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Subjective Well-Being: Evidence from  
Latin America**

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# Heterogeneous Self-employment and Subjective Well-Being: Evidence from Latin America

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## Abstract

This paper analyzes the relationship between labor status and individual satisfaction in Latin America. Existing evidence for developed countries shows that the self-employed report higher job satisfaction than the employed. The evidence, however, is less conclusive in terms of life-satisfaction. Moreover, for Latin American countries, the evidence shows that self-employed individuals report lower life-satisfaction than employed individuals do. To clarify the effect of self-employment on satisfaction, we use the Latinobarómetro survey 2007 for eighteen Latin American and Caribbean countries, considering the category self-employment as a heterogeneous category. Additionally, we control for the distinction between necessity and opportunity self-employed. Contrary to existing evidence, we find that not all self-employed individuals are more satisfied than employed individuals. Specifically, we find evidence revealing that, compared to workers in paid employment: (i) precarious self-employed workers are as satisfied as the employed with their life but less with job and household income; (ii) self-employed professionals are more satisfied than the employed only with their incomes; (iii) business owners are more satisfied with their lives, income and job; and (iv) self-employed farmers and fisherman are less satisfied with their jobs and income.

**Keywords:** Labor informality, voluntary vs. involuntary self-employment, life and job satisfaction

**JEL classification:** C25, I31, J24, J28, O17.

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## 0. Introduction

According to statistics from the International Labor Office, while self-employed individuals represent around 10 percent of the working population in developed economies<sup>1</sup>, they account for a third<sup>2</sup> of the labor force in Latin American and Caribbean (Latin American hereinafter) countries (CEDLAS & World Bank, 2011; LABORSTA, 2011) and are increasing rapidly (Tokman, 2009).<sup>3</sup>

The usual distinction between self-employed and employed individuals is that the former are not subject to a hierarchy (they are their own bosses) despite recognizing that the self-employed are exposed to higher income volatility than wage earners (Shore, 2011). Additionally, as entrepreneurs, the self-employed enjoy a large degree of independence and self-determination at work. Although this description of self-employment applies in developed and less developed countries, there is a specific feature in Latin American countries, namely that self-employment occupations are typically associated to *informal* employment that goes unreported, leaving the individual unprotected and vulnerable.

In terms of the influence of employment status on satisfaction, it is well established that unemployment makes individuals unhappier. Additionally, a rather robust finding is that self-employment is related to higher job satisfaction (see Blanchflower's studies). However, evidence on a relationship between self-employment and life satisfaction is insufficiently clear (see a survey in Dolan et al., 2008 and Binder and Coad, 2012). Moreover, when considering Latin American countries, the evidence shows that the self-employed are, on average, less satisfied with their life than the employed (see Graham and Felton, 2005, 2006).

This large divergence in the results could be due to the fact that these studies assume different categories and types of jobs. That is, at least in Latin American countries, the categories of *informality* and *self-employment* are too broad to be conclusive. In the same line, a recent study by Binder and Coad (2012) points out that there is an empirically weak association between satisfaction and self-employment, which can be explained by the fact that the self-employed are quite a heterogeneous group. They consider the heterogeneity in terms of how individuals become self-employed. While some individuals would go into self-employment voluntarily, others who are forced

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<sup>1</sup> For instance, 7% in the United States, 11% in Spain, 6% in France, 9% in Belgium, 7% in Austria, 13% in the United Kingdom, etc.

<sup>2</sup> This rate ranges from 43.3% in the Dominican Republic and 41.2% in Colombia or Paraguay to 25.1% in Costa Rica and 22.4% in Argentina.

<sup>3</sup> Using data on the urban areas of sixteen Latin America countries, Tokman (2009) finds that the informal economy expanded from 57% to 63.3% of urban employment between 1990 and 2005 because of increases in the informal sector and of the number of precarious workers in formal enterprises.

into self-employment might not appreciate the self-employed lifestyle. Therefore, recent literature has incorporated the distinction between necessity entrepreneurship and opportunity entrepreneurship or alternatively the degree of voluntariness in the choice of occupation.

We try to contribute to the literature by incorporating another source of heterogeneity to avoid lumping together widely different individuals. We propose a classification of self-employment as a heterogeneous workforce status<sup>4</sup> including diverse occupational categories, where such categories are featured in different intensity for the effects associated to the preference for independence or absence of hierarchy, and the existence of risk and instability. In particular, we identify four different occupational types using the Latinobarómetro 2007 dataset: professional, business owner, farmer-fisherman, and street peddler<sup>5</sup> own-account workers. As in recent literature, we also seek to control for the distinction between voluntary versus necessity self-employment (and/or voluntariness). However, our approach differs in that we control for this distinction in each of the occupations.

To this end, we consider subjective well-being in different dimensions: life, job and household income satisfaction. The reason for including life satisfaction, – aside from the inconclusive existing literature about the effect of self-employment on life-satisfaction – is that life satisfaction is a much more global evaluation of individuals' well-being, which includes not only job and income satisfaction, but also a set of other interacting factors (Binder and Coad, 2010, 2011, 2012; Ferrer-i-Carbonell & van Praag, 2003). Since individuals might be able to compensate high evaluations in some domains of life with low achievements in others, high job or income satisfaction might be counterbalanced by lower satisfaction in the family domain, social life, etc.

The idea behind including income satisfaction – besides the fact that there is no income in our dataset – is the importance of this domain in explaining life satisfaction (Ferrer-i-Carbonell and van Praag, 2002, 2003). Satisfaction with household income has often been studied in the context of household equivalence scales (see, for example, van Praag and Van der Sar, 1988 or van Praag and Ferrer-i-Carbonell, 2008).

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<sup>4</sup> Although we have reported that different occupations classified as *informal* influence individuals' well-being in different ways, we do not explore this possibility due to data constraints. For instance, the Latinobarómetro survey does not contain information about the size of the firm the individual works in nor does it offer information about workers employed in unpaid jobs, business owners, domestic help or workers in small firms with benefits. However, there is recent evidence from some developing countries in favor of our hypothesis. Pagés and Madrigal (2008), for example, find substantial differences in job satisfaction within different types of informal jobs in Honduras, Guatemala and El Salvador.

<sup>5</sup> This category includes workers such as street vendors, shoeshiners, window cleaners, etc.

Our contribution is, therefore, to first test whether different self-employment occupations have a different influence on satisfaction of self-employed individuals compared to individuals in paid employment. Secondly, we analyze to what extent the results for life, job and household income satisfaction differ.

Our findings show the importance of analyzing self-employment as a heterogeneous labor market status, at least in Latin American countries. The main finding is that not all self-employed individuals are less satisfied than employed individuals, as predicted by some of the related literature. Our evidence shows firstly that business owners are more satisfied with life, job and income domains than the employed only when controlling for the degree of freedom to choose and occupation.<sup>6</sup> Secondly, self-employed professionals are more satisfied with their income than employed individuals. Third, farmers and fishermen are only less satisfied with job and income if they have reported a higher guarantee of getting a job. The intuition is that in occupations where the self-employed report either higher or equal subjective well-being as wage earners, the effect of risk and instability dominates the effect of independence and absence of hierarchy, unless there is free will in the choice of occupation for the case of business owner self-employed individuals. In the results section, we also comment on different and alternative explanations.

The remainder of this paper proceeds as follows. In the next section, we review the existing literature concerning subjective well-being and self-employment. In section 2, we present the hypotheses with reference to the determinants of individual subjective well-being. The data and the variables used in the study are described in section 3. In section 4, we explain the method of analysis. The results of our analysis are then presented and discussed in section 5. Finally, section 6 concludes.

## **1. Background**

### **1.1. Labor market status**

As pointed out in the introduction, the usual distinction between self-employed and employed individuals is that the former are not subject to a hierarchy, and enjoy a large degree of independence and self-determination at work despite recognizing that the self-employed are exposed to higher

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<sup>6</sup> These results must be taken with caution because they are driven by the fact that the *business owner* category in the Latinobarómetro survey does not distinguish between micro-entrepreneurs and owners of larger businesses.

income volatility than wage earners. Additionally, for Latin American countries, self-employment is associated with *informal* employment that goes unreported, leaving the individual unprotected and vulnerable.

In developing countries, informal self-employment is depicted by some authors (Harris & Todaro, 1970) as a synonym of involuntary underemployment or disguised unemployment, situating it in the context of dualism with the formal labor market.<sup>7</sup> Other authors challenge this view by arguing that informal employment in less developed countries is a voluntary choice and analogous of the voluntary entrepreneurial small-firm sector found in industrialized countries (Maloney, 2004).

