the perception of security. The incivilities considered (street quarrels, alcohol consumption in public spaces, and gang presence) were combined in a single measure. For the metropolitan area of Belo Horizonte, Rodrigues concluded that “[b]y far, the strongest predictor of [the three measures of] perceived risk [is] perceived disorder” (2006, p. 256). In this study, perceived disorder was measured using a standardized index constructed from factor analysis of three survey questions regarding the presence of street children, drug dealing, and gangs in the neighborhood.

A second type of affect heuristic that influences the perception of security is the feeling of trust. This heuristic is consistent with the strong association between perceptions of security and trust in police and other institutions found in surveys for Latin America (Di Tella and Ñopo, 2008; Corbacho, Philipp, and Ruiz-Vega, 2013). In his study for Mexico, Vilalta (2012) found that the level of trust in the local police strongly influences the perception of security (measured with an ordinal scale), and in the study for Belo Horizonte, Rodrigues (2006) found that the perceived legitimacy of the police in the neighborhood significantly reduced the perceived risk of robbery and perceived nighttime insecurity, though not the perceived risk of assault.

Memories of victimization, both direct (when the interviewee has been the victim) and indirect (when other household members have been victimized), which are activated in surveys, seem to influence the perception of security, in a classic example of the availability heuristic. The empirical evidence in support of this hypothesis for the developed world is strong and very consistent (Vilalta, 2012).<sup>17</sup> The few studies available for Latin America also lend support to the hypothesis. For the region as a whole, using Gallup data, Di Tella and Ñopo (2008) found that individuals who have not been crime victims feel safer walking alone at night. Maris and Ortega

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<sup>16</sup> See a brief survey in Vilalta (2012) and a discussion of the literature in Farral, Jackson, and Gray (2009, pp. 91-101). Additional evidence is reported in Wyant (2008) for Philadelphia, United States; and in Russo, Roccato, and Vieno (2011) for Italian counties.

<sup>17</sup> O’Connell and Whelan (1996) found that the perception of crime prevalence in Ireland is independent of personal experience of victimization. However, the small sample of this study (623) casts some doubt on the conclusion, given the relatively low frequency of crime events in the sample.



(2013), using Latinobarometer data, found that crime victims prioritize insecurity significantly more than non-victims. Similarly, for Mexico, Vilalta (2012) found that direct or indirect victims of crime report higher levels of perceived insecurity.<sup>18</sup>

Memories of crimes may influence feelings of security declared in surveys even when the victims are not related or known to the interviewee. This seems to be the reason why exposure to certain media, especially television, is found in some studies to be associated with those feelings. However, the international evidence in this respect is not conclusive, according to Vilalta (2012), who summarizes the results of six previous studies and tests the hypothesis in his own study for Mexico, where no significant association is found between perception of security and media use.<sup>19</sup>

Given the gap between the perception and the reality of crime, a relevant issue is whether providing objective information on the probability of crime events can narrow such a gap. Ardanaz et al. (2013) used an experimental approach to test whether the provision of information affects citizens' crime perceptions. In the context of a victimization survey in Bogota, a sub-sample of interviewees randomly chosen received a flyer containing objective information on the decrease in homicides and robberies. The study concluded that "information can have significant effects on people's perceptions, increasing the share of people who report feeling safer by 30 percent, improving ratings of police effectiveness in dealing with robberies by 5 percent, and reducing the share of individuals who distrust the police by 11 percent." The authors also found that the impact on the improved perception of safety persisted several weeks beyond the information treatment. A later stage of the study will assess the extent to which the effect of information on feelings of safety erodes over a longer period and whether behavior is modified as a result.

The presence of large gaps between objective indicators and opinion surveys may lead to a lack of public and political support for security policies or to a lack of responsiveness by the authorities to the concerns of the citizenry. There is no point in forcing one position over the other, as neither the objective indicators nor the feelings of security of the population separately describe the "real" security situation. As Kahneman (2011, p. 145) concludes in his discussion on the issue: "Democracy is inevitably messy, in part because the availability and affect

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<sup>18</sup> However, in one of three samples used in the study (covering the metropolitan area of Mexico City, January 2011), only indirect victimization was found to be associated with high significance with feelings of insecurity.

