

Stylized Facts about Happiness and Violence in Latin America.

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This study investigates the determinants of life satisfaction in the Latin America using a cross sectional sample of 18 Latin American countries. The paper is not based on individuals' measures of happiness; it uses 2012 data on national averages of life satisfaction, taken from UNDP's 2014 Human Development Report. The paper resorts to several variables that have been identified as determinants of happiness in several studies to test if they can explain this sentiment. These variables are grouped into three categories: the first one comprises variables associated with income, such as per capita GDP and remittances; the second one includes labor market variables, such as the rates of unemployment, and quality employment. The third category comprises variables associated with social policies, such as public social spending and the human opportunity index. The first section presents a review of selected literature; this is followed by the estimation of equations where the national indexes of happiness are expressed in terms of independent variables associated with personal income, the labor market, and public policies. A third section analyzes the relationships between happiness and violence, which is a topic of special interest, given that crime has become rampant in several Latin American countries. The paper ends with a series of conclusions.

INTRODUCTION

In recent years considerable attention has been directed to the analysis of the determinants of happiness in a large number of countries. These studies are based on questionnaires or surveys where individuals are requested to indicate on an ordinal scale, usually from 0 to 10, how happy she or he feels about life. Several of these surveys, such as the Gallup World Poll and the World Attitudes Survey, have compiled data over a long time span, which has been used in the identification of the individuals' and countries' characteristics associated with personal feelings of happiness, and in the computation of national happiness indexes.

The interest given to this topic resides in the fact that happiness is the dearest goal of women and men in all latitudes; moreover, it is one of the principal tacit objectives embedded in public policies. There is evidence that happy individuals tend to have more involvement in national political, religious, and social affairs than unhappy ones, which contributes to strengthening social cohesion in a country.

There are several areas where the measurement of happiness has economic applications, particularly in the quantification of the emotional impacts resulting from unemployment, inflation and economic volatility, as well as in the different degrees in which happy and unhappy individuals value democracy and national institutions. These studies can contribute to establish priorities in social and economic policies, and to assess the acceptance or rejection of public policies, based on how policies impact individuals' happiness¹. There is evidence that unhappy persons are more likely to smoke and drink in excess; moreover, evidence presented by Veenhoven (2008) indicates that happy individuals tend to have a longer life, of between 7.5 and 10 years, than unhappy ones, while for the case of the US, Howell et al (2007) estimated that there existed a difference of 14 percent between the life span of happy persons and those who were unhappy, which is equivalent to six years. There exists evidence that differences in happiness across countries do not result from cultural and social psychology factors; Ouwenel and Veenhoven (1991) study about the determinants of happiness in 28 countries, concluded that the differences in happiness resulted from the countries' own characteristics, such as economic prosperity, social safety net, political and economic freedom, and social security². Other authors have proposed the preparation of national happiness accounts as complements to the national economic accounts (Diener and Seligman, 2004; Kehneman et al., 2004)

This study investigates the determinants of life satisfaction in the Latin American countries using a cross sectional sample of 18 Latin American countries. The terms happiness and life satisfaction are used with the same meaning; Hayo (2004) and Veenhoven (1984, 2012) have argued that empirically both terms measure the same concept. The paper is not based on individuals' measures of happiness; it uses 2012 data on national averages of life satisfaction taken from UNDP's 2014 Human Development Report. The paper resorts to several variables that have been identified as determinants of happiness in several studies to test if they can explain this sentiment in the Latin American countries. These variables are grouped into three categories: the first one comprises variables associated with income, such as per capita GDP and remittances; the second one includes labor market variables, such as the rates of unemployment, and quality employment. The third category comprises variables associated with social policies, such as public social spending and the human opportunity index.

The approach employed in this paper is one of "stylized facts", given that it basically analyzes the associations between indexes of happiness and economic and social variables. The results presented herein do not assess changes in happiness through time in a given country, but the results do provide an appreciation of what can be called the macro determinants of average country level of happiness, which can serve as a basis to more in depth studies. The next section presents a review of selected literature; this is followed by the estimation of equations where the national indexes of happiness are expressed in terms of independent variables associated with personal income, the labor market, and public policies. A third section analyzes the relationships between happiness and violence, which is a topic of special interest, given that crime has become rampant in several Latin American countries. The paper ends with a series of conclusions.

REVIEW OF SELECTED LITERATURE

The early works on this field stressed the importance of psychological variables. Chassell (1928) conducted the first study in the US, and reported that individual happiness increased with the individuals' social interactions, and decreased with her or his excessive self-consciousness. In another pioneer study Watson (1930) reported that parents' education, intelligence and academic achievement had no role, whereas good health, cordial work relationships, and good relationships at home and with other persons had important roles on happiness. Subsequent studies have corroborated these results³.

Easterlin (1974) is the first study about the impact of economic variables on happiness; he reported that in a given country those persons with higher incomes tend to be happier than those with low incomes; however in a cross section of national data the results indicated that happiness increased with GDP per capita up to a point, above which it did not increase. This result, known as Easterlin Paradox, has been questioned by several authors. Deaton (2008) showed the existence of positive relationships between per capita GDP and happiness indexes in 123 countries. Saks, Stevenson and Wolfers (2012) reported the existence of a positive association between happiness and GDP per capita and between economic growth and the increase of the national index of happiness, and encountered no satiation point as per capita income increased.

Easterlin (2013) has argued that happiness is influenced by economic growth in the short term, but no association between the two variables exist in the long run. He stresses that public policies and institutions play important roles in the determination of happiness. He analyzed the cases of Sweden, Finland, Denmark, countries with extensive social safety nets, and of other countries where social coverage is less extended such as Great Britain, France, Germany, and Austria, presenting evidence that citizens from the first group indicated more satisfaction in their work, family and health, and more general sense of life satisfaction than those from the second group. Moreover, in the first group there existed higher levels of satisfaction with public services such as education, health, pensions, child care of the elderly, despite the similarity in economic growth rates with those countries of the second group. These results point out that the individuals' feelings of life satisfaction are derived, in part, by the benefits resulting from public policies. In fact, there is evidence that the size of government, measured as the ratio of public consumption to GDP, exerts a positive impact on the citizens' life satisfaction (Ram, 2009; Ng and Ng, 2009; Perovic and Golem, 2009).

Other authors have reported that the rate of unemployment has a substantial impact on unhappiness (Oswald, 1997; Borooah, 2006; Agau, Savine and Orhan, 2008; Hayo, 2004). Clark and Oswald (1994) presented evidence that in Great Britain the main determinant of unhappiness was the unemployment rate, which: "depressed well-being more than any other characteristic, including important negative ones such as divorce and separation".

The work by Di Tella, MacCulloch and Oswald (1999) also stressed the importance of the macro-economy as a determinant of happiness. Based on data from the 1975-1991 period comprising 270,000 individuals from the US and 12 European countries, these authors concluded that the contributions from personal characteristics were of the same dimension in all countries, and that happy individuals were those with good education, employed, married, young or elderly, but not middle-aged, and belonging to the highest quintile of income distribution. The most determinant variable of the fact of being unhappy was being unemployed, whose effect was equivalent to an individual dropping from the highest to the lowest quintile of income distribution. They also reported that the national index of happiness showed a negative correlation with the national suicide rate.

Blanchflower (2007) analyzed the indexes of life satisfaction in 25 OCED countries and reported that the interest, inflation and unemployment rates exerted negative impacts. Winkelmann and Winkelmann (1998) reported that the negative impact of unemployment on happiness was determined by two costs: one resulting from the loss of income, and other, which is larger than the first, associated with the psychological devastation generated by unemployment. Paul (2001), cited by Perovic and Golem (2009), presented evidence that the negative influence of unemployment on happiness resulted from the loss of income and the isolation experienced by the unemployed.

Another variable associated with happiness is the inequality in income distribution prevailing in a country. Alesina, Di Tella and MacCulloch (2004) analyzed the impact of inequality on life satisfaction in the US and a sample of European countries using data of the 1981-1992 and 1975-1992 periods respectively. They reported that inequality has a negative impact on life satisfaction and that this effect is more pronounced in the European countries than in the US, where the levels of life satisfaction of poor individuals were not associated with inequality, contrary to the results in the other group of countries. They explained this result in base to the belief prevailing in the US of the existence of social mobility, which propagates the myth that anyone can move up in the income ladder, whereas in the European countries such a belief does not exist.

Wietzke y McCloud (2012) analyzed the situation of an individual in the labor market, be it unemployed or employed, and the individuals' personal characteristics and those of hers or his job, in 54 countries of low, middle and high income levels, using 2005-2006 data from the World Value Survey . The authors reported that in high income countries individuals attach high value to "important" jobs, while those in low income countries prefer those jobs that "pay well". In countries with high unemployment levels, individuals prefer jobs that are "secure" and do not care about jobs that are "important", which indicates that unemployment leads individuals to lower their aspirations of having jobs of relevance. They also reported that in high income countries unemployment had large negative effects on life satisfaction, and that this effect decreased as national income decreased, turning insignificant in the low income countries. This may imply that in low income countries unemployment may be seen as a "natural" or "inevitable" phenomenon. Other results were that life satisfaction increased as the governance indexes and public sector social transfers increased, and that the unemployed in high income countries stops participating in religious and political activities and loses trust in other people and in the government, while in low income countries these behaviors were not detected.

Bjornskov, Drecher and Fisher (2006) have argued that at the individual level there is consensus that the determinants of happiness are the following: personal income, being married, and being employed. They add that at the country level no consensus exist yet. They estimated a model with 54 variables from 70 countries, taken from the World Values Survey comprising economic, human development, political and income level categories, which resulted in a sample of 70,000 observations. The results indicated that happiness was associated with infant mortality and a communist regime in the past, with negative signs, and with income per capita, the openness of the respective country to international trade, the coverage of pensions and the tax rate, with positive signs.

Hayo (2004) reported that the important determinants of life satisfaction were faith, family life, and health, and that those who live in rural areas tend to be happier than those in urban ones, while the most determinant negative impact resulted from being unemployed, followed by being self-employed and belonging to an ethnic minority⁴.

Clark, Georgellis and Sanfey (1999) used the longitudinal data from the German Socio-Economic Panel, to test the impacts of current and past unemployment on current happiness. Their results showed that men's happiness decreases as a result of current and past unemployment, but in the case of women only the current impact was detected. Being divorced did not have incidence on women's happiness, contrary to men's, but having disabilities had stronger impact on women's happiness than on men's.

It should be indicated that happiness has economic manifestations. In a study based on longitudinal personal data of 4,457 individuals in Russia, Graham, Eggers, and Sukhtankar (2004) reported that excess happiness in 1995, measured as the residual in an equation expressing whether the individual was happy or not, as function of several independent variables, was a predictor of an increase in her or his income in

2000, or in other words, individuals who were happier than expected in 1995 had higher income five years later. This results were more pronounced in case of individuals in the lower income quintiles, and non-existent in the fifth quintile. The causes behind increases in happiness in that time period were: being employed, being in school and, with a negative sign, being divorced.