These two contested characterizations are of particular relevance to Latin American countries and the description of the individual's labor situation as a *voluntary* or *involuntary* option can have important policy implications. As Kucera and Roncolato (2008) argued, the higher the ratio of voluntary to involuntary informal employment: (i) the less meaningful informal employment is as an indicator of underdevelopment; (ii) the more meaningful the open unemployment rate is as an indicator of labor market slack; and (iii) the more contradictory policies aiming to increase formal employments are.

To understand individuals' preferences regarding employment, in particular the choice between self-employment and employment, the traditional approaches to labor market indicators do not seem to be sufficient (Lugo, 2007). In this line, the literature has proposed several alternative indicators of employment characteristics. Some examples are presented by van der Hulst (2003), who found that long working hours are associated with subjective fatigue and other subjective reported physical health problems. Andersson (2008) studied individuals' perceptions about life and job satisfaction as measures of subjective well-being, self-assessed general health, and whether the job is mentally straining and stressful.

For developed countries, the related literature has shown the importance of the subjective approach (self-assessed satisfaction information) to understand individuals' behavior in terms of employment status (Andersson, 2008; Clark, 2005; D'Addio et al., 2007; van Praag & Ferrer-i-Carbonell, 2004) and to predict labor market mobility (Clark et al., 1998; Clark, 2001). Previous evidence has shown that unemployed individuals are substantially less satisfied with their life than

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<sup>7</sup> Bosch et al. (2007) argue that in this dominant perspective, the informal sector (where self-employment occupations are predominant) is perceived as the disadvantaged sector of a market segmented by rigidities in the formal or covered sector of the economy. From this traditional view (Harris & Todaro, 1970), well-paid, secure and safe jobs are found in the formal sector, while informal jobs are small-scale, not legal, with low productivity and low wages.

workers, even when controlling for other characteristics such as lower income (Clark et al., 2001; Di Tella et al., 2001; Frey & Stutzer, 2002; Winkelmann & Winkelmann, 1998). This finding applies also to developing economies (Graham & Pettinato, 2001).

Concerning the distinction between employment and self-employment, there exists robust evidence for developed economies showing that self-employed individuals report higher levels of job satisfaction than wage earners (Blanchflower, 2000; Blanchflower, 2004; Blanchflower & Freeman, 1997; Blanchflower & Oswald 1998, Blanchflower et al., 2001; Taylor, 2004). However, there is scarce evidence on the relationship between life satisfaction and self-employment (Binder & Goad, 2012; Dolan et al. 2008). For cross-sectional data from the United States, Blanchflower and Oswald (1998) reported that young self-employed are happier than the employed. Craig et al. (2007) provided similar evidence from small businesses in Australia. Looking at European countries, Blanchflower (2004b) only found effects of self-employment on life-satisfaction for subgroups; a finding that strongly depends on the dataset used. The reasons why self-employed individuals report higher subjective well-being than the employed have been widely analyzed (Benz & Frey, 2008a, 2008b; Binder & Coad, 2012; Block & Koellinger, 2009; Carree & Verheul, 2012; Frey et al., 2004; Hundley, 2001; and Kautonen & Palmroos, 2010; among others). An analysis of the compensating wage differentials shows that most entrepreneurs enter and persist in business despite the fact they have both lower initial earnings and lower earnings growth than in paid employment, suggesting that first, self-employment provides substantial non-monetary benefits (Hamilton, 2000); and secondly, that self-employment provides procedural utility<sup>8</sup>, that is, the self-employed do not value only outcomes, but also the conditions and the processes leading to these outcomes (Benz & Frey, 2008a; and Frey, 2008).

Binder and Coad (2012) and Block and Koellinger (2009) showed that autonomy and flexibility are factors that contribute to the procedural utility beyond income. They found that nascent entrepreneurs who started their business after a previous period of unemployment or due to a lack of better work alternatives (necessity entrepreneurs) are significantly less satisfied with their start-up. This finding suggests that, besides the well-known utility losses due to unemployment (Blanchflower & Oswald, 2004a, Di Tella et al., 2001), a new facet of procedural utility, that is, self-employed care about the process leading to their decision to start a business. Benz and Frey (2004, 2008a, 2008b) showed that, in western countries, the value of autonomy essentially explains the

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<sup>8</sup> See Frey (2008) for a detailed discussion of the concept.

whole job satisfaction differential between self-employed and employed people, thus supporting the idea of procedural preferences for independence and the absence of hierarchy.<sup>9</sup>

If the decision to become self-employed is made as a result of an exercise of free will, entrepreneurs are significantly more satisfied. On the other hand, if people are pushed into self-employment out of unemployment or due to a lack of better alternatives, they are significantly less satisfied. Moreover, for individuals who prefer a secure and safe job but are unable to find one, self-employment becomes an option to unemployment, which can be seen as involuntary. We should therefore also consider this involuntariness and the features of risk, instability and income volatility behind self-employment or informal employment to study the link between individuals' labor market status and subjective well-being in this region. Prior evidence from developed economies has shown the negative impact of job insecurity on psychological (Burchell et al., 2002) and subjective well-being (Clark et al., 2010). Consequently, the fact that self-employed workers may be exposed to economic insecurity, not be protected by labor regulations, and excluded from state benefits (Perry et al., 2007) can be considered as joint characteristics which, among others, can lead to a negative effect of self-employment on subjective well-being.

The distinction between push and pull motivated entrepreneurs has been linked with satisfaction in several studies, suggesting that necessity entrepreneurs are less satisfied with their occupational situation than opportunity entrepreneurs, including Blinder and Coad (2012); Block and Koellinger (2009); Carree and Verheul (2012); Kautonen and Palmroos, (2010) and Lange (2012).

The positive effect of self-employment on individual subjective well-being, however, does not seem to be homogeneous. For instance, Alesina et al. (2004), using USA and European data, found that the positive influence of self-employment on individual satisfaction is limited to the *rich*, defined as those in the top two income quartiles. Using data for Germany, Fuchs-Schündeln (2009) found that procedural preferences for independence are heterogeneous across the population because not all self-employed experience an increase in job satisfaction to the same degree. In her study, she showed that those who are likely to value independence, the so-called *independent* types, experience a large increase in job satisfaction from being self-employed, while the most *hierarchical* types

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<sup>9</sup> The possibility of working independently, that is autonomy, emerges as an important non-pecuniary benefit of self-employment. In the literature, the standard trade-off concerns autonomy from self-employment and the higher, more stable income of wage-employment (for a review see Benz & Frey, 2008b or Lange, 2012). We must be aware that it ignores other factors that play a pivotal role in individuals' occupational choice (between self-employment and wage-employment) such as social security, leisure time, opportunity perception and exploitation, and inheritance of a family business.



could even experience a decrease. For a theoretical explanation of the trade-off between increased autonomy from self-employment and the generally higher income that traditional employment offers, see Croson and Minniti (2012). For a detailed literature review, see Dolan et al. (2008).

Alternatively, the related literature has also emphasized ‘overoptimism’<sup>10</sup>, or personal traits in general, with respect to entrepreneurship (see for example Carreer & Verheul, 2012 for a review; and Lange, 2012). Overoptimism occurs when the expectations of an individual regarding an outcome exceed the actual outcome. Satisfaction may partly be determined by the extent of overoptimism, with the disappointment of overoptimistic entrepreneurs limiting their satisfaction. In this respect, Ferrante (2009) directly connects people’s life satisfaction to a (positive) difference between expected and achieved outcomes. Benz and Frey (2004), for example, believe that the self-employed are generally more satisfied with their jobs because they have a natural tendency to be more satisfied. The authors argue that this may be due to the fact that only those actively seeking self-employment actually value its characteristics. This is where opportunity and necessity entrepreneurs are likely to differ. Moreover, the literature often emphasizes that individuals possess different traits, some of which are more suitable to entrepreneurship than others, including self-determination, ability to control life and low risk-aversion, among others.