<sup>19</sup> For an exhaustive discussion of the theoretical and empirical literature see Farral, Jackson, and Gray (2009).

heuristics that guide citizens’ beliefs and attitudes are inevitably biased, even if they generally point in the right direction. Psychology should inform the design of risk policies that combine the experts’ knowledge with the public’s emotions and intuitions.”

## 5. Perceived Social Ranking

Most Latin Americans believe that they belong to the lower-middle fraction of the social ranking in their countries. On a scale of 1 to 10, Latin Americans on average rate their social position at 4.2, roughly two of every three Latin Americans classify themselves on rungs 3 through 5, and only about 6 percent consider themselves to be on the four highest rungs (see Table 3). These results come from the Gallup Poll of 2006 of 16 Latin American countries, which included the following question: “Please look at this card. Imagine at one end are located the ‘richest people’ of [COUNTRY] and at the other end are located the ‘poorest people’ of [COUNTRY]. Taking into consideration your current personal situation, could you please tell me in which cell you place yourself?”

**Table 3. Objective and Subjective Social Rankings Compared**

Subjective Social Ranking	Objective Social Ranking (by Decile of the Income Distribution)										Total
	1	2	3	4	5	6	7	8	9	10	
<b>The Poorest</b>	7.8	5.5	+	+	+	+	+	+	*	*	+
<b>1</b>	12.2	8.8	7.8	5.4	5.7	5.0	+	+	+	+	5.5
<b>2</b>	17.6	13.9	11.2	11.2	9.9	8.7	6.3	5.3	+	+	8.7
<b>3</b>	<b>18.5</b>	<b>21.0</b>	19.0	18.1	17.5	19.0	13.2	14.1	13.8	8.4	16.3
<b>4</b>	17.5	19.3	20.9	21.9	21.2	21.3	22.9	21.3	18.9	14.0	19.9
<b>5</b>	17.2	20.8	<b>24.1</b>	<b>24.7</b>	<b>25.1</b>	<b>26.2</b>	<b>29.7</b>	<b>31.2</b>	<b>30.2</b>	<b>30.7</b>	<b>26.0</b>
<b>6</b>	+	5.8	7.1	8.6	9.9	9.6	12.9	12.4	15.7	18.8	10.1
<b>7</b>	+	+	+	+	5.1	+	6.3	7.5	9.4	13.3	5.0
<b>8</b>	+	+	+	+	+	+	+	+	+	6.4	+
<b>9</b>	*	*	*	*	*	*	*	*	*	+	*
<b>The Richest</b>	*	*	*	*	*	*	*	*	*	*	*

\* Less than 1%

+ Between 1% and 5%

Note: The data in each column add up to 100%, bold numbers are the modes by column, grey cells represent the diagonal.

Source: adapted from Lora and Fajardo (2013).

Table 3 also shows where those in each objective income decile (of their own countries) place themselves in the ladder-subjective question. The mode is rung 5 for all deciles, except the two lowest ones, where the mode is rung 3. Although objectively richer people place themselves on higher rungs, the distribution of responses is not close to a hypothetical NW-SE 45-degree

diagonal, as would be the case if the subjective and the objective classifications matched perfectly. The fact that responses are strongly biased toward the middle rungs may be influenced by a host of psychological factors. However, social rankings are firmly based on a clear understanding by most people of their sources of wealth, as discussed below.

The ladder question is one of three alternative ways that have been used in surveys to elicit perceived social rankings. With some variation, the ladder question has been used in surveys carried out in Europe (Riffault, 1991), the Philippines (Mangahas, 1995), Russia (Ravallion and Lokshin, 1999; 2002), and South Africa (Posel and Casale, 2011). A second alternative, recently applied in Argentina by Cruces, Pérez-Truglia, and Tetaz (2013), is to pose precise questions about an individual's perception of her place in the income distribution. The question is worded as follows: "There are 10 million families in Argentina. Of those 10 million, how many do you think have an income lower than yours?" The third alternative is to ask specific questions about self-perception of class, such as "Are you middle class?", as was done for Chile by Núñez (2005). Regardless of the alternative chosen, all measures show a similar bias toward the middle of the income distribution and a strong reluctance by those objectively belonging to the top income groups to place themselves subjectively among the rich.<sup>20</sup> In the study for Argentina, the mode of the perceptions distribution is found in the fifth decile. Almost half of the respondents place themselves in the middle quintile, as many respondents at the top and the bottom of the objective distribution display substantial negative and positive biases, respectively. Likewise, in Chile, individuals below the median overestimate their relative position while individuals above the median underestimate it, and nearly half of the individuals who belong in the very top of the income distribution identify with the middle socioeconomic groups. In all of the studies, the highest correspondence between actual and perceived class status is among the poor, but mismatches between objective and subjective rankings are also frequent.