Blanchflower and Oswald (2004) used data from the early 70's to the middle 80's to analyze happiness in the US and Britain. Their results showed that white women in the US had experienced lower values of happiness since the seventies; as well, the impacts of unemployment and divorce on women's happiness were, respectively, smaller and of the same dimension than on men. The impact of being widower was larger for men: the authors calculated that when a man becomes a widower he would need an annual transfer of \$100,000 to compensate for his decrease in happiness. In Britain women and men have experienced increasing levels of happiness in the time period, and divorce had a larger negative impact on women than on men, but being unemployed, as well as being widower, had larger negative impacts on men's happiness.

In a recent study Arampatzi, Burger, Ianchovichina and Rohricht and Veenhoven (2016), analyzed the relationship between country happiness and the eruption of the "Arab Spring". The authors used data from the World Gallup Poll 2009-2010 from 10 Arab countries to express the index of happiness corresponding to a sample of 25,244 individuals, in terms of the social conditions in the country and the individuals' characteristics. It should be pointed out that the lowest indexes of happiness, in a scale from 0 to 10, corresponded to countries that experienced social conflicts: Yemen, 4.66, Egypt, 4.88; Syria, 4.86; Iraq, 5.07; Tunisia, 5.17; while the highest values corresponded to Algeria with 5.88, and Jordan with 6.23⁵.

The estimation of a series of equations by IV methods gave the following results: the coefficients of the qualitative variable representing the autocratic nature of the government and thus restrictions on personal freedom, were insignificant; the same result was obtained in the case of corruption in the public sector, indicating that autocracy and corruption had no incidence on happiness. The variable that was most determinant in decreasing happiness was the deterioration of the standard of living, that is, the capacity to purchase the things needed in the household; this capacity was being undermined by the reduction of the size of the public sector, the elimination of subsidies and the rising prices of imported food.

The fact of being unemployed or underemployed showed a negative coefficient, as did the perception that it was not possible to obtain a good job or advance in one's professional career without family connections and influences. On the positive side, working in the public sector and earning high salaries were associated with happiness.

When the equations were estimated with data from the "Arab Spring" countries only, the same coefficients resulted significant and with the same signs as in the case of the complete sample. But the coefficients were much larger. This indicates that in these countries the discontent and unhappiness resulting from the drop in the standard of living, from unemployment and underemployment were more acute than in countries that did not experienced social conflicts. The authors analyzed data contained in the Arab Barometer 2012-2014, which were pertaining to the causes of the "Arab Spring". The Barometer identified questions that coincided with the results presented in the paper as detrimental to happiness: lack of good jobs, reductions in the standard of living, and prevalence of system of connections and influences to obtain employment.

An unexpected result was that in all countries women were happier than men.

DATA

The source of data is the 2014 Human Development Report published by PNUD (2014). Data on the labor market was taken from the World Bank's World Development Indicators, except the data on the real wage, income distribution, per capita social expenditures and the coverage of pensions, which were taken from CEPAL (2014). The variables correspond to 18 countries with 2012 data, otherwise a clarification is made. Unit root tests were conducted on all variables to infer whether the variables were stationary of integrated of order 1, with the results shown on Annex 1. It can be seen that all variables, except Youthunemployfem, GINI, and Q5Q1, are stationary at the 1 per cent level, while at the 5 per cent level Controlcorruption and TaxGDP are stationary. These results indicate that most variables are I (1). Tests were carried out to determine the existence of cointegration, which indicated that in all equations there were one or two cointegration vectors.

A series of equations were estimated by the method Fully Least Squares Modified Least Squares, (Phillips and Hansen, 1990), with the happiness index as the dependent variable. The independent variables are grouped in the following categories: income, labor market and social protection. The definition of variables and their average and deviation standard values are shown on Table 1.

TABLE 1
VARIABLES USED IN THE ESTIMATIONS

Variables	Mean	Standard deviation
Calidemplfem	57.28	14.84
Calidemplmasc	57.51	12.29
Coberturapensiones	56.51	18.05
Coberturasalud	66.36	21.8
Youthemployfem	7.97	4.54
Youthemploymasc	11.18	4.76
Rulelaw	-0.48	0.72
Happiness	6.20	4.60
Homicidies	17.38	11.77
Gastosocial	472.11	397.24
Gini	0.49	0.06
IOH	72.83	14.96
PIBPC	5193	3504
Q5Q1	16.18	5.16
Remesas	4.21	5.33
Salarioreal	108.13	13.28
TaxGDP	15.28	4.55

RESULTS

Independent variables associated with personal income

Table 2 shows the results when the independent variables are related to personal income. Equation (1) shows that income per capita has a positive and significant coefficient, in congruence with the literature, and the equation explains close to a third of the variance of the index of life satisfaction. This result implies that the national happiness index is higher in the more developed Latin American countries. However, the coefficient is very low (0.00016), indicating that income has to increase in large amounts for happiness to increase in an appreciable manner, or in other words, happiness does not trickle down with rising GDP.

Equation (2) was estimated with data corresponding to 13 countries, those for which there was data on real wages. The real wage shows a positive and insignificant coefficient and the R² is zero. This is an unexpected result given the evidence that increasing real wages in the Latin American countries is conducive to poverty reduction (Caceres, 2015). The explanation could reside in the large magnitude of the underground economy in the Latin America countries, where wage do not necessarily follow the path of real wages in the official sector.

In equation (3) the independent variable is remittances as a percentage of GDP, Remitt, which shows a negative, significant and relatively large coefficient, (0.1243), so that increasing this variable from 1.2 to 17.4 percent, the values corresponding to Costa Rica and Honduras in 2014, would lead to a reduction in the life satisfaction index of 2.0 (the actual difference was 2.0). The R² is 0.45, which signifies that remittances as a percentage of GDP explain about half of the variance in the national happiness index.

The negative coefficient of remittances is unexpected given that they are a component of personal income. The explanation can reside in the fact that remittances represent the absence of an adequate social protection safety net in the respective country, which motivates emigration, legal or not, and thus gives rise to remittances. Moreover, remittances represent the absence of relatives and other significant others, which is not propitious to life satisfaction. As well, there is evidence that remittances exert a negative impact on economic growth (Le, 2009; Chami et al., 2008), and in consequence its negative impact on life satisfaction may represent the displeasure of the population in response to economic stagnation. As well, remittances may produce a positive feeling of happiness on the people who receive them, and a negative one on those that do not. Given that the latter are the majority of the population, remittances may pick up the discontentment of that majority⁶. The variety of explanations regarding the impacts of remittances signify that they are important determinants of life satisfaction.

TABLE 2
DETERMINANTS OF LIFE SATISFACTION

Dependent variable: life satisfaction index			
Independents variables:	Equation number:		
	(1)	(2)	(3)
Constant	5.3487 (16.61)	3.9967 (1.85)	6.6283 (38.04)
PIB pc	0.00016 (2.89)		
Real wage		0.0225 (1.12)	
Remittan.			-0.1243 (4.63)
R2	0.27	0.00	0.45

Independent variables associated with the labor market.

The importance of female and male self-employment can be appreciated on table 3. Equation (1) shows that the coefficient of the female self-employment rate is negative and significant, and that the equation explains a fifth of the variance of life satisfaction. The coefficient of the male self-employment rate also is negative and significant, and of larger dimension in absolute terms than the respective coefficient of female self-employment. The R2 of this equation is 0.43. Self-employment in developing countries has been analyzed by various authors as a representation of the underground economy ((Loayza 1997; Loayza y Rigolini, 2011), and as such constitutes low quality or precarious employment; there is evidence from Latin America countries that when economic growth increases there occurs a movement of workers from the underground economy to the official one (Caceres, 2014), which implies that self-employment is not voluntary. Table 3 the coefficients of the self-employment variables are negative, and that the one corresponding to male self-employment are higher than those of female self employment. The R2 in equation (2) is almost two and half times that of equation (1), which indicates that working in the shadow economy stirs more resentment in men than in women and thus extends a wider shadow of unhappiness.

Equations (3) and (4) show the results when remittances are included as independent variables. The variable *Remitt* has negative and significant coefficients in both equations, but in equation (3) the coefficient of the female self-employment rate is negative but not significant. This indicates that female self-employment does not motivate national feelings of unhappiness, and implies that women tend to accept their fate in the underground economy, and are resigned to remain in low quality employment, aware that their choices of employment are limited, and that they are the pillar of the household.

Equation (4) shows that male self-employment has a negative and significant coefficient and the R² increases to 0.68. This shows that the prevalence of low quality employment, and a deficient social protection net, which is represented by remittances, explain close to seventy percent of the variance of life satisfaction in Latin America.

The Human Opportunity Index, IOH, was included as an independent variable in equations (5) and (6). Molinas et. al. (2011) defined this index as the degree (percentage) in which girls and boys of a given country have access to services of health, education, housing, electricity, sanitation and to finish the sixth grade in the established time, independently of their parents' income and place of residence. The values of this index range from 0 to 100, and as it increases it denotes that equality of opportunity is increasing in the respective country.

In equations (5) and (6) the coefficients of IOH are positive and significant, indicating that to more equality of opportunities there corresponds larger values of life satisfaction. In these equations the coefficients of self-employment are negative but that of female self-employment is not significant. This means that women that work in the shadow sector do not exert a "sour" feeling on society; being aware that there are not many good jobs available to women, having a bad job does not generate unhappiness.

The results presented on Table 3 do not coincide with those of Wietzke and McCloud (2002), who reported that self-employment had no impact on life satisfaction; they do not agree either with the results from Di Tella, MacCulloch and Oswald (1999), who found that self-employment was a positive determinant of happiness. But the results on table 3 are in agreement with those of Graham (2002) in the sense that self-employment has a negative impact on happiness, but the results on table 3 show that this impact is larger in the case of male self-employment.

TABLE 3
DETERMINANTS OF HAPPINESS.

Dependent variable: life satisfaction index

Independent variables:	Equation number:			
	(1)	(2)	(3)	(4)
Constant	7.7128 (14.14)	8.4153 (12.44)	7.0138 (17.53)	7.8491 (16.93)
Female self-employment	-0.0384 (3.07)		-0.0143 (1.53)	
Male self employment		-0.0533 (3.48)		-0.0296 (2.78)
Remittan.			-0.1033 (3.72)	-0.0923 (3.90)
R2	0.17	0.43	0.51	0.68

TABLE 3 CONTINUATION
DETERMINANTS OF HAPPINESS

Independent variables:	Equation number:	
	(5)	(6)
Constant	3.2692 (19.57)	5.1314 (4.72)
Female self employment	-0.0046 (0.37)	
Male self employment		-0.0268 (2.20)
IOH	0.0429 (3.08)	0.03008 (3.08)
R2	0.49	0.62

Table 4 shows the results when the independent variables are the female and male quality employment rates. It can be seen in equations (1) and (2) that both rates have positive and significant coefficients with that of female employment having larger “t” statistic than that of male quality employment, while the R2 are 0.50 and 0.48 respectively.

Remittances are included in equations (3) and (4) and their coefficients are negative and significant, while the equations explain respectively 65 and 72 per cent of the variance of the national index of happiness.