For the case of Latin America, the literature is more scarce than for developed countries. There are some attempts to describe the labor market in Latin America using objective indicators such as wages or hours of work (Gasparini & Tornarolli, 2007; Maloney, 2004; Tokman, 2009). Some research analyzes labor force status as a determinant of individual’s subjective well-being, finding dissimilar results. Using data derived from the Latinobarómetro survey of 2000 and 2004, Graham and Felton (2005, 2006) and Graham and Pettinato (2001) distinguished between employed, self-employed and other non-active labor status. They found that the most outstanding difference between industrialized countries and Latin America is that individuals in the USA and Europe classified as self-employed are happier on average than the employed, while in Latin America they are, on average, less happy than the employed. They also argued that workers in the self-employment

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<sup>10</sup> Several explanations have been proposed for the overoptimistic nature of entrepreneurs. The heuristic of overoptimism may help entrepreneurs to cope with information (over)load, time pressure and uncertainty of entrepreneurship and to take timely actions, e.g., developing the new venture before all relevant information is available and known (Busenitz & Barney, 1997). There is the possibility of self-selection with entrepreneurship attracting a certain type of (overoptimistic) people (Astebro et al., 2007; Forbes, 2005). Overoptimism does not necessarily preclude satisfaction. Entrepreneurs may adjust their expectations ex-post and believe that the entrepreneurial experience is satisfactory despite initially unrealistic expectations.

sector choose this labor option due to the absence of more secure employment opportunities and live a precarious existence in the informal sector.<sup>11</sup>

A more recent study by the Inter-American Development Bank (IDB) using data from the Gallup World Survey for the release 2007, and complementary information provided by other institutions in different countries analyzes the quality of life in Latin American countries (Lora, 2008). Among their findings, they highlight that despite the proliferation of low-skill jobs and informal employment in Latin America, people are satisfied with their work. When comparing informal and formal workers, there is a generalized preference to work in the informal rather than the formal, salaried sector. The authors stress that this preference for the informal economy could be due to the flexibility, autonomy, and opportunity for personal growth that informality seems to offer.

The apparent divergence in the results of these studies comes from the fact that they assume different categories and types of jobs. Lora (2008) points out the difference between formal and informal jobs<sup>12</sup>, while Graham and Pettinato (2001) and Graham and Felton (2005, 2006) use the distinction between salaried workers, self-employed and non-active individuals.<sup>13</sup> Without doubt, these definitions of informal employment and self-employment in the previous studies pose some research difficulties. For instance, while the first definition based upon regulation coverage does not necessarily imply that all the jobs under the *informal* category are of low quality (in terms of working conditions, wages, training opportunities, etc.), the second definition based on type of occupation (employed/self-employed) does not either.

Therefore, we try to contribute to filling the gap in the literature for Latin American countries using the heterogeneous categories of self-employment and controlling for the voluntariness of the choice and the degree of guarantee or chances to get a job.

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<sup>11</sup> There is no clear definition for the informal sector, but informal employment is frequently defined as the non-coverage by social protection, and obviously, individuals in informal employment do not have any labor or economic security.

<sup>12</sup> Lora (2008) defines informal status as salaried workers in small firms (including micro firm owners), non-professional self-employed, and zero-income workers. Although, informality is considered an important topic to be included in academic and politic debates given, among other things, the strong link between informality, poverty and underemployment, the term informality is not clear from a theoretical point of view, and is difficult to implement empirically. In principle, informal employment refers to employment that goes unreported, and thus leaves the worker unprotected and vulnerable. However, some experts have argued that the definition should instead focus on the overall working conditions of workers and include distinctions between jobs in terms of the size of the firm and/or the type of occupation (e.g., employees vs. the self-employed) and the economic sector, among others. For a review of the most widely used criteria for defining informality see Gërkhani (2004).

<sup>13</sup> In particular, the self-employment category in Graham and Pettinato (2001) includes micro firm owners and self-employed professionals, as well as farming, fishing, forestry workers and street vendors.

## 1.2. Other determinants of subjective well-being

The related literature also includes other determinants for subjective well-being apart from labor status. A common result in the literature is that individuals' economic status or material circumstances affect their subjective well-being in a positive way. In the related literature, economic status is usually modeled by income (Blanchflower & Oswald, 2004a; Ferrer-i-Carbonell, 2005), expenditure (Bookwalter & Dalenberg, 2010) or wages (Tao & Chiu, 2009), and less frequently by indexes of wealth (Graham & Felton, 2005, 2006; Graham & Pettinato, 2001). This hypothesis has also been studied as the *absolute income hypothesis* and states that the level of utility or well-being varies positively with the level of income up to a threshold level beyond which utility remains largely invariant (Caporale et al., 2009). This idea is consistent with the assumption of diminishing marginal utility of consumption (or income) posited by neoclassical economic theory.

Social capital has received increasing attention as a determinant of subjective well-being (Ateca et al., 2013; Coleman, 1988; Elgar et al., 2011; Han et al., 2012; Helliwell, 2001, 2003, 2006; Helliwell & Putnam, 2004; Leung et al., 2011; Tokuda et al., 2010, among others). In terms of existing results, many cross-sectional studies in the field of sociology and economics have shown that bridging associations are more likely to generate positive externalities than bonding associations<sup>14</sup> (Ateca et al., 2013; Helliwell, 2001; Helliwell & Putnam, 2004; Marshall & Stolle, 2004; Putnam & Goss, 2002; Woolcock & Narayan, 2000). The scarce empirical evidence from Latin American countries (Ateca et al., 2013) has found similar results to developed countries, that is, social capital increases well-being with bridging ties being more important.<sup>15</sup>

In terms of socioeconomic characteristics, based on evidence from related literature<sup>16</sup>, being female is associated to larger levels of subjective well-being (see Alesina et al., 2004 for life satisfaction; Clark, 1997 and van Praag et al., 2003 for job satisfaction; for both see Verheul et al., 2012). There is evidence regarding a convex shape in the relationship of subjective well-being and age (see Oswald, 1997; Blanchflower & Oswald, 2004a for some evidence in terms of life satisfaction and van Praag et al., 2003 about job satisfaction in relation to age). With respect to marital status, some variation can be observed across studies. However, it seems that with respect to

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<sup>14</sup> Bonding relates to closed networks of people with the same background, whereas bridging entails cross-cutting ties (e.g., associations that bring people into contact with others from a cross-section of society).

<sup>15</sup> People who have close friends, confidants, friendly neighbors and supportive co-workers are less likely to experience sadness, loneliness and low self-esteem (Helliwell & Putnam, 2004).

<sup>16</sup> Mostly in developed countries, although Ateca et al. (2013) find similar results for Latin American countries.

being single, being married has a positive effect on life satisfaction (Blanchflower & Oswald, 2004b; van Praag & Ferrer-i-Carbonell, 2004), while being separated, divorced or widowed is associated with the lowest levels of satisfaction (Helliwell, 2003). Although the relationship between each additional level of education and subjective well-being is positive in low income countries (and in early studies for OECD countries), recent findings do not show a clear effect. It seems that the expectations of highly educated individuals prompt them to report lower levels of satisfaction with life (Clark, 2003; Meier & Stutzer, 2008) and with employment (Clark, 1997; Cornelißen, 2009). Race and ethnicity provide a basis for identity and the previous literature has argued that identity could affect individuals' behavior and aspirations (e.g., Akerlof & Kranton, 2000). Research on European countries and the USA have found differences between blacks and whites' satisfaction with life (Blanchflower & Oswald, 2004a). There is some evidence across a range of geographical locations – Dockery (2003) for Australia; Gerdtham and Johannesson (2001) for Sweden; Hudson (2006) for Europe – that living in large cities is detrimental to life satisfaction.

## 2. Hypotheses

In line with related studies, we assume that a standard well-being function (measured by either life, income or job satisfaction) can be written as follows:

$$SWB_i = SWB(y_i, LMS_i, M_i, SC_i, X_i) \quad (1)$$

where  $y_i$  represents individual  $i$ 's resources;  $LMS_i$  measures individual  $i$ 's labor market status;  $M_i$  is the distinction either between voluntary vs. involuntary self-employed or necessity vs. opportunity self-employed; and  $SC_i$  and  $X_i$  are social capital and socioeconomic characteristics, respectively. For the case of individual resources, social capital and socio-economic characteristics, we expect the usual results in the literature (reviewed in section 1.2).

The contribution of our work, in terms of hypothesis, stems from how we model labor market status ( $LMS_i$ ), and its interaction with the choice ( $M_i$ ).

- Labor Market Status Hypothesis: The evidence for developed countries shows that self-employed workers report higher subjective well-being (in terms of life and job satisfaction) than wage earners. On the other hand, for Latin American countries, the evidence reports that self-employed individuals report less life-satisfaction than those in paid employment. We hypothesize that, after controlling for other characteristics, the consideration of heterogeneous self-employment occupations could lead us to expect a positive (negative) sign in the case of occupations where

preference for independence or absence of hierarchy (risk, instability and income volatility) dominates.

- *Motivation Hypothesis*: Individuals care about the process leading to their decision to be self-employed. If the decision is made as a result of an exercise of free will, they are significantly more satisfied. On the other hand, if people are pushed into a specific status, they are significantly less satisfied. Moreover, if the self-employment situation is a result of opportunity, not necessity, individuals will report to be more satisfied.