Subjective social rankings are important in people's lives: perceived social ranking is associated with subjective well-being, which is significantly stronger than objective measures based on reported income (Posel and Casale, 2011). Efforts to ascend in the perceived social

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<sup>20</sup> This is also the case outside Latin America. For instance, only 6 percent of all individuals ranked in the richest third of South Africans in terms of actual per capita household income perceive that they are among the richest third.

ranking through consumption of some goods may distract individuals from more satisfying activities, and may in the end prove illusory (Frank, 1985).

Preference for redistributive policies respond to individuals' beliefs about their own positions in a social ranking and about what determines such positions (Alesina and La Ferrara, 2005; Cruces, Pérez Truglia and Tetaz, 2013; Gaviria, 2007; Senik, 2009). Those who perceive that their social position has declined have more positive attitudes towards redistribution (Guillaud, 2011), while those who perceive having experienced higher mobility are less supportive of redistributive policies (Gaviria, 2007). And when the perceptions of social position, which are often biased, are corrected by informing the interviewees of their actual social position, their attitude toward redistribution changes correspondingly (Cruces, Pérez Truglia, and Tetaz, 2013). Perceived social ranking and the gap between perceived and objective social ranking may also influence consumers' aspirations and decisions as well as work attitudes and effort.

### ***5.1 What Makes Most People Think That They Are Middle Class?***

To be sure, the bias toward the middle of the subjective social ranking scale is not due to people's ignorance of what constitutes wealth. Individuals in all income groups recognize that social ranking is determined not just by current income, but by all forms of wealth. Indeed, a striking finding in my own econometric work with Johanna Fajardo (Lora and Fajardo, 2013) using the Gallup data was that individuals' judgment of their social ranking is affected in a statistically significant way by their human capabilities (age, education, health status<sup>21</sup>), different forms of relational capital (family, friends, religion), and material conditions of life, which include not only income but also a variety of physical and financial assets, as well as perceptions of economic vulnerability. The results are striking because they are entirely in line with the predictions of standard economic theory, which seldom happens with subjective data. The findings are consistent with previous work, such as that by Ravallion and Loshkin (2002) for Russia, which found that perceived social ranking is influenced not just by income, but also by marital status, family size and composition, education, health, employment status, and ownership of several assets (car, freezer, washer, television, and VCR).

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<sup>21</sup> Measured with a summary index of the five health conditions assessed through the EQ-5D instrument described in the health section above.

In our study we also addressed the question of what makes so many people think that they are middle class, when objectively, on the basis of their current income only, they are not. The same set of factors that are associated with the self-ranking of individuals along the social ladder was used to shed light on the issue. We found that having (or not) at least completed secondary education helps to explain why some people that are objectively poor classify themselves as middle class (and why some rich people see themselves as middle class). *Not* having children makes some objectively poor people see themselves as middle class (and *having* children make some rich people see themselves as middle class). Among the material conditions of life, variables such as access to financial services, no concerns about finances, owning an automobile, and owning a washing machine make some poor people classify themselves as middle class (and lack of those things make some rich see themselves as middle class). Access to running water, access to telephone service, and having a television and freezer increase the odds that a poor person sees herself as middle class, while not having a computer raises the odds that someone who is rich sees herself as middle class.

These findings offer clues to the main psychological biases that influence subjective social rankings. Although most people may be aware that social rankings depend on a host of forms of wealth, the valuations they give to each capability or asset are strongly influenced by psychological and social factors, above and beyond their actual monetary values. For instance, there is no monetary value for “considering religion to be important” or for “having friends to rely on,”<sup>22</sup> but these relational assets are valued implicitly by a typical individual as equivalent to 57 percent and 169 percent of her current income, respectively.<sup>23</sup> Assets that do have monetary value may be implicitly valued extremely highly: access to running water, telephone service, television, and computer are *each* valued as equivalent to nearly 100 percent of income, while owning an automobile is valued as equivalent to 77 percent of income, and a washing machine is worth subjectively 63 percent of current income.