Results shown on tables 3 and 4 indicate that happiness is mainly the result of the position an individual occupies in the labor market and of the coverage of the national social protection net, or more specifically, better jobs and the widespread supply of social services, without geographical or class discrimination, would lead to larger values of happiness. Blanchflower, Oswald and Warr (1993) have reported that in the US happiness follow its own specific cycles, especially in the case of men; this can be associated by the results presented by Caceres (2014; 2015a) that quality and self-employment, which are the main determinants of happiness, depend on the national economic business cycle in the Latin American countries.

TABLE 4.
DETERMINANTS OF HAPPINESS

Dependent variable: life satisfaction index				
Independent	Equation number:			
variables:	(1)	(2)	(3)	(4)
Constant	3.5362	3.2617	4.8737	4.8000
	(6.62)	(3.88)	(8.67)	(7.40)
Female quality				
employment	0.0461		0.0282	
	(5.08)		(3.27)	
Male quality				
employment		0.0510		0.0298
		(3.51)		(2.77)
Remitt.			-0.0697	-0.0904
			(2.38)	(3.77)
R2	0.50	0.48	0.65	0.72

Table 5 presents the results when the independent variables are the youth unemployment rates. These equations include the qualitative variable *Cualijoven*, equal to one when the country's happiness index is 6 or lower, and equal to 0 when the index is above 6. This qualitative variable is significant in all estimations. Equation (1) shows that female youth unemployment has a negative and positive coefficient and the R² is 0.79. In equation (2) the coefficient of male youth unemployment is negative and insignificant. Remittances are included in equations (3) and (4). In both equations the coefficients of remittances are negative and significant. The R² corresponding to equation (3) and (4) are 0.83 and 0.77 respectively.

The IHO is included in equation (5) and (6) and its coefficients are positive and significant.

These results show that youth unemployment by itself explains a large fraction of the variance of the happiness index, and that the coefficients of female youth unemployment have larger "t" coefficients than those of male youth unemployment, implying that youth unemployment causes large distress in society as a whole, more than the distress resulting from self-employment, especially when the young unemployed are females. This may be related to the possibility that young unemployed men have more options or routes to take when faced with unemployed than young women, particularly in terms of emigration.

These results on table 5 differ from those of Clark and Oswald (1994), who reported that the young population of Great Britain did not resent being unemployed because they understood that unemployment is a common phenomenon to people their age, who perceived it as a short term situation. In the Latin American countries youth unemployment provokes feelings of unhappiness, as seen on table 5, implying that young people do not perceive it as a short term event. Deaton (2007) has presented results indicating that in different world regions the highest sentiment of happiness is reached when individuals are between 20 and 25 years old, which is associated with their convictions that the "system works well" and that there exists social mobility in their respective countries. But it seems that these convictions do not prevail in the minds of young Latin Americans, given the negative impact of youth unemployment on happiness. It can be seen on table 5 that the R² are higher than those of previous tables. This indicates that youth unemployment has more explanatory power than other labor market variables.

To conclude this section it can be inferred that youth unemployment, precarious employment and a deficient social protection net undermine happiness in the Latin American countries and, in consequence, they can be conducive to social conflicts. But these causes of social frictions are within the radius of action of national social policies and, thus, it is possible to support happiness through social policies that underwrite equality of opportunities and the generation of good jobs.

TABLE 5
DETERMINANTS OF HAPPINESS

Variables associated with youth unemployment. Dependent variable: index of happiness.

Independent Variables	Equation number:					
	(1)	(2)	(3)	(4)	(5)	(6)
Constant	7.4347 (27.12)	7.3694 (20.52)	7.4846 (28.87)	7.4243 (22.78)	6.1495 (9.28)	5.9161 (7.64)
Cualijoven	-1.4913 (7.46)	-1.5151 (6.48)	-1.1254 (4.55)	-1.1245 (4.06)	-1.0728 (4.78)	-1.0642 (4.06)
Female youth						
Unemployment	-0.0282 (2.43)		-0.0299 (2.75)		-0.0385 (3.97)	
Male youth						
unemployment		-0.0377 (1.52)		-0.0402 (1.78)		-0.0632 (2.88)
Remitt.			-0.0444 (1.94)	-0.0457 (1.83)		
IOH					0.0083 (2.16)	0.0214 (2.16)
R2	0.79	0.73	0.83	0.77	0.83	0.78

Independent variables associated with social protection

Continuing the investigation of the determinants of national happiness, several equations were estimated with independent variables associated with the social protection net, with results shown on table 6.

Equation (1) shows that the coefficient of per capita social expenditures as percentage of GDP is positive and significant and the equation explains 31 per cent of the variance of the national happiness index. Equation (2) shows that life expectancy at birth, in years, which can represent the quality and coverage of the national health system, has a positive and significant coefficient, and the R2 is 0.23. The HOI is the independent variable in equation (3) and its coefficient is significant, and the R2 is 0.53⁷.

TABLE 6
DETERMINANTS OF HAPPINESS

Variables associated with the national social safety net. Dependent variable: happiness index.

Independent variables:	Equation number:		
	(1)	(2)	(3)
Constant	5.4396	-10.2338	3.1888
	(23.57)	(2.03)	(4.35)
Per capita social expend.	0.0015		
	(3.62)		
Life expectancy at birth		0.2203	
		(3.24)	
HOI			0.0424
			(2.22)
R2	0.31	0.23	0.46

DETERMINANTS OF SELF AND QUALITY EMPLOYMENT

In view of the important role of self and quality employment in the determination of happiness, is of interest to know which variables determine these types of employment. Table 7 presents results when the independent variable is the national per capita social expenditures, in dollars. In equations (1) and (2) the dependent variables are the female and male self-employment rates; it can be seen that in both equations per capita social expenditures have negative and significant coefficients, and the R2 are 0.54 and 0.60 respectively. This indicates that precarious employment, which is an important determinant of unhappiness, results from deficient availability of social services in the respective country. In equations (3) and (4), the dependent variables are the rates of female and male quality employments and it can be seen that per capita social expenditures have positive and significant coefficients and the R2 are 0.67 and 0.60 respectively. Thus, low levels of social expenditures in some Latin American countries are associated with their low happiness indexes; it follows that by increasing social expenditures governments have important tools to support the increase of life satisfaction.

TABLE 7
DETERMINANTS OF SELF AND QUALITY EMPLOYMENT

Independent variables.	Dependent variable:			
	Self-employment		Quality employment	
	Female	Male	Female	Male
	Equation number:			
	(1)	(2)	(3)	(4)
Constant	56.9588 (12.51)	55.0328 (25.41)	39.3271 (13.72)	43.7550 (16.80)
Per capital Social expenditure	-0.0332 (6.14)	-0.0254 (7.28)	0.0361 (7.81)	0.0264 (6.28)
R2	0.52	0.61	0.67	0.60

HAPPINESS AND VIOLENCE

Violence is one of the most pressing problems in Latin America, where several countries have become among the most violent in the world. In 2012 the number of homicides per 100,000 reached 39.90 and 90.4 in Guatemala and Honduras respectively, values above the world average of 6.2, and the regional average of 13.2. Violence has given rise to high economic costs that represent, on a regional average, 10.2 per cent of GDP⁸. The question that arises is whether violence has a relationship with happiness; it can be expected that happy individuals would not be inclined to commit crimes lest they lose their life satisfaction, that is, the value they assign to happiness dissuades them to incur in crime. Hence, if happiness has an association with violence, it can be expected that the variables that determine life satisfaction would also determine violence. This topic is analyzed next.

Table 8 presents the results of estimating several equations with the homicide rate per 100,000 persons as the dependent variable⁹, and several independent variables. The equations include a qualitative variable Cuali2 which is equal to 1 in countries whose homicide rate is at or below 20, and 0 when it is above 20.

It can be seen in equation (1) that the happiness index has a negative and significant coefficient that and the equation explains 75 per cent of the variance of the homicide rate. This indicates that in countries with high happiness indexes their homicide rate will tend to be low.

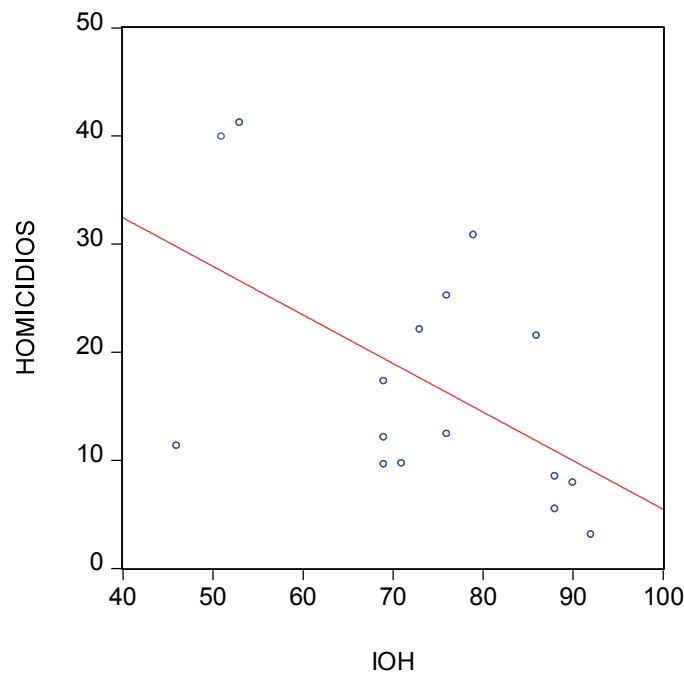
Equation (2) shows that the coefficient of remittances as percentage of GDP is positive and significant, and the R2 is 0.75. This implies that to a higher ratio of remittances to GDP in a given country there corresponds a higher homicide rate. This corroborates the argument that remittances represent the lack of good jobs and of a deficient social protection net, elements that push people to emigrate and eventually to send remittances to their home countries. This result imply that violence can acquire a persistent nature, in the sense that the first wave of emigration causes the fragmentation of families, which is propitious to increase unhappiness and violence, that in turn pushes another round of emigration, which gives rise to more violence, and so on.

In equations (3) and (4) the independent variables are the 2012 values of the indexes of Control of Corruption and Rule of Law published by the World Bank¹⁰. Their coefficients are negative and significant, and the equations explains around 65 of the variance of the homicide rates. This indicates that probity and solid institutions are “shields” that prevent the surge of crime. It should be observed that the size of the coefficient of Rulelaw is larger than that of Control of Corruption.

In equation (5) the independent variable is the human opportunity index, IOH, which shows a negative and significant coefficient, and the R2 is 0.86, the highest value in all equations. This result provides unquestionable evidence of the role of equality of opportunities in preventing and reducing violence. In fact, the most violent countries in Latin America, Guatemala, Honduras and El Salvador, are those where the indexes of human opportunity are lowest. It can be observed on graph 1 that there is a close association between the IOH and violence.