### **3. Data and Variables**

#### **3.1. Data**

The empirical analysis is based on a representative survey conducted in eighteen Latin American and Caribbean countries called Latinobarómetro (Latinobarómetro, 2007a, 2007b, 2009). In addition to the standard demographic and socioeconomic variables already presented in the Latinobarómetro dataset, the 2007 survey includes information about individual self-evaluations of satisfaction with diverse aspects of people's life and social capital variables, which some other waves do not.

The Latinobarómetro is an annual public opinion survey. It is not a longitudinal survey and therefore does not interview the same people every year, so we cannot examine the effect of changes in personal or environmental conditions over individual life satisfaction. The surveys are conducted annually by a prestigious research firm in each country and coordinated by the Latinobarómetro Organization.

The 2007 release of the Latinobarómetro includes questions about personal satisfaction with work, income, leisure, household and life (unfortunately, some of these questions were only asked in 2007). The survey consists of 20,212 observations, with approximately 1000-1200 interviews per country. The information is collected through the data each country sends. In almost all the countries, the methodology consists mainly of a modified probability sample, probabilistic in three stages and quotas in the final stage. The samples are representative of the adult population of each country, with a margin of error of approximately 3% for each country.<sup>17</sup> With the exception of five countries, the

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<sup>17</sup> The main features of the sample design, with the specification of the method of selection of respondents and the sample size for each country, can be found at <http://www.latinobarometro.org>. In almost all the countries, the methodology consists of a modified probability sample, probabilistic in three stages and quotas in the final stage.

representativeness is 100%. The exceptions are Guatemala 96%, Honduras 98.4%, Nicaragua 99.8%, Panama 99.2% and Paraguay 97.4%. Adulthood begins at 18 in most of the countries, with the exceptions being Brazil and Nicaragua, where the legal age is 16. The entire survey is treated as a large region-wide sample with the weights assigned in the whole dataset for each individual and country.<sup>18</sup>

Our analysis considers only individuals who are active in the workforce and excludes those with missing information about their demographic or socioeconomic characteristics. Thus, our final sample covers information for 10,900 individuals from the eighteen countries included in the dataset: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, the Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay and Venezuela.

## **3.2. Variables**

### **3.2.1. Definition of subjective well-being**

Subjective well-being is the umbrella term for different measures, which are grouped according to two dimensions (Stutzer & Frey, 2010). The first dimension considers the distinction between an individual's own judgments about life satisfaction and the positive-negative affect component of well-being (Diener, 1984, 2000; Diener et al., 1999, 2009; Schimmack, 2008; Stutzer & Frey, 2010). Diener (2006) reported that subjective well-being does not consider only how happy individuals are at a point in time, but also how satisfied they are with their lives as a whole. The second dimension distinguishes between measures that capture a person's level of subjective well-being and the duration in one mental state rather than in another. As life satisfaction is a relatively stable construct, duration measures usually refer to affect (comprising feelings and moods). Since no assessment of affect is conducted in this paper, we focus the analysis on life, job and income satisfaction.

Certain additional reasons for choosing satisfaction arise from the economic literature, where the main focus is on the measurability and interpersonal comparability of utility. There is still an

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Information about the sampling error and representativeness is also provided. Finally, a specific description of the methodology for each country is included in the document.

<sup>18</sup> In the Dominican Republic, El Salvador, Guatemala, Honduras and Nicaragua, the sample is weighted with respect to stratum; in Chile it is weighted with respect to age, sex, educational level and geographical area; in Argentina with respect to sex and age; in Colombia with respect to age, sex, educational level and size of habitat; in Paraguay with respect to type of area, and in Venezuela with respect to sex and educational level. In Bolivia, Brazil, Costa Rica, Ecuador, Mexico, Panama, Peru and Uruguay the sample is not weighted. More details are also provided in the Methodological Report (Latinobarómetro, 2009).

ongoing discussion in the literature on whether there is indeed a link between the underlying utility and reported well-being measures. Subjective well-being, as a more general term, is more likely to represent the ‘experienced utility’ (Lelkes, 2006a, 2006b). Satisfaction coincides with an economic point of view on well-being, and represents the possibility of satisfying one’s own preferences (Diener, 1984). Happiness reflects the degree to which individuals judge the overall quality of their own lives to be wholly favorable (Headey & Wooden, 2004).

Finally, the choice of satisfaction rather than other measures of subjective well-being, such as happiness, is also informed by two practical reasons (Sacks et al., 2010). First, satisfaction is more commonly found in datasets than any other measure. Second, prior literature on economics has focused largely on satisfaction issues (even researchers have tended to label these analyses of “happiness”). Thus, we focus our attention on analyzing similar issues to make a direct comparison with prior literature.

Moreover, we consider different dimensions of satisfaction: life, income and job satisfaction. The Latinobarómetro dataset for 2007 provides different measures of satisfaction. As mentioned above, the respondents in the Latinobarómetro survey are asked about their satisfaction with their life, job, free time, housing, household income and neighborhood, among other individual and social aspects.<sup>19</sup> We use the information about individual self-assessed life satisfaction (*LS*) that derives from the following question: “*Could you please tell me on a scale from 0 to 10, where “0” means you are “very dissatisfied” and “10” means you are “very satisfied”, how satisfied you are with the way your life has turned out so far?*”. The non-response rate to this question is less than 2%. There is a fair amount of variation in the answers, with a mean reported life satisfaction of 5.93 and a standard deviation of 2.17. About 80% of the individuals in the sample are in the five highest categories of satisfaction.<sup>20</sup> The main descriptive statistics about satisfaction variables are included in Table 1.

----- Insert Table 1 here -----

Information about job satisfaction (*JS*) is obtained from the question: “*Could please tell me on a scale from 0 to 10, where “0” means you are “very dissatisfied” and “10” means you are*

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<sup>19</sup> For instance, the way the economy operates in their country, public safety, democracy, healthcare, education and the public spaces to which they have access, among other things.

<sup>20</sup> We have also make the analysis with a question included in Latinobarometro “*In general, would you say you are satisfied with your life? Would you say that you are: (a) very satisfied, (b) fairly satisfied, (c) not very satisfied, (d) not at all satisfied?*”. The results do not differ greatly and but for the comparability with the other questions, we keep the variable with an 11-value scale.

“*very satisfied*”, *How satisfied you are with your work?*”. The average job satisfaction for our sample is 5.06 (standard deviation 3.33). The distribution of the responses to the job satisfaction question shows that almost half of the individuals in the sample declare levels of satisfaction equal or above 7. This high level of job satisfaction in Latin American countries seems surprising given the predominance of low quality jobs in the region (Lora, 2008).

In addition, we analyze individual’s income satisfaction (*IS*), which is obtained from the question: “*Could please tell me on a scale from 0 to 10, where “0” means you are “very dissatisfied” and “10” means you are “very satisfied”, How satisfied you are with your household income?*”. The average income satisfaction for our sample is 5.34 (standard deviation 2.32). The distribution of the responses to the job satisfaction question shows that almost half of the individuals in the sample declare levels of satisfaction equal or above 5.

### **3.2.2. Definition of explanatory variables**

As pointed out before, we include the influence of resources and some other socioeconomic variables to be consistent with prior literature. The reported periodical income or the expenses that individuals must assume to maintain their standard of living are commonly used as a proxy of material conditions or individuals’ economic status (Blanchflower & Oswald, 2004a; Bookwalter & Dalenberg, 2010; Kingdon & Knight, 2006). In our case, neither income nor consumption data are collected in the Latinobarómetro. Notwithstanding, it provides information of certain goods and assets that households possess. To approximate the level of the household’s material well-being, we use information about the ownership over different assets to construct a weighted linear index of household wealth using principal components analysis<sup>21</sup> to derive those weights. Ten assets and services were considered: television, refrigerator, own house, computer, washing machine, cell phone, car, a second or holiday house, running water and bathroom with shower. A similar index is used by the Latin American Public Opinion Project (LAPOP), with the difference that the LAPOP index includes information about the ownership of conventional telephones and microwaves (Córdova, 2009), but they do not consider either owning a house or a second home. The constructed linear index derived from our analysis is used as a proxy of the material welfare<sup>22</sup> and household

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<sup>21</sup> Principal components analysis is a statistical procedure to extract from a set of variables the few orthogonal linear combinations of the variables that capture the common information in the most satisfactory way. Consistently, the first principal component of a set of variables is the linear index of all the variables that capture the largest amount of information that is common to all the variables.

<sup>22</sup> Filmer and Pritchett (2001) proposed and used this procedure to estimate the relation between household wealth and children's school enrollment in India. The authors compared this method with the use of consumer expenditures, finding



wealth of each individual. The index is rescaled from 0 to 10 and will be referred to in our analysis as *Wealth*. The average value of our index in the sample is 5.85. Table 2 presents the main descriptive statistics of the variables used. Definitions of the variables used are given in Appendix A.