Possible psychological explanations for the high value implicitly attached by individuals to their assets are the endowment effect and cognitive dissonance. The endowment effect

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<sup>22</sup> Admittedly, however, some people may derive pecuniary benefits from their relation with others or their participation in social or religious organizations.

<sup>23</sup> These computations make use of the fact that, since income affects subjective social ranking, the effect of any other variable on social ranking can be expressed in terms of income. The actual calculations presented in this paragraph are based on the coefficient estimates in Lora and Fajardo (2013, Table 5) for a hypothetical 30-year-old woman who lives in Brazil, has one child, a high education level, is employed, has friends and religious beliefs, and lives in a house with access to all public services.

hypothesis holds that a person's willingness to accept compensation for an asset they possess is greater than their willingness to pay for it if they did not possess it (Kahneman, Knetsch and Thaler, 1990; Kahneman and Tversky, 1986; Kahneman, 2011). Cognitive dissonance is the state of tension that occurs whenever a person holds two cognitions (ideas, attitudes, beliefs, opinions) that are psychologically inconsistent (Festinger, 1957; Harmon-Jones and Mills, 1999). To deal with this tension, life aspects that demand effort or are costly or painful tend to be seen through a more positive lens and are more highly valued (Aronson and Mills, 1959; Gerard and Mathewson, 1966; Tavriss and Aronson, 2007). However, these remain hypotheses, since no empirical work has yet been done to test their validity in relation to the formation of subjective social rankings.

Subjective social rankings are necessarily dependent on the reference points used by individuals to rank themselves with respect to others in society. The bias toward the middle rungs in subjective social rankings may be the result of the choice of reference points.<sup>24</sup> In his study for Chile, Núñez (2005) found that this is indeed the case: both upper- and lower-income individuals have a distorted view of the incomes of the other groups. Upper-income individuals believe that the incomes of the poor are higher than they actually are, while most of the population in the bottom four quintiles tends to underestimate the income of the uppermost group. In the study by Cruces, Pérez Truglia, and Tetaz (2013) for Argentina, the biases in perceptions of the respondent's own income ranking were found to be significantly correlated with his relative position within the reference group (as proxied by area of residence), lending support to the hypothesis that the choice of reference points affects subjective social rankings. Finally, in my work with Fajardo for 16 Latin American countries, we found that the standards of reference used in each country depend on the level of socioeconomic development of the country. This is a counterintuitive finding, since it implies that individuals judge their *relative* position in their societies taking into consideration the *absolute* level of socioeconomic development of the society. As a result of the absolute level bias, in more developed countries fewer poor people tend to erroneously classify themselves as middle class, and more rich people

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<sup>24</sup> As pointed out by a commentator, it may also be due to a social desirability bias, as interviewees may feel ashamed to declare themselves relatively well-off or rich. The same commentator suggested an alternative explanation: by placing themselves subjectively in the middle rungs, individuals mitigate the disutility associated with inequality, which results from feeling envious of those who are richer and from feeling regret for having more than those who are poorer, as argued by Fehr and Schmidt (1999). These hypotheses have not been tested in this context.

tend to define themselves as middle class. In other words, the more developed the country, the *stronger* the downward bias in the subjective classification. This suggests that in more developed societies, individuals may be better informed about the living conditions of the rich (but not so much of the poor), and/or that aspirations of reaching the higher rungs of the wealth ladder are stronger than in poorer societies.

Outside of Latin America, Norton and Ariely (2011) assessed the relationship between perceived and actual income distribution of society as a whole. They asked a nationally representative online sample of individuals to estimate the current distribution of wealth in the United States and compared the responses with the actual distribution. Their results revealed that respondents dramatically underestimated the current level of wealth inequality in the United States, believing that the wealthiest quintile held about 59 percent of the wealth, when the actual number is closer to 84 percent.

Taken together, the extant literature indicates that self-rankings of social position offer a distorted picture of actual income rankings and of income distribution. Self-rankings tend to concentrate around the lower-middle points of the scales. While self-rankings are strongly associated with individuals' incomes, capabilities, and assets, they are also influenced by the subjective valuations attached to those capabilities and assets, by people's beliefs about the income distribution in their societies, and by the reference points they use to place themselves on the social ladder.

## **6. Conclusion**

The large gaps between objective and subjective indicators in the social domains of life may be a rich source of information to understand how perceptions are formed, to identify important aspects of people's lives that have been neglected in the official indicators, to inform the public debate on social policies, and to shed light on the political attitudes that citizens and politicians adopt on key social issues.