GRAPH 1

INDEX OF EQUALITY OF OPPORTUNITY AND HOMICIDE RATE IN LATIN AMERICA

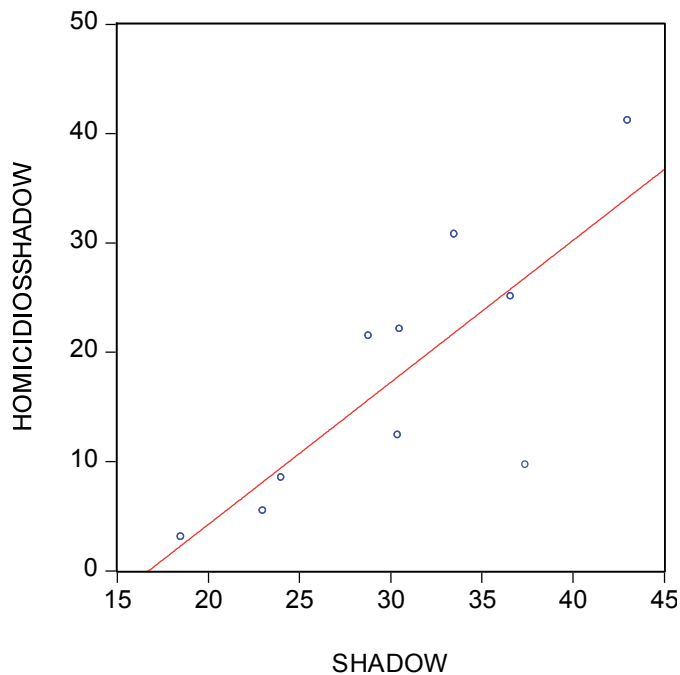


Equations (6) and (7) show that the coefficients of the female and male self-employment rates are positive and significant, and the R2 are relatively high (0.78 and 0.74 respectively). These results indicate

that self-employment ignites the surge or growth of violence, which may reflect the resentment from the self-employed for the inability of the economy in question to generate sufficient job opportunities in the official sector.

The positive impact of self-employment on violence is appreciated on graph 2 which shows the positive relationship between the size of the shadow economy and the homicide rate, such that countries with larger shadow economies have higher homicide rates¹¹.

GRAPH 2
SHADOW ECONOMY AND HOMICIDE RATES IN LATIN AMERICA



The coefficient of the female quality employment rate is negative and significant, as shown in equation (8). However, it can be observed in equation (9) that the coefficient of the male quality employment rate is negative but insignificant. This indicates that women that have good jobs exert a “pacification” role, one that is not observed in the case of men. This special role exerted by women who have good jobs may be explained by the fact that when a woman has a good income all members of the household benefit; that is, a woman’s income exerts a well-being multiplier effect on the family, which is not observed in the case of men (World Bank 2011c). More specifically, women’s income is spread around the family and the country, and hence social tensions are attenuated. The irony is that in most Latin American countries, women occupying quality jobs represent a lower percentage of the labor supply than men. This is a case where supporting gender equity in terms of access to good jobs, as well in terms of eliminating gaps in pay, would lead to reductions in violence, thanks to social “internalities” (within the family) and externalities (from the family to rest of country), exerted by the “sharing effect” generated by women. To stress this point reference is made to Majlesi (20016) study that reported that in Mexico when the manufacturing sector offers more jobs to women, their income and decision making ability in the household improves, thus benefiting their children who receive better health care¹².

Better access to good jobs by women would be facilitated by the design and implementation of national child care center networks, where children can receive the adequate early childhood development care, and which would help women to continue their studies, or occupy high paying jobs, without relying, in the best case, on family members to take care their children. The social benefits from the increased education level that women would obtain thanks to the availability of low cost child day care centers would be substantial, in terms of improvements in children's health, increments in female labor participation (which helps to close fiscal gaps, as shown by van Ewijk et al (2006)¹³), and better human capital of future generations (Mitra, Bang y Biswas, 2015)¹⁴. In this respect it has to be pointed out that Dieterich, Huang and Thomas' (2016) results from a study of women opportunities in a sample of Sub-Saharan countries indicated that their chances of obtaining a good job depended on their level of education, but in the case of married women their chances were annulled by the care they provided to their children, given the unequal division of household work. This is another case where child care centers can provide significant benefits.

TABLE 8
DETERMINANTS OF THE HOMICIDE RATE

Dependent variable: homicide rate					
Independent variables:	Equation number:				
	(1)	(2)	(3)	(4)	(5)
Constant	48.5789 (6.01)	25.1749 (21.92)	28.8000 (16.46)	27.3766 (13.91)	47.9468 (12.00)
Cuali2	-20.7947 (11.83)	-17.0631 (14.43)	19.2786 (9.50)	-18.8253 (9.31)	-18.1928 (12.27)
Happiness index	-2.8333 (2.21)				
Remitt.		0.8416 (6.65)			
Control corruption			-3.6604 (2.06)		
Rule of law				-5.1518 (2.51)	

IOH					-0.2580
					(4.69)

R2	0.74	0.75	0.64	0.67	0.86
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TABLE 8 CONTINUATION
DETERMINANTS OF THE HOMICIDE RATE

Independent variables:	Equation number:			
	(6)	(7)	(8)	(9)
Constant	10.5328 (9.23)	23.0669 (7.14)	34.8962 (9.91)	35.4566 (8.98)
Cuali1	-18.8875 (3.41)	-18.2332 (10.81)	-18.3068 (10.02)	-18.2914 (10.95)
Female self employment	0.1403 (2.53)			
Male self employment		0.1385 (1.96)		
Female quality employment			-0.1085 (1.88)	
Male quality employment				-0.11411 (1.72)
R2	0.78	0.74	0.75	0.72

Thus, the causes of violence in the region are associated with the absence of good jobs, emigration and the large dimension of the shadow economy, together with the weakness of the social safety net. But the roles of other variables in promoting violence must not be dismissed, such as the production, transportation, and consumption of drugs.

HAPPINESS, INEQUALITY, TAXATION, AND VIOLENCE

A point that has to be stressed is the important role played by per capita social expenditures in the promotion of quality employment and happiness, and thus in the prevention of violence. This contrasts with the relative low tax revenues in most countries in the region, which represents an obstacle to expand social services in a way that it is feasible to close the significant gaps in social development, and promote equality of opportunity, happiness, and the prevention of crime. Table 9 shows a series of equations that provide evidence on the important role of tax revenues.

Equation (1) expresses the happiness index in terms of the ratio of 2012 tax revenues to GDP, Tax2012, taken from ECLAC (2012). This sample does not include Mexico and Venezuela, given that their tax ratios are very low as they use oil income to attend public expenditures; thus the sample is reduced to 16 countries. The equation includes a qualitative variable, Cual3, which is equal to 1 to signify that the happiness index is above 5.5 and 0 in other cases. The coefficient of Tax2012 is positive and significant and the equation explains 71 per cent of the variance of the happiness index. This implies that citizens in countries with higher tax mobilization will tend to be happier than those in countries where the tax rate is low. Bjornskov, Dreher and Fischer (2006) and Oishi, Schimmack and Diener (2012) have reported the same result in the case of the OCDE countries, and in a sample of 54 countries, respectively.

In equation (2) the dependent variable is the homicide rate and it includes a qualitative variable, Cual4, which is equal to 1 when the country is Honduras and 0 otherwise. It can be seen that the coefficient of Tax2012 is negative and significant, which indicates that countries with higher tax rates will have lower crime rates, given that the larger amounts of social spending resulting from larger tax revenues promote the generation of good jobs and happiness, elements that represent personal options more attractive than crime.

Equations (1) and (2) imply that by means of tax policies governments can prevent crime. The question that arises is why government do not adopt this road, the road of massive social investments as “pacification” instruments. To investigate this point, equation (3) was estimated which expresses the ratio of tax revenues to GDP in terms of Q5/Q1, the ratio of the percentage of national income destined to the fifth quintile, the richest segment of the population, to the percentage received by the first quintile, the poorest one, and a qualitative variable Cual5 which is equal to 1 when the tax ratio is above 30 per cent, and 0 otherwise. It can be seen that Q5/Q1 shows a negative and significant coefficient and the R2 is 0.74. This indicates that inequality in income distribution is a constraint to increase taxes. Thus, it can be inferred that individual happiness may be a “prisoner”, or is under the command of inequality, a situation which in turn generates violence.

Low taxation is a problem that has existed in the region since colonial times; several authors have stressed the historical opposition by the economic elites to increase taxes (McCoon, 2011). Equation (4) expresses the 2012 homicides rates in terms of the 1870 per capita taxes corresponding to 11 Latin American countries¹⁵. It can be seen that the 1870 tax variable has a negative and significant coefficient, and, as shown on graph 3 the association between taxes in 1870 and 2012 homicide rates is close. This shows that current violence is a “heritage”, or the result of low tax ratios (and low social investments), in the past. This implies that low taxation has been reproduced through time under the command of persistent inequality, and has given rise to the reproduction of low social expenditures and violence.

GRAPH 3

TAXES IN 1870 AND 2012 HOMICIDE RATES IN LATIN AMERICA

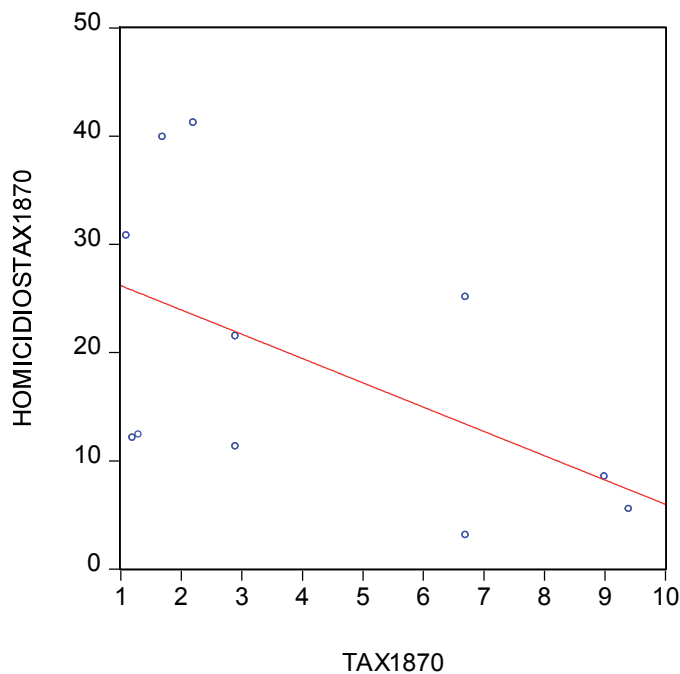
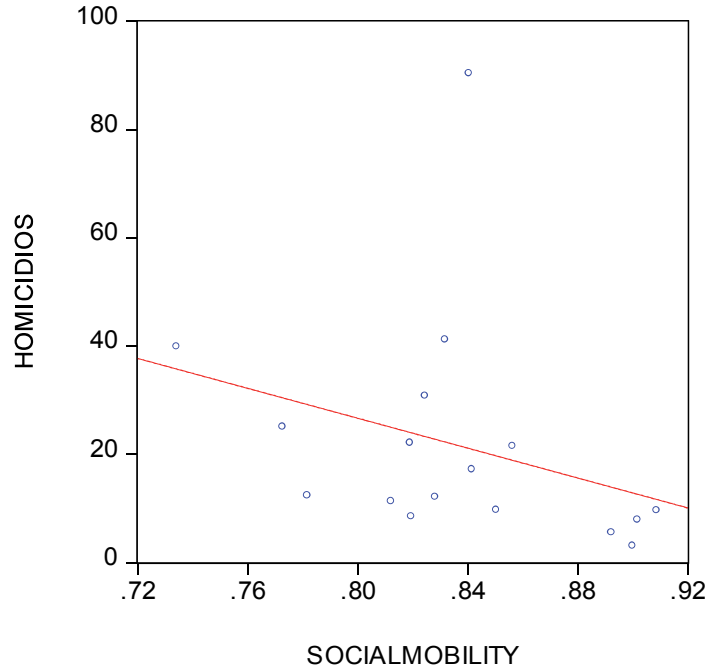


TABLE 9
DETERMINANTS OF HAPPINESS AND HOMICIDE RATES¹⁶.