----- Insert Table 2 here -----

A set of sociodemographic variables are included to control for the regularities found in the literature. We define the variable *Male*, which is coded 1 if the individual is a male and 0 otherwise. In our sample, 64% of individuals are male. The age of the respondent is included with the variable *Age* measured in years. In order to test nonlinearity in the relationship between subjective well-being and age we also include age squared in the statistical analysis below (*Age squared*). The average age in the sample is 38.4 years. To cover marital status, we define a dummy *Single* that takes the value of 1 if the individual has never married, a dummy *Married* that is coded 1 if the individual is married or cohabiting, and a dummy *Other* that is equal to 1 if the individual is separated, divorced or widowed. In our sample, 28% of the individuals have never been married and 61% have a partner.

Five dummy variables cover all the education categories in the dataset. The variable *Illiterate* takes the value of 1 if the individual is illiterate. The dummy *Primary-Incomplete* is coded 1 when the individual has not completed primary education. We differentiate between illiterate and primary incomplete education levels because having the ability to read and write can make a difference in terms of capabilities in low-income countries. If the individual has completed primary, secondary or university level education, we construct the dummies *Primary*, *Secondary* and *University*, respectively. In our sample, 9% of individuals are illiterate, 20% have not completed primary education, 32% have completed primary education, 28% have a secondary level of education, and finally 11% have a university degree.

While research on European countries and the USA have found differences between blacks and whites' satisfaction with life (Blanchflower and Oswald, 2004a), we consider these ethnic differences in Latin America between indigenous people and people from other ethnic groups. In this case we define four dummy variables guided by the self-reported ethnic group: *Indigenous*, *White*,

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that this simple index of assets has a high correlation with information on the consumer expenditures of a household and works as well, or better, than information on expenses for making predictions of children's enrollment. Additionally, they showed the internal and external validity of this type of index, as well as its robustness to the inclusion of different assets.

*Mestizo*<sup>23</sup> and *Other* (include Asian, black, mulatto<sup>24</sup> and others). In our sample 10% of individuals are indigenous, 43% are mestizos, 27% are white and 19% are from other ethnic groups.

To capture the effect of city size, we construct a set of dummy variables. To do so, *MediumCity* is coded 1 if the individual's town has more than 10,000 inhabitants and is not a capital city; the variable *SmallCity* takes the value of 1 if the individual's town has less than 10,000 inhabitants; and the variable *CapitalCity* equals 1 if the individual lives in a capital city. In our sample, 70% of the individuals live in a medium city, while 14% reside in a small city. As mentioned above, all the descriptive statistics are presented in Table 2.

In terms of social capital variables, respondents in the Latinobarómetro survey are also asked how often they meet friends and relatives (beside normal activities) and about their active membership in a political party, a professional association, a church or other religious organization, and/or a sports, leisure or cultural group.<sup>25</sup> We include two different types of social capital: bonding and bridging social capital. As suggested by Beugelsdijk and Smulders (2003) and Sabatini (2009), we use the information about the frequency of contacts with friends and relatives to construct the categorical variable *Bonding-SC*. This variable takes the value of 1 if the respondent meets friends and relatives at least once a month, and 0 otherwise.<sup>26</sup> On average, 72% of the respondents in our sample meet friends and relatives at least once a month. We define the variable *Bridging-SC*, which is a linear index constructed using an individual's answers about their membership and active participation in political, labor, religious, sports and leisure organizations.<sup>27</sup> Principal components analysis is used to derive the weights.

Now we describe the variables that we have selected to measure the hypotheses, which are the main goal and contribution of this paper. To test the *Labor Market Hypothesis*, we consider two different alternatives. Following the standard literature, in the first alternative we only compare being employed or self-employed. To this end, we consider two dummies defined as *Employed* and *Self-employed*. The main criterion used to construct this classification is whether the remuneration received depends wholly on the (potential) profits from the sales of goods and services that are

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<sup>23</sup> The individual classified herself as a person of mixed race, particularly of indigenous and white parentage.

<sup>24</sup> Individuals with one black and one white parent.

<sup>25</sup> The corresponding question asks whether the individual belongs to a trade union or professional association.

<sup>26</sup> The options to the question are: never, less than once a month, once a month, several times a month, once a week, several times a week, and every day.

<sup>27</sup> Individuals are classified as members of each of these associations if they choose one of the following 4-point scale verbal categories: (1) Belong and actively participate; (2) Belong but do not actively participate; (3) Used to belong but do not anymore; (4) Have never belonged.

produced by the economic unit in which the job is located. If it does, then this is considered a self-employment job, and if it does not, then this is considered a paid employment job (ILO, 1993). The variable *Employed* is then coded 1 if the individual is employed in a paid job and 0 otherwise. Self-employment status is measured with a dummy *Self-employed* that takes the value of 1 when individuals state that they are self-employed, and 0 when people in the workforce are employed by an organization. In our sample, 54% of individuals are self-employed.

The second alternative, where our main contribution resides, considers the heterogeneous nature of self-employment. This alternative allows us to capture which of the described opposed effects dominate: either independence and lack of hierarchy or the risk and instability of certain types of self-employment occupations. To this end, and guided by the questions about the individual's type of occupation included in the Latinobarómetro survey, we define four dummies that substitute the *Self-employment* variable as presented in the first alternative. The dummy variable *Professional* takes the value of 1 if the individual belongs to the group of self-employed lawyers, architects, engineers, etc., and 0 otherwise. The variable *BusinessOwner* is equal to 1 for those who are micro-entrepreneurs and/or the owners of larger businesses. The variable *Farmer/Fisherman* is coded 1 if the individual is a self-employed farmer or fisherman. Finally, the variable *Precarious* takes the value of 1 for individuals engaged in unqualified occupations such as street vendors, shoeshiners, window cleaners, hawkers, etc. In our sample, 2% of the individuals in the labor market are self-employed professionals, 13% are business owners, 8% are farmers or fishermen and 31% are precarious self-employed. Given these occupational types we expect, *a priori*, that the effects of individuals' preferences for independency, the absence of hierarchy at the workplace, and the procedural utility associated to these jobs will dominate for the first two categories (*Professionals* and *BusinessOwner*). However, for the last two categories (*Farmer/Fisherman* and *Precarious*) the effect of risk, the instability involved and the higher volatility of income in these activities might be dominant. As can be observed in Table 3, the descriptive statistics on the differences in life, income and job satisfaction between self-employed and employed individuals and within the self-employed occupations give support to our *a priori* expectation.

----- Insert Table 3 here -----

We find significant differences<sup>28</sup> between individuals' satisfaction across the different types of self-employment, mostly in the labor dimension. Individuals' self-reported life and job satisfaction

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<sup>28</sup> The test on the equality of means was rejected in all cases with a p-value lower than 0.01.

differ between employed and self-employed individuals and within the self-employed individuals. On average, self-employed professionals and business owners report to be more satisfied with their life and their job than employees in paid jobs. However, farmers, fishermen and precarious self-employees are, on average, less satisfied than other kinds of self-employed and employed workers as well.

To test the *Motivation Hypothesis*, we have the information about the degree of freedom to choose the occupation, which is measured on a four degree scale (fully, fairly general, not generally, not at all). We define the variable *Voluntary* as a dummy variable that takes the value of 1 if the individual reports to have fully or fairly general freedom to choose the occupation. About 67% of the population reports having that degree of freedom. To include the idea of necessity versus opportunity, we also consider the variable *Opportunity* as a dummy variable that takes the value of 1 if the individual reports having a fully or fairly general guarantee of getting a job. About 30% of population reports having a fairly or fairly general guarantee of getting a job.

#### 4. Empirical Model

As described above, we consider different variables to measure individuals' subjective well-being: life satisfaction ( $LS_i$ ), satisfaction with household income ( $IS_i$ ), and job satisfaction ( $JS_i$ ). The response of individual  $i$  to any of the measures of the subjective well-being question is modeled as a manifestation of the latent and continuous variable. We do the following reasoning using life satisfaction ( $LS_i$ ), but for the other measures it is equivalent. These choices are modeled assuming that underlying subjective well-being ( $LS_i^*$ ) is a linear function of a set of observable ( $Z_i$ ) and unobservable factors ( $\varepsilon_i$ ) as  $LS_i^* = Z_i'\beta + \varepsilon_i$ . The existence of a set of  $K-1$  ordered threshold parameters is also assumed such that the individual responds category  $k$  if and only if  $LS_i^* \in (\mu_{k-1}, \mu_k]$ . Assuming independence between ( $\varepsilon_i$ ) and  $Z_i$ , the probabilities of the observed outcomes are derived from:

$$Pr(LS_i = k) = F(\mu_k - Z_i'\beta) - F(\mu_{k-1} - Z_i'\beta)$$

where  $F$  is the cumulative distribution function of  $\varepsilon_i$ , which is assumed to follow a normal standardized distribution; therefore we estimate an ordered probit model. The regression parameters  $\beta$ , and the  $K-1$  threshold parameters,  $\mu_1 \dots \mu_{K-1}$ , are obtained by maximizing the log likelihood function subject to  $\mu_k > \mu_{k-1}$  for all  $k$ .