Although research on the factors explaining the gaps is still in its infancy, it is a promising endeavor. This paper offered an overview of the main empirical findings with a focus on Latin America, in four social domains: health satisfaction, job satisfaction, security perceptions, and subjective social rankings. The overview put emphasis on the psychological

factors that contribute to explain the gaps and help understand how individuals form their perceptions in those areas.

Different psychological biases contribute to explain the gaps in the different domains. Biases associated with cultural values, which affect the choice of reference points and the weights attached to different aspects of a domain, are very relevant with respect to health and job satisfaction. Cultural differences across countries are pronounced in health, while cultural differences across socioeconomic groups are more apparent with respect to job satisfaction. The choice of reference points seems to be less culturally dependent in the formation of subjective social rankings, although it does change with the level of socioeconomic development of the countries. Affect and availability heuristics are the dominant sources of bias in the case of security perceptions. It is possible that the endowment effect and cognitive dissonance are to blame for the extravagant valuations that people seem to attach to some of their assets, on which their subjective social rankings depend.

These are all very tentative conclusions, however, which deserve more direct testing than that provided so far by the extant empirical literature, especially in Latin America. Closer collaboration between economists, psychologists, and sociologists would make this effort more viable and productive.



## References

- Akerlof, G., and R. Kranton. 2000. "Economics and Identity." *Quarterly Journal of Economics* 115(3): 715-53.
- . 2005. "Identity and the Economics of Organizations." *Journal of Economic Perspectives* 19(1): 9-32.
- . 2010. *Identity Economics: How Our Identities Shape Our Work, Wages and Well-Being*. Princeton, United States: Princeton University Press.
- Alesina, A., and E. La Ferrara. 2005. "Preferences for Redistribution in the Land of Opportunities." *Journal of Public Economics* 89(5-6): 897-931.
- Alicke, M.D. 1985. "Global Self-evaluation as Determined by the Desirability and Controllability of Trait Adjectives." *Journal of Personality and Social Psychology* 49(6): 1621-30.
- Ardanaz, M., A. Corbacho, P. Ibararán, and M. Ruiz-Vega. 2013. "Mind the Gap: Bridging Perception and Reality with Crime Information." Unpublished Research Report. Washington, DC, United States: Inter-American Development Bank.
- Aronson, E., and J. Mills. 1959. "The Effect of Severity of Initiation on Liking for a Group." *Journal of Abnormal and Social Psychology* 59: 177-81.
- Asadullah, M., and R. Fernandez. 2008. "Work-Life Balance Practices and the Gender Gap in Job Satisfaction in the UK: Evidence from Matched Employed-Employee Data." IZA Discussion Paper 3582. Bonn, Germany: Institute for the Study of Labor (IZA).
- Blanchflower, D., and A. Oswald. 1999. "Well-Being, Insecurity and the Decline of American Job Satisfaction." Coventry, United Kingdom and Hanover, United States: University of Warwick and Dartmouth College. Mimeographed document.
- Botero, J. et al. 2004. "The Regulation of Labor." *Quarterly Journal of Economics* 119(4): 1339-82.
- Buckingham, M., and C. Coffman. 1999. *First, Break All the Rules: What the World's Greatest Managers Do Differently*. New York, United States: Simon and Schuster.
- Chan, D. 2009. "The Urban Legend of Self-Report Data and its Historical Roots." In C. E. Lance and R. J. Vandenberg, eds. *Statistical and Methodological Myths and Urban Legends: Doctrine, Verity and Fable in the Organizational and Social Sciences*. New York, United States: Routledge.