Equation				
number:				
(1)	Happiness = 56.1967 – 12.9956Cuali3 + 0.3477Tax2012	R2=0.71		
	(16.23) (4.93) (2.21)	DW=1.87		
(2)	Homicides = 31.4338 + 70.0700Cuali4 - 0.7027Tax2012	R2=0.76		
	(3.43) (5.85) (1.65)	DW=2.02		
(3)	Tax2012 = 26.8032 +17.0348Cuali5 - 0.5259Q5Q1	R2=0.74		
	(8.80) (6.40) (3.01)	DW=2.17		
(4)	Homicides = 28.4221 – 2.2487Tax1870	R2=0.28		
	(4.71) (1.90)	DW=1.98		
(5)	Homicides = 140.0694 + 73.7002Cuali6 – 146.7810Mobility	R2= 0.82		
	(3.31) (7.43) (2.90)	DW=2.6		

A result from insufficient taxation is the lack of social mobility prevailing in several Latin American countries, particularly in Central America. Equation (5) shows an equation that expresses the homicide rate in terms of the index of social mobility computed by Andersen (2001), and a qualitative variable Cuali6, that takes the value of 1 in the case of Honduras and 0 otherwise. It can be seen that as social mobility increases the homicide rate decreases and that the R2 is high (0.82). This result shows that it is valid to argue that the lack of social mobility is one of the main causes of the violence in the Latin American countries. Thus, undertaking significant increases in social spending destined to promote social mobility would constitute an important tool to reduce violence. This can be a policy that can pay by itself, given the evidence that increasing social mobility is conducive to increasing economic growth and hence to increasing tax revenues (Andersen, 2001; Molina, Narayan and Saavedra-Chanduvi, 2013). Graph 4 shows the relationship between the homicide rates and social mobility¹⁷.

FIGURE 4
SOCIAL MOBILITY AND THE HOMICIDE RATE IN LATIN AMERICA



DESINDUSTRIALIZATION AND SELF AND QUALITY EMPLOYMENT

In a recent paper, Caceres (2016a) employed panel data from 6 Latin American countries (Costa Rica, Colombia, Ecuador, Dominican Republic, Bolivia, and Jamaica) to analyze the determinants of labor productivity, with the result that labor productivity declined as the participation of the manufacturing sector in GDP decreased. A related result is that in these countries de-industrialization also has negative repercussions on female quality employment, and that it is conducive to increasing female self-employment.

Thus, the nature of the economic structure in a given country is associated with life satisfaction and crime: those countries with large and increasing tertiary sectors would be expected to have lower indexes of life satisfaction, as the result of the significant prevalence of self-employment. In fact, there is evidence that the de-industrialization experienced by the US economy since the sixties has led to the loss of good jobs, and to increases in persistent poverty, unemployment and violence in urban areas Wilson (1987).

It can be expected that the des-industrialization that the Latin American countries have experienced since the 80's have been a determinant element of the reductions of productivity, economic growth, and happiness, and a cause of violence.

SYSTEM OF INEQUALITY, TAXATION, HAPPINESS AND VIOLENCE

The relationships between taxes, happiness and violence are shown on Figure 5. Quadrant 1 shows that social expenditures increase when tax revenues as percentage of GDP increase, and quadrant 2 shows that the increase in social spending leads to increments of quality jobs, as was shown on table 6. Quadrant 3 represents the negative association between quality employment and the homicide rate, as was shown on table 8. Based on the associations shown on quadrants 1-3, a negative relationship is derived on quadrant 4 between taxes and the homicide rate, which indicates that as the tax ratio increases violence decreases.

Quadrant (5) shows a positive relationship between quality employment and happiness as was shown on table 4, which leads to the relationship shown on quadrant 6 between the tax ratio and happiness, implying that increases in tax revenues, and the resulting attention to social expenditures, is a means to increase happiness. Quadrant 7 shows the negative association between the ratio of the percentage destined to the richest quintile and the poorest quintile, Q5Q1; with this relationship and that of quadrant 5 a negative association is derived on quadrant 8 between Q5Q1 and quality employment, which indicates that countries with higher inequality in income distribution will have lower quality employment rates than less unequal countries. This implies that a large shadow sector is a manifestation of inequality.

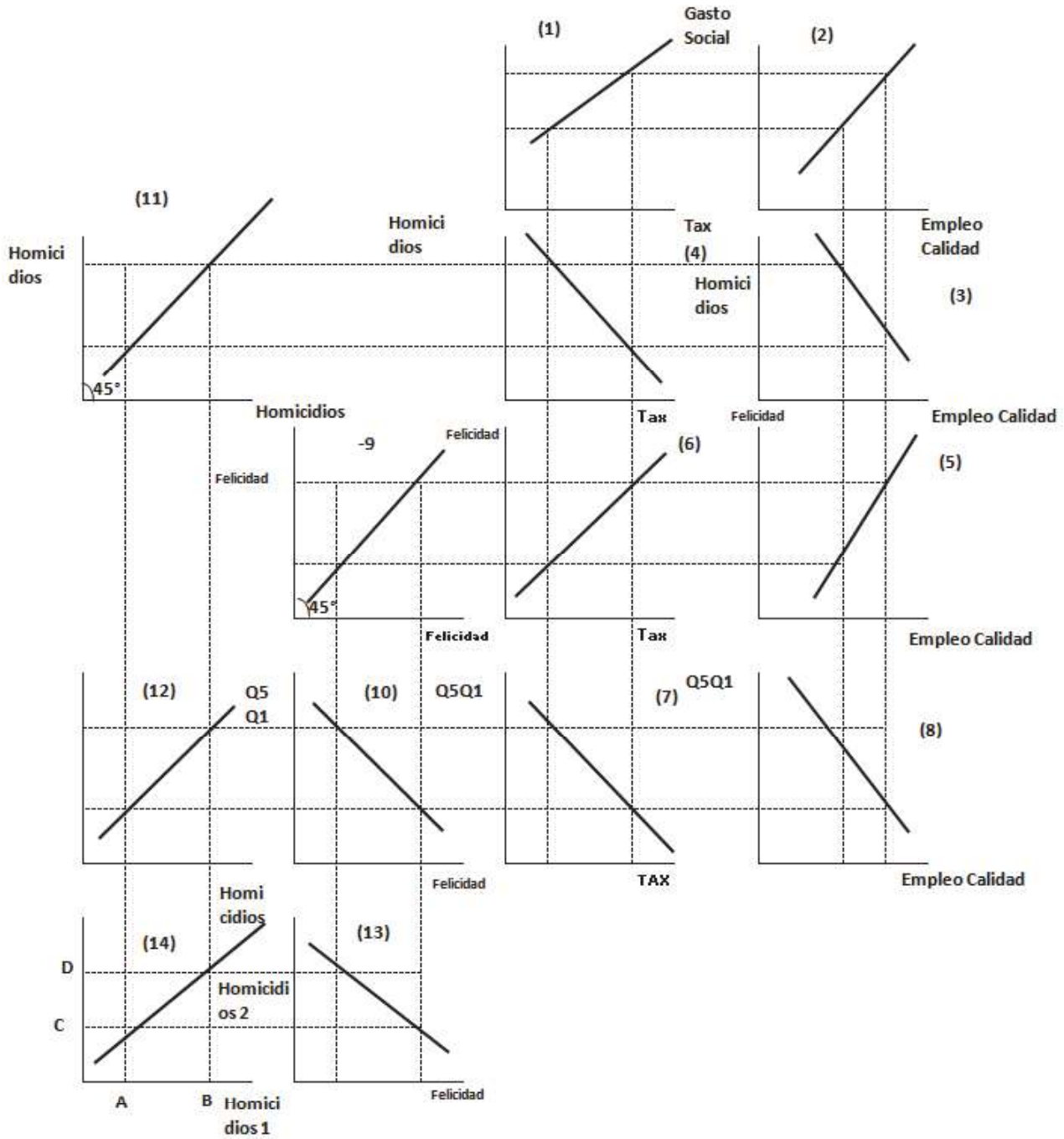
Quadrant 9 employs a 45 degrees line to move the happiness variable to the abscissa; this quadrant and quadrant 7 lead to quadrant 10 which shows a negative association between Q5Q1 and happiness, implying that to higher inequality there corresponds lower happiness.

Quadrant 11 uses the 45 degrees line to move the homicide rate to the abscissa, and with quadrant 10 a relationship is derived on quadrant 12 between inequality and the homicide rate.

It can be observed on quadrant 12 that an increase in inequality is conducive to an increase in homicides shown as segment AB; but the increase in inequality also leads to a reduction in happiness, as is depicted on quadrant 10. This reduction in happiness leads to an additional increase in the homicide rate, shown on quadrant 13 as the segment CD. Thus a relationship is derived on quadrant 14 showing that the initial increase in homicides, called Homicides1, is accompanied by an additional increment of homicides, called Homicides2. This is evidence that violence can have a self-sustained or persistent nature.