However, in our analysis we consider interactions between certain variables (labor market status and degree of voluntariness or opportunity), this question poses an empirical problem. As Norton et al. (2004) have shown, the interpretation of interaction terms in linear regression models does not extend to non-linear regression models, and the computation of the marginal effects and statistical significance of the parameters in the latter case involve an additional difficulty.

Nevertheless, Ferrer-i-Carbonell and Frijters (2004) and van Praag and Ferrer-i-Carbonell (2004) have shown that the results using ordered logit or probit models are surprisingly close to the result of a simple ordinary least squares (OLS) when the dependent variable ranges over a large scale. That is, the sign of the coefficients is the same, the significance is the same, and the trade-offs between variables are roughly the same, which means that the indifference curves are similar. Ferrer-i-Carbonell (2005) suggests that the larger the scale, the more precise the measure of individual well-being. We take the ranking SWB to be more nearly cardinal. Then we use the probit adapted ordinary least squares (POLS) as developed by van Praag and Ferrer-i-Carbonell (2008). One of the advantages of this approach is that the estimated coefficients can be directly interpreted as marginal effects.

The set of observable factors ( $Z_i$ ) includes the individual's resources ( $y_i$ ), her labor status ( $LMS_i$ ), motivation ( $M_i$ ), social capital ( $SC_i$ ), and other socioeconomic characteristics ( $X_i$  modeled by variables). It is likely that other regional factors that are correlated with cultural distinctiveness also affect well-being. To control for these effects not covered in the socioeconomic characteristics, we include country dummies ( $C$ )<sup>29</sup>.

Recall that our contribution is the choice of variables to test the *Labor Market Status* hypothesis, therefore we adjust two distinct regression models for  $LS_i^*$  (and the other measures). The first specification (*Model A*), our benchmark case, follows the related literature, that is, it only considers the distinction between employed and self-employed individuals:

$$LS_i^* = \alpha + \varphi' y_i + \beta_0 \text{Selfemployed}_i + \beta_1 \text{Voluntary}_i + \beta_2 \text{Selfemployed} * \text{Voluntary}_i + \gamma' X_i + \tau' C + \varepsilon_i \quad (\text{A})$$

The explanatory variable *Self-employed* allows us to investigate whether there are differences in the average subjective well-being reported by employed (baseline category) and self-employed

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<sup>29</sup> Although our interest lies in the individual determinants of satisfaction, some anonymous referees point out that the inclusion of some quality of life indicators, such as the social and economic situation in a country to distinguish between the different countries, would reveal some other insights. In the present paper, we consider that country dummies control for country-level relevant factors including GDP, size of the informal sector, social security, etc.

individuals in Latin American countries. There is an ambiguous expected sign for  $\beta_0$  that depends on which of the effects described above dominates, either independence and absence of hierarchy or risk and instability. Evidence from developed economies finds that this effect is positive ( $\beta_0 > 0$ ). For Latin American countries, Graham and Felton (2005, 2006) and Graham and Pettinato (2001) found just the opposite ( $\beta_0 < 0$ ). Lora (2008) found evidence that developing countries follow the same pattern as developed ones ( $\beta_0 > 0$ ). We also expect that  $\beta_1 > 0$ , since the more freedom the individual has to choose the occupation, the happier the individual is assumed to be. We consider also Model A1, where the variable chosen to model the distinction between opportunity vs. necessity ( $M_i$ ) is the variable *Opportunity*

In order to disentangle this apparently opposing and non-conclusive evidence for Latin American countries, we propose Model B as a second alternative. This second alternative includes four dummies regarding different self-employment occupational types in substitution of the variable *Self-employed* in Model A.

$$\begin{aligned}
 LS_i^* = & \alpha + \varphi' y_i + \lambda_0 \text{Professional}_i + \lambda_1 \text{BusinessOwner}_i + \lambda_2 \text{Farmer/Fisherman}_i + \lambda_3 \text{Precarious}_i \\
 & + \beta_1 \text{Voluntary}_i + \lambda_4 \text{Professional} * \text{Voluntary}_i + \lambda_5 \text{BusinessOwner} * \text{Voluntary}_i + \\
 & + \lambda_6 \text{Farmer/Fisherman} * \text{Voluntary}_i + \lambda_7 \text{Precarious} * \text{Voluntary}_i + \gamma' X_i + \tau' C + \varepsilon_i
 \end{aligned} \tag{B}$$

Concerning our hypothesis, we expect the following:

$\lambda_0$  and  $\lambda_1 \geq 0$       Self-employed professionals and business owners are at least as satisfied as the employed.

$\lambda_2$  and  $\lambda_3 \geq 0$       Farmers, fishermen and precarious self-employed workers are at most as satisfied than the employed.

## 5. Results

We present the estimation results for life satisfaction, job satisfaction and satisfaction with income regression models in Tables 4 and 5.

----- Insert Table 4 and 5 here -----

Before commenting on our results in terms of the main goals of the paper, our evidence shows the usual results in terms of individual's resources, sociodemographic variables and social

capital. We find that individuals' material conditions, as captured by *Wealth*, have a positive effect on their life, income and job satisfaction.

Regarding the regularities from the socioeconomic variables, there is no gender effect on life, income or job satisfaction. Similar to Lora (2008), satisfaction with job and income increases with age until it reaches a maximum, when the increases are lower. There is no effect on life satisfaction. This result is the opposite of Rojas (2007), who showed that job satisfaction for Mexicans<sup>30</sup> tends to decrease with age, and also contradicts evidence from developed countries (van Praag and Ferrer-i-Carbonell, 2004).

As regards marital status, while being married does not have an effect on life, job and income satisfaction, separated, divorced or widowed individuals are less satisfied than single individuals. Although previous studies for Latin American countries have found that educational variables have a highly significant effect on life satisfaction (Graham and Felton, 2006), this only occurs in our sample when dealing with income satisfaction. In the case of life or job satisfaction, only variables associated to lower educational levels appear to have an effect. One of the possible reasons for this difference between previous results and ours is that in the last case the analysis is limited to workers' subjective well-being. While the research for European countries and the USA has found differences between the satisfaction of blacks and whites (Blanchflower and Oswald, 2004a), we find that the majority of ethnicities has no significant effect on satisfaction. Finally, living in a capital city has a negative effect on life, job and income satisfaction, while people who live in small cities are more satisfied with their lives and jobs, but not their income, than people in large urban areas. Finally, social capital increases satisfaction (only in life and income satisfaction), although the evidence does not support the idea that bridging social capital shows a larger effect than bonding social capital. This happens in the case of life satisfaction, but the largest effect regarding income appears in bonding social capital.

Concerning our goals, our results show the following findings. On the one hand, the estimation results in terms of life and job satisfaction show that there are no differences between self-employed and employed individuals regarding either life or job satisfaction<sup>31</sup>. Therefore, we do not

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<sup>30</sup> When we performed the regression analysis considering only workers in Mexico, we did not find any age effects on job satisfaction. This is similar to our findings for the whole Latin American sample.

<sup>31</sup> In addition to cultural differences, it is likely that the inclusion of country dummies also controls for other regional factors that are correlated with country social norms associated to employment, and which may attenuate the negative influence of self-employment on individual subjective well-being as shown by Clark (2003) in the case of unemployment in developed economies.

find the common results in terms of self-employed and satisfaction. The interpretation is that the positive effect of the autonomy and flexibility of their occupation is offset by the economic insecurity and lack of stability associated with the job. As we expected, having freedom to choose one's occupation and the chance of getting a job increases satisfaction in all domains. However, there is no significant effect when considering voluntary and opportunity self-employed individuals.<sup>32</sup> This is contrary to the existing result that voluntary self-employed or opportunity self-employed individuals are more satisfied than necessity self-employed individuals (Binder & Coad, 2012, among others cited in the introduction).