- Chaparro, J. C. and E. Lora. 2013. "The Relation between Human Resource Management Practices, Job Satisfaction, and Labor Productivity: Evidence from Cross-country and Individual-Level Data." Unpublished Research Report.
- Clark, A. 2001. "What Really Matters in a Job? Hedonic Measurement Using Quit Data." *Labour Economics* 8(2): 223-42.
- Clark, A., and C. Senik. 2006. "The (Unexpected) Structure of 'Rents' in the French and British Labor Markets." *Journal of Socio-Economics* 35(2): 180-96.
- Corbacho, A., J. Philipp, and M. Ruiz-Vega. 2012. "Crime and Erosion of Trust: Evidence for Latin America." IDB Working Paper 344. Washington, DC, United States: Inter-American Development Bank.
- Cruces, G., R. Pérez Truglia, and M. Tetaz. 2013. "Biased Perceptions of Income Distribution and Preferences for Redistribution: Evidence from a Survey Experiment." *Journal of Public Economics*. Forthcoming.
- Dachs, J. N. W. et al. 2002. "Inequalities in Health in Latin America and the Caribbean: Descriptive and Exploratory Results for Self-reported Health Care in Twelve Countries." *Pan American Journal of Public Health* 11(5-6): 335-55.
- Daude, C., and E. Fernández-Arias. 2010. "On the Role of Productivity and Factor Accumulation in Economic Development in Latin America." Working Paper IDB-WP-155. Washington, DC, United States: Inter-American Development Bank.
- Deaton, A. 2010. "Income, Aging, Health and Well-being around the World: Evidence from the Gallup World Poll." In D. A. Wise, editor. *Research Findings in the Economics of Aging*. Chicago, United States: The University of Chicago Press.
- Di Tella, R., and H. Ñopo. 2008. "Happiness and Beliefs in Criminal Environments." Research Department Working Paper 554. Washington, DC, United States: Inter-American Development Bank. Available at: <http://ssrn.com/abstract=1821905> or <http://dx.doi.org/10.2139/ssrn.1821905>
- Fehr, E., and K. M. Schmidt. 1999. "A Theory of Fairness, Competition and Cooperation." *Quarterly Journal of Economics* 114(3): 817-68.
- Farrall, S. D., J. Jackson, and E. Gray. 2009. "Social Order and the Fear of Crime in Contemporary Times." Clarendon Studies in Criminology. New York, United States: Oxford University Press.

- Festinger, L. 1957. *A Theory of Cognitive Dissonance*. Palo Alto, United States: Stanford University Press.
- Frank, R. H. 1985. "The Demand for Unobservable and Other Nonpositional Goods." *American Economic Review* 75(1): 101-16.
- Frey, B. 2008. *Happiness: A Revolution in Economics*. Cambridge, United States: MIT Press.
- Gaviria, A. 2007. "Social Mobility and Preferences for Redistribution in Latin America." *Economía* 8(1): 55-96.
- Gaviria, A., and C. Pagés. 2002. "Patterns of Crime Victimization in Latin American Cities." *Journal of Development Economics* 67(1): 181-203.
- Gerard, H., and G. Mathewson. 1966. "The Effects of Severity of Initiation on Liking for a Group: A Replication." *Journal of Experimental Social Psychology* 2: 278-87.
- Graham, C., L. Higuera and E. Lora. 2011. "Which Health Conditions Cause the Most Unhappiness?" *Health Economics* 20(12): 1431-47.
- Groot, W. 2000. "Adaptation and Scale of Reference Bias in Self-assessment of Quality of Life." *Journal of Health Economics* 19(3): 403-20.
- Guenther, C. L., and M. D. Alicke. 2010. "Deconstructing the Better-than-Average Effect." *Journal of Personality and Social Psychology* 99: 755-70.
- Guillaud, E. 2011. "Preferences for Redistribution: An Empirical Analysis over 33 Countries." *Journal of Economic Inequality*. 11(1): 57-78. DOI: 10.1007/s10888-011-9205-0.
- Harmon-Jones, E. and J. Mills, editors. 1999. *Cognitive Dissonance: Progress on a Pivotal Theory in Social Psychology*. Washington, DC, United States: American Psychological Association.
- Harter, J., F. Schmidt, and C. Keyes. 2002. "Well-Being in the Workplace and its Relationship to Business Outcomes: a Review of the Gallup Studies." In: C. Keyes and J. Haidt, editors. *Flourishing: Positive Psychology and the Life Well-Lived*. First edition. Washington, DC, United States: American Psychological Association.
- Inter-American Development Bank (IDB). 2008. *Beyond Facts: Understanding Quality of Life. Development in the Americas*. Cambridge, United States: Harvard University, David Rockefeller Center for Latin American Studies.
- Jürges, H. 2007. "True Health vs. Response Styles: Exploring Cross-country Differences in Self-reported Health." *Health Economics* 16(2): 163-78.