FIGURE 5

INEQUALITY, TAXATION, INCOME DISTRIBUTION, AND HAPPINESS



UNHAPPINESS TRAP

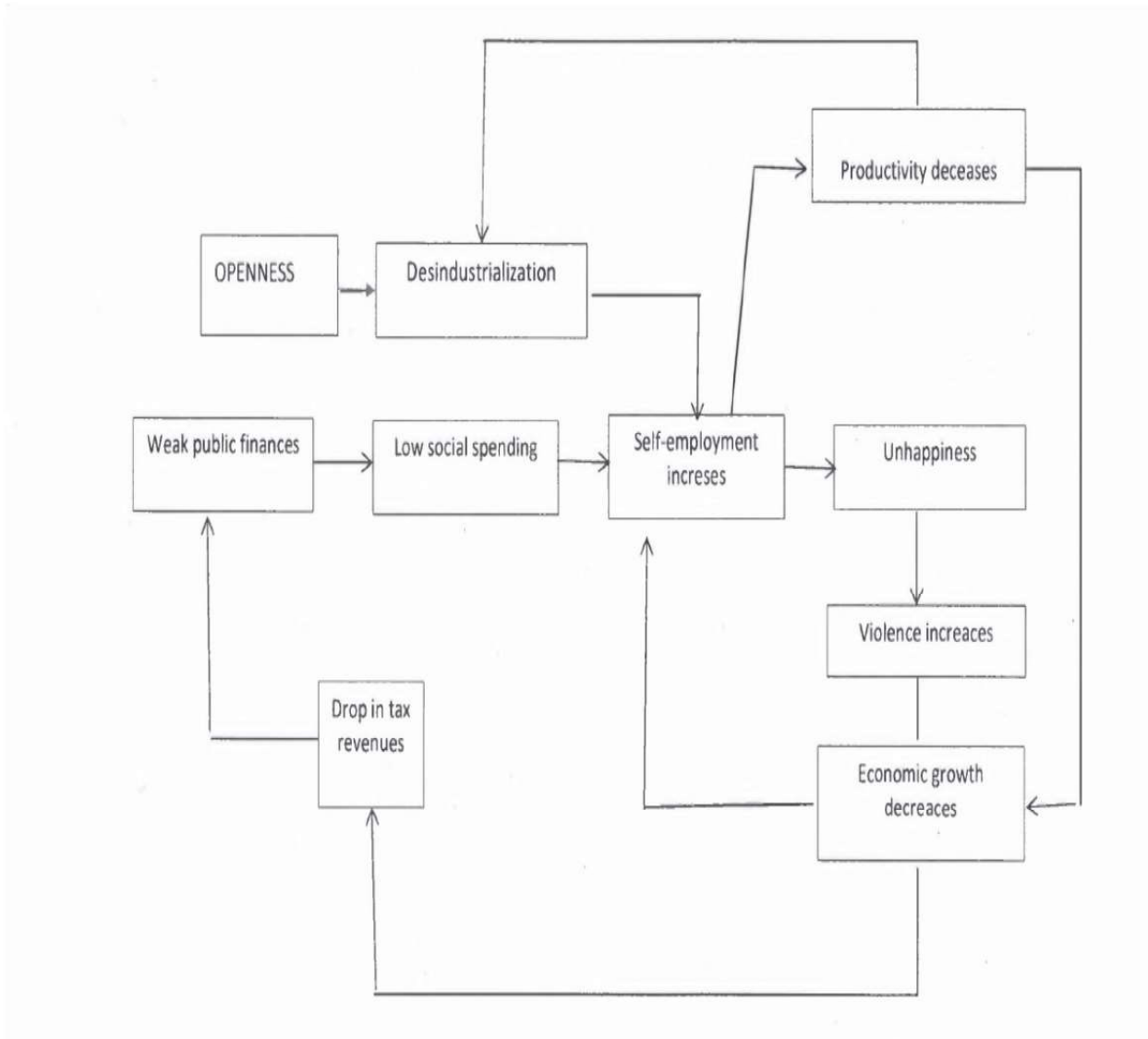
The possibility of a vicious circle arising from unhappiness is described in graph 7. There is evidence that the extreme openness to external trade that took place in the some Latin American countries has led to dis-industrialization and the consequent increase in self-employment and the loss of quality employment (Caceres, 2016). The increase in precarious employment.

There is evidence that the extreme openness to external trade that took place in the some Latin American countries has led to dis-industrialization and to the consequent increase in self-employment and loss of quality employment (Caceres, 2016). The increase in precarious employment causes productivity to deteriorate, with adverse consequences on economic growth; as well, the rise of precarious employment undermines happiness and promotes violence. The increase in violence constraints economic growth and thus leads to increases in self-employment. The lower rate of economic growth is associated with insufficient tax revenues, which in turn exerts a brake on the expansion of social spending. In this situation it is not possible to ameliorate the expansion of deficient jobs. Precarious employment undermines productivity and in consequence de-industrialization continues.

Thus the economy falls in in a vicious circle whereby self –employment and the shadow economy, resulting from deindustrialization and low social spending, promotes unhappiness and violence, resulting in lower economic growth and lower tax revenues and, consequently, in low social spending, and in increasing precarious employment, and so on.

In this vicious circle the economy may be kept afloat by external development assistance, or by booms of primary products, but the underlying causes prevail. In this situation the essential policy measures are to increase protection to domestic manufacturing seeking a reindustrialization, and substantially increasing social spending.

FIGURE 6
UNHAPPINESS TRAP



DISCUSSION AND CONCLUSIONS

A result that must be stressed is the important role that self and quality employment play in determining happiness and violence, as well as the paramount role played by social expenditures in promoting quality employment, reducing self-employment and crime, and increasing happiness. Moreover, self-employment results, in part, from the extreme external openness of the economies which in turn undermine economic growth and quality jobs¹⁸. It is in order as well to point the negative role of emigration on happiness.

But self-employment and working in the shadow sector, are the result of a persistent structure of social exclusion that manifests itself in the inertia or reluctance to attend in a decisive manner the needs of the poorer sectors of the population. Thus, being self-employed is the culmination or zenith of a long trajectory of life in the margins, carrying a baggage of trauma, lies, hunger, anger, hopelessness and

defeat since early age. Moreover, there is evidence that children that are born and grow up in poverty do not develop the mental capacity to deal with rejection, and thus, are prone to enter in a life of crime. It can be argued that the lack of attention to the needs of large segments of the population may constitute a “promotion” of criminal behavior.

Low social mobility can be associated with the fragmentation of society prevailing in several Latin American countries. In fact, there exists a tendency to not accept citizens as having the same value: those in urban areas are more valuable than those in rural ones, the rich more than the poor, the whites, with their distinct shades, more than Afro-Latinos and indigenous populations. These spheres of discrimination rise doubts about the authenticity of the religious and democratic values that supposedly are at the roots of society.

These segments of “secondary value” have not had capacity to react to the fragmentation of values by society, given their low levels of human capital and inability to structure concerted actions. But in recent years, those “second category” citizens have undertaken positions to overcome this situation; one has been illegal emigration; and other the violence that engulf several countries, which likely embeds a sentiment to “settle accounts”.

Hence the importance of substantially increasing public social expenditures as a means to generate good jobs, reduce emigration, accelerate economic growth, and thus increase happiness and reduce crime. This goal faces the obstacle of weak public finances in many Latin American countries, a situation that can be overcome by increasing tax revenues. It has to be mentioned that the costs of violence in the region, estimated on average at 11 percent of GDP, (World Bank, 2011a), is without doubt higher than the additional tax revenues required to close the social gaps¹⁹. The additional social investments would lead to the gestation of a society with stronger social cohesion and trust, and to a larger economy resulting from higher levels of human capital and better jobs, which would in turn lead to more dynamic economic growth than in the absence of the additional tax revenues. Thus, the opposition to increase tax revenues has an ironic side, since this opposition actually signifies opting for underdevelopment, social conflict and violence, and to renounce larger profits in the future. In fact, Rodrik (1999) has presented evidence that institutional weakness generated by social conflicts are conducive to economic stagnation, which implies losses to all.

Reference is made to the evidence in the US in the sense that the tax to cigarettes increases happiness of those who smoke, given that the good feeling of self-control resulting from not smoking compensates the unhappiness of paying higher prices of cigarettes (Gruyer and Mullainathan, 2002). Di Tella, MacCulloch and Oswald (2001), cited by Graham (2002), have reported that in the US and Europe, citizens are willing to accept higher inflation rates if it leads to reduced unemployment. Moreover, Neumann, Peichi and Sieglöcher (2012) analyzed the impact of the income tax in Germany, with 1985-2010 data from the German Socio-Economic Panel, a total of 240,000 personal observations. The results from estimating panel equations indicated that happiness increased as the tax rate increased, results that the authors explained by the sentiment of complying with the moral obligation of paying taxes, as well as the recognition of the importance of public social goods, and by the interest in contributing to income redistribution.

It can be assumed that in Latin America the middle and higher classes would accept tax increases when they realize that such measure would be instrumental in creating an economy with larger quality employment levels, higher investment opportunities, higher profits, and without violence. Hence the importance of disseminating the potential benefits from tax reform so as to motivate the good will from all economic sectors to accept what could be viewed as a sacrifice.

An additional obstacle to increase taxes may reside in the volatility and uncertainty existing in the Latin American economies, which creates a short term vision in the population and strong attachment to their resources. This involves another irony, given the evidence that the high instability prevailing in Latin American countries is a result of high inequality (Acemoglu, Johnson, Robinson, and Thaicharon, 2003), which can be remedied by the increases in human capital resulting from tax increases.

Another obstacle is that members of the higher income classes take the “exit option”, as described by Hirschman, and opt to use private health and education services and, thus, they are not “shareholders” or “stakeholders” committed to the improvement and expansion of public services, and thus oppose additional taxation.

The opposition to taxation is not confined to the higher income classes but it may also be encountered in the middle income strata. This can exist when members of the middle class assume that a regime of equality of opportunities and social mobility exist in the country, and in consequence they emulate the political and social customs of the higher income classes, hoping that eventually they will move up in the social and economic ladder. However, this is only an illusion, given that the human opportunity indexes in most Latin American countries are still relatively low, and increase only slowly (Molinas et al, 2011); besides, the indicators of social mobility in the region computed by Andersen (2001) indicated that social mobility is still elusive. This is another example that brings to mind the great singer Cesar Donald’s balade: “Vivir de Sueños”.

Another aspect that undermines the solidarity with the lower income classes is the open identification of large segments of the population with foreign cultures, which establishes distance between these populations and national reality, reality that they would see as a “stain” or “nuisance” on the dream of being “modern” and “liberated” from ancestral cultures. This is not a behavior that predominates in all Latin American countries. But it constitutes another illusion, given that in order to be a bona fide member of some cultures, it is necessary to have the appropriate skin color, which, alas, despite all intents and prayers, it is not the case in the majority of the Latin American countries.

Luttmer (2001) showed that in the US the propensity or predisposition of individuals to accept income distribution policies depends on the characteristics of the people in her or his neighborhood: the support decreases when the percentage of people who receive welfare payments increases, and increases when the welfare recipients are of the same racial group, a phenomenon that the author calls “loyalty by race”. This author reported that the sentiment of loyalty by race is stronger in higher income individuals and in those who did not finish high school, and it is lower in people that finish tertiary education. Luttmer (2001) points out that:

“Self-reported attitudes toward welfare spending are determined not only by financial self-interest but also by interpersonal preferences. These interpersonal preferences are characterized by a negative exposure effect—individuals decrease their support for welfare, as the welfare reciprocity rate in their community rises—and racial group loyalty—individuals increase their support for welfare spending as the share of local recipients from their own racial group rises. These findings help to explain why levels of welfare benefits are relatively low in racially heterogeneous states” (page 500).

Moreover, Roemer y Lee (2004) analyzed the role of racism on the redistributive programs in the US, on the outcomes of political campaigns, and on the individuals’ affiliation to political parties in said country. These authors identified two mechanisms that determine that the size of redistributive programs are smaller than the dimensions required to attend the needs of poorer populations. One is the anti-solidarity effect, which manifests itself by the oppositions of some voters to increase monetary transfers to minority groups because of their belief these beneficiaries do not deserve support. The other effect is

called the bundle effect, which occurs when voters that are poor and have low education levels, and who need and support redistribution, give, nonetheless, their votes to the parties that opposes redistribution, given that the racist messages of this party are similar to their own points of view. The results from the estimation of their model with 1976-1992 data from the Panel Study of Income Dynamics and from the National Election Studies, showed that voters' racism had provoked a fall in national income tax rate of between 11 and 18 percentage points, and the reduction of the percentage of votes received by the Democrat party by between 5 and 38 percentage points, lower than in the absence of racism²⁰.