In terms of income domain, however, we find that self-employed workers are more satisfied with their household income than the employed as in developed countries, only if we control for opportunity to get a job. So in this case, the positive effect of the autonomy and flexibility of their occupation dominates the effect of economic insecurity and lack of associated stability. Interestingly, we find that those who report to have a fully or fairly general guarantee of choosing the occupation (chance to get a job, Table 5) report less (more) satisfaction. This could be interpreted as frustration given that there are opportunities, but it is not possible to get a job. Again, the results in terms of freedom to get a job, are contrary to the existing result in the literature, that is, voluntary self-employed are more satisfied than necessity self-employed, but could be explained by the idea pointed out in Carreer & Verheul (2012) and Lange (2012), among others, that over-optimism occurs when the expectations of an individual regarding an outcome exceed the achieved outcome; and satisfaction may be partly determined by the extent of over-optimism, with the disappointment of overoptimistic entrepreneurs limiting their satisfaction. For the case of opportunity we find the usual result (Binder & Coad, 2012).

On the other hand, when the category self-employed is split into the four occupational types presented above (Model B), the results change. In terms of life satisfaction, the unique effect that is significantly different from zero is that self-employed business owners have significantly higher life satisfaction, while the rest of the occupations do not present statistically significant differences regarding their levels of life satisfaction compared to employed individuals. That is, for business

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<sup>32</sup> All these results are interpreted in terms of what effect dominates, either the autonomy and flexibility of their occupation or the economic insecurity and lack of associated stability. This follows the usual distinction in the related literature as pointed out in the literature review. As literature we also use the distinction of voluntarily versus necessity entrepreneurs for the interaction variables. However, the interpretation could have been made in terms of some other factors that play a pivotal role in self-employment such as social security, leisure time, opportunity perception and exploitation, inheritance of family business, etc. Due to data availability, we cannot control for all these factors, so we interpret the results without considering them.



owners the positive influence of the autonomy and independence effect seems to dominate the risk and instability associated to self-employment. Neither effect is found for the comparison between voluntary vs. involuntary or opportunity vs. necessity self-employed. Again, this is not the usual result and could be interpreted as before. Alternatively to the interpretation described above, we can interpret the greater reported life satisfaction by business owners as being due to the fact that these individuals are better at coping with uncertainty and lack of stability. In fact, we would expect this to be true if these people self-selected themselves, but workers in precarious jobs are forced to take these jobs. This last idea is not fully confirmed by the interaction variables.

The changes in job satisfaction from Model A to Model B are more notable. There are no statistically significant differences between the reported job satisfaction of self-employed professionals and the reported satisfaction of employees. Self-employed business owners are more satisfied with their jobs than the employed, thus indicating that the procedural utility derived from the independence and absence of hierarchy of these jobs dominates the possible negative effect of their risk and instability. However, being a farmer/fisherman or precarious worker has a negative effect on job satisfaction, and the instability and economic insecurity associated to these precarious occupations dominates the effect of independence.

The interaction of different occupations with the degree of voluntariness or opportunity do not show any other significant effect. As before, the interpretation is again that voluntariness or opportunity is only one of the factors that are included in procedural utility, and in this case it could be offset by others.

The changes in satisfaction with income from Model A to Model B are even more notable. There is a clear distinction among those occupations that can be considered precarious (farmers and fishermen and precarious) and those which are not (professionals and business owners). The latter report to be more satisfied than the employed (professionals are the most satisfied), while the former report to be less satisfied (more farmers). This result is in line with evidence in developed countries. Moreover, greater chances to get a job negatively affects business owners, farmers and fishermen. Individual voluntariness could be related to “overoptimism”. Concretely, in the income domain, self-employed individual expectations regarding income could exceed the achieved outcome, which produces a decrease in income satisfaction. This again provides evidence that controlling for only one aspect of procedural utility – voluntary or necessity motivation – is not enough.

## 6. Conclusions

The purpose of this work has been to contribute to the research on the determinants of subjective individual well-being in Latin American and Caribbean countries, with particular attention to the relationship between employment types and satisfaction. To do so, we used the Latinobarómetro survey from the year 2007 and analyzed different subjective measures: life, job and income satisfaction.

There are two worthwhile results. First, we find that, compared to employed people, the self-employed do not report different levels of satisfaction. However, this last finding is examined in a deeper way in order to explore the effect of different types of jobs on individuals' satisfaction. Thus, our second result shows that in Latin American countries self-employed is a heterogeneous category and its effect on life, job and income satisfaction is associated to the sort of self-employment analyzed. Our evidence complements previous literature about Latin American countries (Graham and Pettinato, 2001; Graham and Felton, 2005, 2006; Lora, 2008).

We have shown that, for some self-employed, the autonomy and flexibility of their occupation seems to be considered an advantage if they are compared to the employed. This is the case of self-employed professionals and business owners and coincides with the findings of Lora (2008). However, for other categories of self-employment, the economic insecurity and lack of stability associated to *precarious* jobs prevents individuals from considering their occupation an opportunity for personal growth or a source of satisfaction. This latter evidence goes in line with the findings of Graham and Felton (2005, 2006) and Graham and Pettinato (2001).

We find the most remarkable effects in the income domain. Professionals and business owners are more satisfied than the employed, but it seems that their expectation about income could exceed the actual incomes, reflecting a decrease in their satisfaction.

The evidence presented here only provides support for the precariousness effect of self-employment for Latin Americans. However, the effect of different labor market statuses on subjective well-being could be analyzed taking into account the lack of protection and precariousness of some employment and self-employment occupations. There exists considerable heterogeneity within both salaried and self-employed jobs in Latin American countries in terms of pay, hours of work, job security and other job features. Although we could not consider these variables in the analysis presented in this paper, recent studies for developed countries have shown the importance of

these factors in self-assessed job satisfaction (Bardasi and Francesconi, 2004; Clark, 2010; Clark et al., 2010).

Although we controlled for a large number of variables, we found that only a few have a statistically significant effect on individuals' well-being. Future research into the analysis of satisfaction in Latin America would require better sources of information. Recent studies on developed and developing countries, including this one, warn of the need to pay greater attention to labor market heterogeneity in terms of current labor position, procedural dimensions of employment and the individual's future prospects. As suggested by the Inter-American Development Bank (Lora, 2008), data documenting such characteristics should be collected and taken into account in the design of policies.

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**Table 1. Dependent Variables - Descriptive Statistics**

<b>Dependent Variables</b>	<b>Mean/Proportion</b>	<b>St. Deviation</b>	<b>Min</b>	<b>Max</b>
<i>Life Satisfaction</i>	5.93	2.17	0	10
Very Dissatisfied	0.88			
1	1.75			
2	3.38			
3	6.77			
4	9.60			
5	22.11			
6	17.20			
7	13.93			
8	12.53			
9	4.43			
Very Satisfied	7.42			
<i>Job Satisfaction</i>	6.21	2.54	0	10
Very Dissatisfied	2.29			
1	2.35			
2	3.98			
3	5.93			
4	8.31			
5	17.34			
6	13.21			
7	13.11			
8	12.85			
9	7.38			
Very Satisfied	13.25			
<i>Household Income</i>	5.378	2.32	0	10
Very Dissatisfied	1.58			
1	3.34			
2	6.28			
3	9.66			
4	12.95			
5	20.94			
6	14.40			
7	11.97			
8	9.39			
9	3.68			
Very Satisfied	5.81			

The sample comprises information from 10,231 individuals with valid life and job satisfaction.

**Table 2. Explanatory Variables - Descriptive Statistics**

<b>Explanatory Variables</b>	<b>Mean/Proportion</b>	<b>St. Deviation</b>	<b>Min</b>	<b>Max</b>
<i>Resources</i>				
Wealth	6.21	2.48	0	10
<i>Labor Market Status</i>				
Employed	0.46	0.50	0	1
Self-employed	0.54	0.50	0	1
Professional	0.02	0.14	0	1
Business/Owner	0.13	0.34	0	1
Farmer/Fisherman	0.08	0.27	0	1
Precarious	0.31	0.46	0	1
Voluntary	0.67	0.47	0	1
Opportunity	0.28	0.45	0	1
<i>Sociodemographic Characteristics</i>				
Bonding-SC	0.72	0.45	0	1
Bridging-SC	0.96	1.78	0	10
<i>Sociodemographic Characteristics</i>				
Male	0.64	0.48	0	1
Age	38.21	13.46	16	87
<i>Marital Status</i>				
Single	0.28	0.45	0	1
Married	0.61	0.49	0	1
Other	0.11	0.31	0	1
<i>Education</i>				
Illiterate	0.09	0.29	0	1
Primary-Incomplete	0.20	0.40	0	1
Primary	0.32	0.47	0	1
Secondary	0.28	0.45	0	1
University	0.11	0.31	0	1
<i>Ethnicity</i>				
Indigenous	0.10	0.30	0	1
White	0.27	0.45	0	1
Mestizo	0.43	0.50	0	1
Other	0.19	0.39	0	1
<i>City size</i>				
MediumCity	0.70	0.46	0	1
SmallCity	0.14	0.35	0	1
CapitalCity	0.16	0.37	0	1
Sample size	10,258			