- Kahneman, D. 2011. *Thinking, Fast and Slow*. New York, United States: Farrar, Straus, and Giroux.
- Kahneman, D., J. L. Knetsch, and R. H. Thaler. 1990. "Experimental Tests of the Endowment Effect and the Coase Theorem." *Journal of Political Economy* 98(6): 1325-48.
- Kahneman, D., and A. Tversky. 1986. "Choices, Values and Frames." In N. J. Smelser and D. R. Gerstein, eds. *Behavioral and Social Science: 50 Years of Discovery*. Washington, DC, United States: National Research Council, Committee on Basic Research in the Behavioral and Social Sciences.
- Kristensen, N., and E. Johansson. 2006. "New Evidence on Cross-country Differences in Job Satisfaction Using Anchoring Vignettes." *Labor Economics* 15(1): 96-117.
- Krosnick, J. A. 1999. "Survey Research." *Annual Review of Psychology* 50: 537-67.
- Lee, S. W. S., N. Schwarz, D. Taubman, and M. Hou. 2010. "Sneezing in Times of a Flu Pandemic: Public Sneezing Increases Perception of Unrelated Risks and Shifts Preferences for Federal Spending." *Psychological Science* 21(March): 375-377.
- Lindeboom, M., and E. van Doorslaer. 2004. "Cut-Point Shift and Index Shift in Self-reported Health." *Journal of Health Economics* 23(6): 1083-99.
- López Bóo, F., L. Madrigal and C. Pagés. 2010. "Part-Time Work, Gender, and Job-Satisfaction: Evidence from a Developing Country." *The Journal of Development Studies* 46(9): 1543-71.
- Lora, E. 2011. "Health Perceptions in Latin America." *Health Policy and Planning*. DOI: 10.1093/heapol/czr078. (First published online: December 24, 2011.)
- "Using Life Satisfaction Data to Identify Urban Problems, Prioritize Local Public Expenditures and Monitor the Quality of Urban Life." In M. Rojas, editor. *Handbook of Happiness Research in Latin America*. New York, United States: Springer Publishing. Forthcoming.
- Lora, E., and J. Fajardo. 2013. "Latin American Middle Classes: The Distance between Perception and Reality." *Economia*. Forthcoming.
- Mangahas, M. 1995. "Self-rated Poverty in the Philippines, 1981-1992." *International Journal of Public Opinion Research* 7(1): 40-52.
- Maris, L., and D. Ortega. 2013. "Crime Perceptions and Reality in Latin America." Unpublished Research Report. Washington, DC, United States: Inter-American Development Bank.

- Mas, A. 2006. "Pay, Reference Points and Police Performance." *Quarterly Journal of Economics* 121(3): 783-821.
- Menezes-Filho, N. A., R. Botura Corbi, and A. Zaitune Curi. 2009. "Job Insecurity and Life Satisfaction." In C. Graham and E. Lora (eds). *Paradox and Perception: Measuring Quality of Life in Latin America*. Washington, DC, United States: Brookings Institution.
- Milcent, C., and F. Etile. 2006. "Income-related Reporting Heterogeneity in Self-assessed Health: Evidence from France." *Health Economics* 15(9): 965-81.
- Norton, M. and D. Ariely. 2011. "Building a Better America—One Wealth Quintile at a Time." *Perspectives on Psychological Science* 6(1): 9-12.
- Núñez, J. 2005. "Living under a Veil of Ignorance." Santiago, Chile: University of Chile. Mimeographed document.
- O'Connell, M., and A. Whelan. 1996. "The Public Perception of Crime Prevalence, Newspaper Readership and 'Mean World' Attitudes." *Legal and Criminology Psychology* 1(2): 179-95.
- Perry, G. E., et al. 2007. *Informality: Exit and Exclusion*. Washington, DC, United States: World Bank.
- Pinker, S. 1997. *How the Mind Works*. New York, United States and London, United Kingdom: W.W. Norton & Company.
- , 2002. *The Blank Slate: The Modern Denial of Human Nature*. New York, United States: Viking.
- Pfeiffer, C., M. Windzio and M. Kleimann, 2005. "Media Use and Its Impacts on Crime Perception, Sentencing Attitudes and Crime Policy." *European Journal of Criminology* 2(3): 259-85.
- Poggi, A. 2010. "Job Satisfaction, Working Conditions and Aspirations." *Journal of Economic Psychology* 31(6): 936-49.
- Posel, D. R., and D. M. Casale. 2011. "Relative Standing and Subjective Well-Being in South Africa: The Role of Perceptions, Expectations and Income Mobility." *Social Indicators Research* 104(2): 195-223.
- Pratap, S., and E. Quintin. 2006. "Are Labor Markets Segmented in Developing Countries? A Semiparametric Approach." *European Economic Review* 50(7): 1817-41.