In a similar study, Lee, Roemer and van der Straeten (2005) showed the results that racism at the polls had led to the reduction of income taxes between 10 and 20 percentage points, between 1972 and 1992²¹.

In relation to these two studies, a third effect is possible in some Latin American countries: the reduction of social expenditures targeted to the poor, that in many cases belong to minorities groups, can be presented to voters as an initiative that seeks "efficiency" and better "incentives", that only mask the goal of reducing taxation, but that in reality capitalizes on voters' racists spirits. In the medium term these measures would lead to drops in human capital and economic growth, and to increasing social costs in terms of violence, deteriorating public health, and loss of competitiveness. This process generates dead weights that undermine economy dynamism and social cohesion, but that rarely would be denounced by political organizations lest elections be lost. In the end, those that support the process of social exclusion end up in worse situations: still with low levels of education, without adequate medical care, with limited options other than migration, in a clear example of a social and political rope-a-dope.

It can be expected that the effects described by Van der Straeten, Roemer y Lee exist, with different intensity, in the Latin American countries. The opposition to increase social spending can be associated to the reluctance to increased taxation; this position is sustained by the "traditional" view that dates from colonial times that the indigenous population and the Afro-Latinos are violent and prone to vices, and thus money spent on their social development would be a waste; and specially by the point of view that given that these populations have traditionally been marginalized, without any opposition, there is in no urgency to change the status quo. This view hardly masks a historical racism and the advantages in cheap labor, but in the long run it extracts substantial costs from society in terms of the waste of resources, primarily human capital, and the consequent inability of the national economy to reach its potential, where there would be more employment and profits to distinctive groups of society²². In a certain sense, this scheme of things constitute a dynamic duo of rope-a-dope and oldie Frankenstein.

Special importance resides in a variant of the bundle effect describe by Roemer and Lee, that occurs when the low income population segments give their votes to parties that do not have a trajectory of attending the needs of the poor, as a result of their publicity campaigns and electoral marketing strategies depicting the party that has had a historical commitment to seek solutions of the needs of the poor, as one that instigates "class struggle", or that is an enemy of the "market economy" and "democracy". In consequence, the intense media campaigns induce the poor to vote against their interests, which is conducive to the consolidation of power by those groups that are instrumental to their plight in the first place. This process, which represents assaults against democracy and popular wellbeing, can be called a "farce effect".

Moreover, Alesina, Glaeser and Sacerdote (2001) have used data from the 1990 US General Social Survey, to present evidence that the percentage of a State population that is African-American has a negative relationship with the amount of transfers destined to families in need of assistance. They add that this situation is aggravated by the geographical isolation of the Afro American population, which tends to

create in the population at large the belief that African American are “outsiders” or an “Out group”, which compounds the opposition to increase social services. These authors reported that those who were most opposed to the expansion of social assistance were those in favor of the death penalty and that attend church persistently. It is not farfetched to assume that these views are applied to other “Outsiders”, such as those with disabilities, and to those with sexual orientation different from that of the majority. It can be assumed also that these views are prevalent in some Latin American countries.

An important variable in the Latin American countries is the biased perception that the middle and high income strata have of the poorer segments of the population, who would be the beneficiaries of increasing taxation. When the predominant view is that the poor are “lazy” and thus undeserving, paying taxes would not give the tax payers sentiments of satisfaction. This would be more accentuated when the poorer segments of the population belong to specific ethnic groups subject to defamation and disdain.

It has to be pointed out that there is no evidence that particular ethnic groups are more inclined towards violence than other populations; Kubrin and Wadsworth (2003) conducted a study of crimes committed in Saint Louis Missouri between 1985 and 1995. Their conclusion was that crime is not a characteristic owned by a particular ethnic group, but results from the obstacles derived from social exclusion, which:

“are the results of an interaction of structural factors that have created and maintained a system of stratification giving rise to minority neighborhoods characterized by multiple disadvantages including poverty, joblessness, and family disruption. The social, political, and economic forces that help create structural factors include, among other things, a legacy of slavery and discrimination, redlining and patterns of residential segregation, and globalization and deindustrialization. Had these or other forces created the same multiple disadvantages for the white population, we would expect similar cultural adaptations among whites. However, this is not the case. The concentrated disadvantage found in many urban African American communities is rarely paralleled in predominantly white neighborhoods” (page 29).

A similar conclusion was reached by Krivo and Peterson (1996) in their study about the determinants of crime in Columbus Ohio:

“A large part of the racial difference in crime is due to the fact that whites and blacks often live in structurally distinct communities. To the degree that whites are more likely to live in areas with lower level of disadvantage and blacks in communities with the highest levels of disadvantage, then our results indicate that racial differences in violence are attributed heavily to structural differences in the communities in which they live” (page 635-636). However, attributing a propensity to commit crimes to particular ethnic groups plays well with racism.

The disadvantages and structural differences between ethnic groups with respect to social benefits and place of residence can be interpreted as the result of racism. Thus, racism is a barrier that annuls solidarity towards the poor, a barrier that constraints the progress towards equality of opportunities and social inclusion to all, a generator of violence, and an inhibitor of economic progress of any country.

It has to be mentioned again that an inclusive society would be conducive to the gestation of a larger economy than in the absence of a regimen of equality of opportunities, and the larger economy would create higher wages and profits. This indicates that racism gives rise to the waste of human capital in Latin America, and to the loss of opportunities to create a more prosperous region, with vast monetary losses to society. On the opposite side, the prevalence of equality of opportunities ((Or all are sons or all

are step-sons) (“O todos hijos o todos entenados!”), would be conducive to higher personal and business incomes, to the reduction of violence, and to the attainment of individuals’ and a country’s potentials.

It should be pointed out that in his analysis of the development experiences in several countries, Rodrik (2004), concluded that solidarity is a necessary condition or prerequisite to achieve the take-off toward social and economic development.

Special importance resides in the result that youth unemployment undermines happiness and promotes violence²³. This indicated that the generation of good jobs available to the young are of particular importance in the prevention of violence. It can be fruitful to explore the convenience that Latin American countries establish accords to mobilize additional resources towards this end, the amount of which may be much lower than the costs involved in other methods of reaction to social conflicts, and lower than the costs of violence per se.

The creation of jobs should not depend exclusively on the decisions by the private sector to invest, which is a decision subject to uncertainty and contingencies, which contrasts with the urgency of employment generation. The short term option should be the undertaking of workfare programs, which can put people at work in brief time. It is expected that in the middle term the private sector will invest with impetus as the additional demand would dissipate uncertainty about the economy. It must be pointed out that a World Bank (2011b) evaluation of “workfare” programs around the globe concluded that they were valuable in the creation of work.

It has to be stressed that it is not valid to justify the relative low attention destined to social development in some Latin American countries with the ranting that countries do not have the means to attend these areas. Easterlin (2013) has pointed out that Germany introduced health insurance in 1883, work accident insurance in 1884, and the public pension system in 1889. He adds that in those years the German per capita income, in 2005 prices, was 3,200 dollars, and that the majority of developing countries, except those in Sub-Saharan Africa, have per capita GDP that exceed Germany’s amount in the 1880’s; this author adds that German per capita GDP was growing at 1.8 per annum, rate that is lower than the rates of majority of developing countries.

There are only four countries in Latin America with per capita GDP below \$3,200 dollars: Honduras, Nicaragua, Haiti and Bolivia, and with no exceptions the GDP of most countries have grown at rates higher than 1.8 per year. This indicates that it is not valid to argue that the countries’ low level of development justifies the low levels of social spending. Thus, increasing social spending is not a luxury to the Latin American countries, it is within the reach of their economic capacity, and it is a necessity if the objectives of attaining inclusive societies and reducing crime are to be reached; as well, it is a moral imperative.

The fact is that Germany has done very well with those pioneering social development policies, as have other countries that emulated them, and there is no reason to believe that Latin American countries would not be able to replicate those Teutonic experiences without success.

It has to be kept in mind that, as shown in this paper, precarious employment, unemployment, lack of opportunities, emigration and deficient social expenditures, undermine personal happiness, which in turn leads to premature death²⁴. There is also evidence presented, respectively, by Banarjee and Duflo (2007) and Junakar (1991), that poverty and unemployment are conducive to premature death²⁵.

These results imply that the reluctance or opposition to accept increases in taxes and thus in social expenditures that would lead to the prevention of premature death, can be conceived as an “extermination” campaign against the marginalized population segments. It has to be pointed out that the costs incurred in social programs that prevent death are relatively low. Meller and Litschig (2014) evaluated Ecuador’s Programa de Alimentacion y Nutricion Nacional, PANN 2000, a program that provides free micronutrients to children 6-24 months old, in Exchange for periodic check-ups. Their evaluation indicated that child mortality had been reduced from 2.5 to 1.5 per cent, at an annual cost of \$30 per beneficiary.

There is no doubt that a child’s life is worth more than \$30 per year²⁶.

The importance of these interventions are appreciated more vividly taking into consideration the Case, Fertig and Paxson (2005) results that poor health during childhood is an early indicator of low occupational status when children reach adulthood. As well, Cunha and Heckman (2009) have reported that early childhood nutrition programs significantly increase labor market earnings when beneficiary children become adults. Thus, given their impact in providing enhanced capacity to obtain good jobs, these intervention would be conducive to higher rates of economic growth, happier population and to the decrease in violence. It would be difficult to identify other interventions with higher returns²⁷. In these times when the key buzz words have become “efficiency” and “productivity”, attention must be directed to the underinvestment in childhood nutrition (and education) which are a source of high social opportunity costs to Latin American countries.

This implies that the attainment of equality of opportunities requires that all children in a country receive adequate care during early age.

Special importance resides in establishing institutional mechanisms whereby the national Budget is analyzed and discussed by civil society and other groups, particularly those line items related to the wellbeing of children, women, the elderly, and persons with disabilities. This would be conducive to strengthening transparency, to generate trust among different sectors of society and to maintain vigilance on important budget items, such as education, health, gender, so that they receive the highest priorities²⁸.

It can be inferred that the reluctance to increase taxation and insufficient social investments constitutes a violation of the Universal Declaration of Human Rights, which in its Article 3 establishes the right to live:

Everyone has the right to live, liberty and security of person.

Given the association between unemployment, poverty and death, Articles 23 of said Declaration has to be kept in mind:

Everyone has the right to work, to free choice of employment, to just and favourable conditions of work and to protection against unemployment.

While Article 25 stipulates that:

1. Everyone has the right to security in the event of unemployment, sickness, disability, widowhood, old age or other lack of livelihood in circumstance beyond his control.

2. Motherhood and childhood are entitled to special care and assistance.

Given that most countries have subscribed the Universal Declaration of Human Rights, it constitutes the rule of law, or the law of the land in all nations.