**Table 3. Life and Job Satisfaction by Labor Market Status**

<i>Labor Market Status</i>	<b>Proportion</b>	<b>Life Satisfaction</b>		<b>Job Satisfaction</b>		<b>Income Satisfaction</b>	
		<b>Mean</b>	<b>S. D.</b>	<b>Mean</b>	<b>S. D.</b>	<b>Mean</b>	<b>S. D.</b>
Employed	0.46	6.02	2.11	6.37	2.44	5.48	2.52
Self-employed	0.54	5.84	2.23	6.07	2.61	5.29	2.37
Professional	0.02	6.65	1.85	6.98	2.43	6.49	2.03
BusinessOwner	0.13	6.15	2.13	6.46	2.42	5.72	2.19
Farmer/Fisherman	0.08	5.62	2.34	5.67	2.77	4.83	2.47
Precarious	0.31	5.73	2.24	5.93	2.64	5.14	2.38

**Table 4. Estimation Results for Latinobarómetro 2007**

	Life Satisfaction		Job Satisfaction		Income Satisfaction	
	Model A	Model B	Model A	Model B	Model A	Model B
<b>Individual resources</b>						
Wealth	0.081*** (0.01)	0.080*** (0.01)	0.091*** (0.01)	0.088*** (0.01)	0.123*** (0.01)	0.119*** (0.01)
Bonding-SC	0.086** (0.04)	0.086** (0.04)	0.094 (0.06)	0.095 (0.06)	0.102*** (0.03)	0.101*** (0.03)
Bridging-SC	0.032*** (0.01)	0.033*** (0.01)	-0.009 (0.01)	-0.008 (0.01)	0.024*** (0.01)	0.025*** (0.01)
<b>Labor Market Status</b>						
Voluntary	0.232*** (0.05)	0.234*** (0.05)	0.164** (0.07)	0.167** (0.07)	0.233*** (0.04)	0.237*** (0.04)
Self-employed	0.003 (0.06)		-0.115 (-0.09)		0.055 (0.05)	
Self-employed*Voluntary	-0.025 (-0.07)		-0.051 (-0.11)		-0.097* (-0.06)	
Professional		0.021 (0.23)		-0.139 (-0.32)		0.374*** (0.10)
BusinessOwner		0.174** (0.09)		0.188* (0.11)		0.253*** (0.06)
Farmer/Fisherman		0.055 (0.11)		-0.368 (-0.23)		-0.178 (-0.12)
Precarious		-0.087 (-0.08)		-0.202* (-0.11)		-0.016 (-0.06)
Professional*Voluntary		0.114 (0.23)		0.277 (0.32)		-0.13 (-0.11)
BusinessOwner*Voluntary		-0.129 (-0.10)		-0.167 (-0.13)		-0.091 (-0.07)
Farmer/Fish*Voluntary		-0.183 (-0.14)		-0.101 (-0.27)		-0.226 (-0.15)
Precarious*Voluntary		0.042 (0.09)		-0.02 (-0.13)		-0.075 (-0.07)
Country dummies	Yes	Yes	Yes	Yes	Yes	Yes
Sociodemographic vbs	Yes	Yes	Yes	Yes	Yes	Yes
Prob>F		0.012		0.008		0.002
Observations	10900	10900	10900	10900	10900	10900

**Table 5. Estimation Results for Latinobarómetro 2007**

	Life Satisfaction		Job Satisfaction		Income Satisfaction	
	Model A1	Model B1	Model A1	Model B1	Model A1	Model B1
<b>Individual resources</b>						
Wealth	0.103*** (0.01)	0.103*** (0.01)	0.118*** (0.01)	0.109*** (0.01)	0.136*** (0.01)	0.130*** (0.01)
Bonding-SC	0.090** (0.04)	0.090** (0.04)	0.091 (0.06)	0.092 (0.06)	0.102*** (0.03)	0.102*** (0.03)
Bridging-SC	0.033*** (0.01)	0.033*** (0.01)	-0.012 (0.01)	-0.011 (0.01)	0.023*** (0.01)	0.024*** (0.01)
<b>Labor Market Status</b>						
Opportunity	0.212*** (0.05)	0.212*** (0.05)	0.180*** (0.07)	0.178*** (0.07)	0.189*** (0.04)	0.188*** (0.04)
Self-employed	-0.009 (-0.07)		-0.005 (-0.10)		0.109** (0.06)	
Self-employed*Opportunity	-0.009 (-0.07)		-0.005 (-0.10)		0.109** (0.06)	
Professional		0.075 (0.10)		0.013 (0.13)		0.271*** (0.06)
BusinessOwner		0.028 (0.06)		0.056 (0.08)		0.100** (0.04)
Farmer/Fisherman		0.117 (-0.08)		-0.339** (-0.16)		-0.219*** (-0.08)
Precarious		-0.046 (0.05)		-0.170** (-0.07)		-0.083** (-0.04)
Professional*Opportunity		-0.009 (0.13)		0.035 (0.15)		-0.116 (-0.10)
BusinessOwner* Opportunity		0.111 (0.09)		0.052 (0.12)		0.098 (0.07)
Farmer/Fish* Opportunity		-0.187 (-0.17)		0.062 (0.28)		0.247* (0.15)
Precarious* Opportunity		-0.02 (-0.09)		-0.064 (-0.13)		0.086 (0.07)
Country dummies	Yes	Yes	Yes	Yes	Yes	Yes
Sociodemographic vbs	Yes	Yes	Yes	Yes	Yes	Yes
Prob>F		0.000		0.000		0.000
Observations	10319	10319	10319	10319	10319	10319



# Appendix A

## Description of the Explanatory Variables

Explanatory Variables	Description
<i>Resources</i>	
Wealth	Weighted linear index for ownership of the following assets: television, refrigerator, own house, computer, washing machine, cell phone, car, second house, running water and bathroom with shower. The weights are derived from the first principal component, and then it is rescaled from 0 to 10.
<i>Labor Market Status</i>	
Employed	Dummy variable: 1 if employed in paid employment; 0 otherwise.
Self-employed	Dummy variable: 1 if self-employed; 0 otherwise.
Professional	Dummy variable: 1 if individual is a self-employed professional; 0 otherwise.
BusinessOwner	Dummy variable: 1 if business owner; 0 otherwise.
Farmer/Fisherman	Dummy variable: 1 if individual is a self-employed farmer or fisherman; 0 otherwise.
Precarious	Dummy variable: 1 if individual is a street vendor, shoeshiner, window cleaner, etc.; 0 otherwise.
Voluntary	Dummy variable: 1 if individual has “some” or “all” freedom to choose the occupation.
Opportunity	Dummy variable: 1 if individual has “some” or “all” chances to get a job.
<i>Social Capital</i>	
Bonding-SC	Dummy variable: 1 if the individual meets friends and relatives at least once a month and 0 otherwise.
Bridging-SC	A linear index constructed using an individual’s answers about their membership in a political, labor/professional, religious, or sport/leisure association.
<i>Sociodemographic Characteristics</i>	
Male	Dummy variable: 1 if male; 0 if female
Age	Age in years.
Age squared	Age in years squared.
<i>Marital Status</i>	
Single	Dummy variable: 1 if never married; 0 otherwise.
Married	Dummy variable: 1 if married; 0 otherwise.
Other	Dummy variable: 1 if separated, divorced or widowed; 0 otherwise.
<i>Education</i>	
Illiterate	Dummy variable: 1 if illiterate; 0 otherwise.
Primary-Incomplete	Dummy variable: 1 if primary incomplete; 0 otherwise.
Primary	Dummy variable: 1 if primary; 0 otherwise.
Secondary	Dummy variable: 1 if secondary; 0 otherwise.
University	Dummy variable: 1 if university; 0 otherwise.
<i>Self-reported Ethnicity</i>	
Indigenous	Dummy variable: 1 if indigenous; 0 otherwise.
White	Dummy variable: 1 if white; 0 otherwise.
Mestizo	Dummy variable: 1 if mestizo; 0 otherwise.
Other	Dummy variable: 1 if Asian, black, mulatto and others; 0 when self-reported ethnicity is indigenous, white or mestizo.
<i>City size</i>	
MediumCity	Dummy variable: 1 if individual's town has more than 10,000 inhabitants and is not a capital city; 0 otherwise.
SmallCity	Dummy variable: 1 if individual's town has less than 10,000 inhabitants; 0 otherwise.
CapitalCity	Dummy variable: 1 if a capital city; 0 otherwise.