- Ravallion, M., and M. Lokshin. 1999. "Subjective Economic Welfare." World Bank Policy Research Working Paper 2106. Available at SSRN: <http://ssrn.com/abstract=569202>.
- , 2002. "Self-Rated Economic Welfare in Russia." *European Economic Review* 46(8): 1453-73.
- Riffault, H. 1991. "How Poverty is Perceived." In K. Reif and R. Inglehart, editors. *Eurobarometer: The Dynamics of European Public Opinion*. London, United Kingdom: Macmillan Press.
- Rodrigues, C. D. 2006. "Civil Democracy, Perceived Risk, and Insecurity in Brazil: An Extension of the Systemic Social Control Model." *Annals of the American Academy of Political and Social Science. Democracy, Crime, and Justice* 605(May): 242-63.
- Russo, S., M. Roccato, and A. Vieno. 2011. "Predicting Perceived Risk of Crime: A Multilevel Study." *American Journal of Community Psychology* 48(3-4): 384-94.
- Salomon, J. A., A. Tandon, and C. J. L. Murray. 2004. "Comparability of Self-Related Health: Cross Sectional Multi-Country Survey Using Anchoring Vignettes." *British Medical Journal* 328: 258-64.
- Sánchez, A., et al. 2012. "Evolución Geográfica del Homicidio en Colombia." Documento de Trabajo sobre Economía Regional 169. Banco de la República. Cartagena, Colombia: Centro de Estudios Económicos Regionales (CEER).
- Schaeffer, N. C., and S. Presser. 2003. "The Science of Asking Questions." *Annual Review of Sociology* 29: 65-88.
- Senik, C. 2009. "Direct Evidence on Income Comparisons and their Welfare Effects." *Journal of Economic Behavior & Organization* 72: 408-424.
- Sommerfeld, J. et al. 2002. "Determinants of Variance in Health State Valuations." In C. J. L. Murray, J. A. Salomon, C. D. Mathers, and A. D. Lopez, editors. *Summary Measures of Population Health: Concepts, Ethics, Measurement and Applications*. Geneva, Switzerland: World Health Organization.
- Suárez-Berenguela, R. M. 2000. "Health System Inequalities and Inequities in Latin America and the Caribbean: Findings and Policy Implications. Working Paper prepared for the Health and Human Development Division of the Pan American Health Organization/World Health Organization. Washington, DC, United States: World Bank.

- Tavris, C., and E. Aronson. 2007. *Mistakes Were Made (But Not by Me): Why We Justify Foolish Beliefs, Bad Decisions, and Hurtful Acts*. New York, United States: Hartcourt, Inc.
- Thaler, R. H., and C. R. Sunstein. 2008. *Nudge: Improving Decisions about Health, Wealth and Happiness*. New Haven, United States: Yale University Press.
- Tourangeau, R., L. J. Rips and K. Rasinski. 2000. *The Psychology of Survey Response*. Cambridge, United Kingdom: Cambridge University Press.
- Van Doorslaer, E., and U. G. Gerdtham. 2003. "Does Inequality in Self-assessed Health Predict Inequality in Survival by Income? Evidence from Swedish Data." *Social Science and Medicine* 57(9): 1621-29.
- Vilalta, C. J. 2012. "Los Determinantes de la Percepción de Inseguridad Frente al Delito en México." Working Paper IDB-WP-381. Washington, DC, United States: Inter-American Development Bank.
- Warr, P., 2003. "Well-Being and the Workplace." In D. Kahneman, E. Diener, and N. Schwarz, editors. *Well-Being: Foundations of Hedonic Psychology*. New York, United States: Russell Sage Foundation Publications.
- Wilson, J. Q., and G. Kelling. 1982. "Broken Windows: The Police and Neighborhood Safety." *Atlantic Monthly* March: 29-38.
- Wyant, B. R. 2008. "Multilevel Impacts of Perceived Incivilities and Perceptions of Crime Risk on Fear of Crime: Isolating Endogenous Impacts." *Journal of Research in Crime and Delinquency* 45(1): 39-64.