The purposes of reducing poverty and increasing equality of opportunity constitute an uphill battle, confronting greed, indifference, racism, classism, ignorance and hard hearts, but is a purpose that reaffirms the value of humanity and complies with a moral obligation. This may sound as an “idealistic aspiration”, but is a much better aspiration than accepting the continuation of the daily anguish of poverty and violence that constitute the essential characteristics of the life of so many Latin American citizens.

The case may be that there exists the necessity that citizens be born again, whereby they conduct a life characterized by solidarity and compassion, making possible that “people go out to their work, and to their labor until evening” (Psalm 104:23).

In this respect, there are lessons in what an indigent child wrote in his letter to Santa one hundred years ago, as reported by the Washington Post, December 25, 2015, page A21, which ended with the petition:

“P.S. Please do not forget the poor”.

Yes, indeed, as Matthew 18, 3 commands:

Truly I tell you, unless you change and become like children, you will never enter the kingdom of heaven.

Amen.

Endnotes

“God doesn’t sleep... no slumber.”

¹ On the implications of happiness on public policies see, among others, Layard (2006).

² These authors concluded: “There are sizeable differences in happiness between countries. These differences are consistent across indicators and quite stable through time. There is solid empirical support for the view that these differences result from the fact that some societies provide their citizens with better living conditions than others. The bulk of the variance in happiness can be explained by nation characteristics such as economic prosperity, social security, political freedom, and social equality” (page 8).

³ Wilson (1967) concluded: “The happy person emerges as a young, healthy, well-educated, well-paid, extroverted, optimistic, worry-free, religious, married person with a high self-esteem, high job morale, and modest aspirations, of either sex and of a wide range of intelligence”.

⁴ Winkelman and Winkelman (1998) have reported, based on the German Socio-Economic Panel, that the negative impact of unemployment on happiness is, in absolute value, 3 times that of having good health, while Clark and Oswald (1994) reported that in Great Britain the mental stress of the unemployed was 2 times more severe than that of those who were employed.

⁵ The authors pointed out that by the end of the 2000’s Egypt, Iraq, Syria, Tunisia and Yemen were among the unhappy countries in the world.

⁶ It has been estimated that in El Salvador 1.3 million persons receive remittances, out of a population of 6.1 million.

⁷ Another equation was estimated with the national coverage of pensions as independent variables its coefficient was significant, indicating that when the coverage of pensions increase, happiness increase as well. It should be mentioned that Bjornskov, Dreher and Fischer (2006) reported that the coverage of subsidies was a determinant of happiness in the OCED countries, and that Pacek and Radcliff (2008) presented evidence that the coverage of pensions was a determinant of happiness in a sample of 18 developed countries. Moreover, Graham (2002) has shown that having good health is an important determinant of happiness in the Latin American countries, which is corroborated in this paper with the detection of important roles played by life expectancy and pension coverage.

⁸ This value is an estimation by the World Bank (2012).

⁹ The source of data is Wikipedia, Homicide Rates in the World, 2012.

⁹ The source of data is World Bank Governance Indicators.

¹¹ The source of data on the shadow economy is Buehn and Scheneider (2012). The values shown on graph 1 are 2007 values.

¹² This author concluded: “labor demand shocks that change the relative number of jobs available for women in the Mexican manufacturing sector affect women’s relative decision making power within the households...as relative demand for female labor goes up, women gain power over decisions regarding their own private goods and services, such as their work status and money that is giving to their parents, as well as some of their decisions made on public goods...women are more likely to make the decision about major expenditures as the relative number of jobs available for them increases...the decisions about public goods that are likely to change hand are the ones over contraceptive use and children’s health and medicine”.

¹³ In the case of the Netherlands, Van Ewijk et al (2006) have indicated that if female participation increased in 7 percentage points, tax revenues would increase in 1 percentage point.

¹⁴ This point is also made by Hakura, Hussain, Newiak, Thakoor and Yang (2016).

¹⁵ Data on the 1870 taxes was taken from Sokoloff and Zolt (2004).

¹⁶ These equations were estimated by OLS.

¹⁷ These equations were estimated by OLS.

¹⁸ Reference has to be made to Loayza and Raddatz (2010) study of 55 countries about the sector composition of economic growth, with the result that agriculture, construction and manufacturing have important impacts on poverty reduction, contrary to mining, utilities and the service sector. This last sector is where the self-employed work.

¹⁹ A recent study estimates the cost of violence in El Salvador at \$4,0263 million, or 16 per cent of GDP (Penhate, 2016).

²⁰ The authors concluded: “the existence of a non-economic dimension, such as race, changes the alignment of voters in a significant different way ... There have recently emerged, in several countries, politically significant movements and parties, which are anti-migrant and xenophobic: Le Pen in France is the best known, but one must also mention Austria, the Netherlands, Denmark, and Switzerland. Indeed, the phenomenon of ethnocentrism or xenophobia is “realigning” voters in these countries; many who used to vote Left are now voting for the new Right. In particular, many unskilled white workers, who feel most threatened by immigration, globalization and skill biased technological change, have switched their allegiance”.

²¹ These authors concluded: “Our substantive conclusion is that the conservative economic agenda has been given new life because of racist and xenophobic views of politics” (page 14).

²² It has been shown by Caceres (2008) that if El Salvador undertook a fiscal reform conducive to increase tax revenues by 3 percentage points, under the assumption that all additional revenue be destined to the expansion of public investment, the size of the resulting GDP in 2025 would be close to \$5,500 million larger than in the case of no fiscal reform; as well, the additional tax revenues would be \$850 million, implying larger salaries and profits, and lower levels of violence.

²³ An article in The Washington Post, on November 28, 2015, on the visit of Pope Francis to Kenya describes the point that: “Francis told the crowd that the way to prevent the young from being radicalized is to give them an education and a job. “If a young person has no work, what kind of a future does he or she have? That’s where the idea of being recruited comes from”, he said” (page A4).

It is also relevant to make reference to the April 28 edition of The York Times, which in the article As Colombia Pursues Peace, a Former Girl Soldier Seeks a Path, points out the importance that poverty and hunger may play in generating or expanding social conflict: “Melida was only 9 when guerillas fighters lured her away with the promise of food as she played on the floor” (Page A1).

“Melida said that when her captors came to her house along the river, they drew her attention by saying they had soup in their canoe” (page A6).

²⁴ Individual suicidal tendencies could be embedded, or submerged, in the waves of crime and violence experienced in some Latin American countries, as a response of the lack of perspectives in terms of employment and social protection. It is relevant to make reference to the increasing suicide rate in the US reported by the New York Times, April 22, 2016, which quotes Julie Phillips, a professor at Rutgers University who has studies this phenomenon: “Disappointed expectations of social and economic well-being among less educated white men from the baby-boom generation may also be playing a role...It appears this group isn’t seeking help but rather turning to self-destructive means of dealing with their despair... Another possible explanation: an economy that has eaten away at the prospects of families on the lower rungs of the income ladder.”

It is possible to make a paragon of the rising suicide rates reported in the US and violence in some Latin American countries, by identifying common causes of joblessness and hopelessness; the Washington Post of April 11, 2016 has reported That: “The wave of lethal agents rolling across the country is broad in its effects, but it appears to be cresting in places that are particularly vulnerable – such as a town where the trains no longer stop, or a small city that saw its biggest manufacturer move overseas, or in a household broken by divorce or substance abuse or tragedy. Or in the mind and body of someone who is doing poorly, and just barely hanging on”.

²⁵ The Washington Post reports about a recent study by the Northern Virginia Health Foundation and Virginia Commonwealth University’s Center on Society and Health, with the main result being that there is life expectancy difference between children born in affluent and poor neighborhoods: “A baby born in parts of western Lorton, for example, is expected to live to 89; a newborn a short distance away in Manassas has a life expectancy of 76 years... A different future awaits children born blocks apart in Northern Virginia, the report concludes...Babies in Alexandria’s Seminary Hill neighborhood, which has an average income of \$186,705, can be expected to live 84 years the report found. A few census tracts north in Alexandria, where the average income is \$44,624, the life expectancy drops to 79. The disparities can be attributed to health-care access and individual behaviors, according to the report, but the largest influences are education, income and race... Healthier conditions could be achieved through public policy to boost employment levels and early childhood education, the report argues” (Washington Post June 7, 2016, page B2).

The case maybe that there are “vaccinations” to delay early death from cancer. The Washington Post. April 12, 2016, describes the research by Scarlet Lin Gomez and Maria Elena Martinez who examined records from 800,000 US adults diagnosed with cancer in the period 2000-2009, with The Post indicating that: “They sliced the data by income, race, insurance status and other factors and found that unmarried patients suffered from higher death rates than their married counterparts...According to their analysis, men had a death rate that was 27 per cent higher than those who were married. For unmarried women the death rate was 19 per cent higher. (“Marriage Increases the Odds of Surviving Cancer, Studies Find”, page A3).

²⁶ Meller and Litschig (2014) add that a previous evaluation (Lutter et al, 2008) encountered that the PANN 2000 gave rise to increases in children's height and weight and to the reductions in the prevalence of children being underweight or anemic in 65 and 58 per cent respectively. They also pointed out the results of the evaluation conducted by Newman et al (2002) in Bolivia of programs of health facility upgrading and provision of supplies, which indicated that the program was conducive to the reduction of child mortality by 44 per cent; as well, the evaluation of health impacts of investments in water supply in Bolivia led to the reduction in child mortality in 42 per cent.

²⁷ UNICEF (2009) has indicated that a global annual investment of 30 million on zinc and A vitamin supplements would yield a benefit of \$1,000 million.

²⁸ On the importance and design of children's budgets see Cáceres (2016b).

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ANNEX 1

UNIT ROOT TESTS (ADF)

Variable	“t” statistic	Significance levels		
		1%	5%	10%
Calidemplfem	0.6895	4.0579	3.1199	2.7011
Calidemplmasc	1.4631	3.9591	3.0810	2.6813
Coberturapensiones	0.8625	4.0044	3.0988	2.6904
Coberturasalud	1.6241	3.9591	3.0810	2.6813
Trustinpeople	2.3386	3.8867	3.0522	2.6666
Trustgovernment	4.5538	3.9204	3.0656	2.6735
Controlcorruption	3.8810	3.9591	3.0810	2.6913
Youthemplyfem	3.2381	3.8867	3.0522	2.6666
Youthemplymasc	2.4671	3.8867	3.0522	2.6666
Rulelaw	2.1333	3.9591	3.0810	2.6813

Homicides	3.0377	3.8867	3.0522	2.666
Felicidad	2.2983	3.8867	3.0522	2.6666
Gastosocial	2.4464	4.0044	3.0988	2.6904
Gini	4.2001	3.8867	3.0522	2.6666
IOH	1.6831	4.0044	3.0988	2.6904
PIBPC	2.2255	3.9591	3.0810	2.6813
Q5Q1	4.2114	3.8867	3.0522	2.6666
Reduccionpobreza	3.9428	3.8867	3.0522	2.6666
Reducciondesigualdad	4.1175	3.8867	3.0522	2.6666
Remesas	0.1083	3.7591	3.0810	2.6813
Salarioreal	2.6202	4.1220	3.1449	2.7138
TaxGDP	3.9701	4.0044	3.0988	2.6904
