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Perceived Happiness and Economic Development: Easterlin Paradox and the Latin American Case

(Comparative Test of the Effect of Corruption on life satisfaction in East Asia and Latin America)

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Abstract

This study contributes to growing research on the determinants of subjective wellbeing (SWB). We explored the relationship between corruption perceptions index (CPI) and SWB using panel data for Latin America and East Asia & Pacific countries. Our results suggested that CPI has U-shaped link with SWB in Latin America, while it was insignificantly related to SWB in East Asia and Pacific.

Keywords: Corruption; Life Satisfaction; Subjective Well Being; Latin America; East Asia.

Introduction

Over the past decades academic studies evidenced a significant increase in the research on the predictors of life satisfaction (Bjørnskov et al., 2008; Dorn et al., 2007; Ebrahim et al., 2013; Hou, 2014; Mata, 2002; Ngoo et al., 2015). These studies explored largely about antecedents of subjective wellbeing at individual (Borges et al., 1984) and cross-country levels (Helliwell & Huang, 2008).

The research at micro-economic levels found that income (Plouffe & Tremblay, 2017), religion (Bergan & McConatha, 2001), trust (Mueller, 2005), health (Ngamaba et al., 2017) and other factors are cases off life satisfaction at individual levels. At the cross-country levels, the life satisfaction has been correlated to democracy (Inglehart & Klingemann, 2000), economic growth (Bjørnskov, 2003), life expectancy (Veenhoven, 1996), unemployment (Gallie & Russel, 1998) and institutions (Nikolaev, 2016). In this study, we contribute to the research on the link between quality of institutions and life satisfaction, by investigating the relationship between corruption and SWB for all countries, Latin America and East Asia. We do this to assess the effect of corruption differs across globe and across selected regions of interest.

For example, Stockemer and Sundström (2013) investigated the effect of corruption and perceptions of democracy and life satisfaction in Europe. The authors controlled for micro-level variables, macroeconomic factors and demographic characteristics, when using hierarchical linear model. The study found that on individual level, corruption hampers wellbeing, while at the macroeconomic levels the effect vanishes.

Wu and Zhu (2016) investigated at wich extent, corruption experience at individual level is related to happiness in China. The study, with data from nationwide Asian Barometer Survey (ABS) conducted in China in 2002, contained rich data for more than 2700 observations. The study documented that the effect of corruption on SWB is non-monotonic. For example, in regions with low levels of corruption, individual's experience with corruption has significant effect on life satisfaction and vise versa. In a similar vein, Obydenkova and Salahodjaev (2017) assessed whether the effect of bureaucracy on life satisfaction was conditional on the levels of cognitive abilities. The authors used data from 138 countries and regression life satisfaction index on government size, cognitive abilities, income inequality and GDP per capita, and regional dummy. The study reported that government size has also non – monotonic effect on SWB conditional on level of cognitive skills of society.

A more recent study by Tay et al. (2014), using data from Gallup World Poll, found that corruption lowers institutional trust and income, which in turn reduces life satisfaction across countries. The study concluded with a statement:

"residents who have higher perceptions of corruption—likely due to perceived injustices and experiences of corruption—have lower [life satisfaction]" (p. 758).

While exploring the determinants of life satisfaction, Helliwell et al. (2009), found that even after controlling for gender, age, marital status, income and freedom; perceived corruption has a significant negative effect on life satisfaction across more than 68 000 individuals around the globe.

Data

The dependent variable in this study is life satisfaction downloaded from the World Happiness Report by Helliwell, Layard and Sachs (2015). In this report life satisfaction was estimated from responses to the Cantril ladder question: 'Please imagine a ladder, with steps numbered from 0 at the bottom to 10 at the top. The top of the ladder represents the best possible life for you and the bottom of the ladder represents the worst possible life for you. On which step of the ladder would you say you personally feel you stand at this time?" The data is from 2005 to 2015 in our study.

The main independent variable is corruption perceptions index. The index, which ranks 180 countries and territories by their perceived levels of public sector corruption according to experts and businesspeople, uses a scale of 0 to 100, where 0 is highly corrupt and 100 is very clean. The Corruption Perceptions Index (CPI) aggregates data from a number of different sources that provide perceptions by business people and country experts of the level of corruption in the public sector.

Considering that life satisfaction is predicted by other variables apart from corruption, we also controlled for a set of potential antecedents of life satisfaction.

First, we controlled for the GDP per capita as economic progress may increase happiness of the citizens (Mikucka et al., 2017). The data for GDP per capita is from World Bank.

Next, we controlled for the democracy index from Freedom House. For example, Owen et al. (2008) found that democracy is positively related to individual's level of life satisfaction in a sample of 46 nations. Orviska et al. (2014) tested the hypothesis that governance has effect on wellbeing. The study also found a significant regional positive effect on both life satisfaction and happiness of individuals.

We also controlled for the level of inflation, life expectancy and unemployment rates from World Bank. The descriptive statistics are presented in Table 1. Figures 1 and 2 plot CPI scores for Latin America and East Asia countries.

To assess the effect of corruption on SWB we estimateed the following econometric model:

$$SWB_{i,t} = a + b*CPI_{i,t} + c*lnY_{i,t} + X_{i,t}d + e_{i,t}$$

where SWB is life satisfaction in country i at year t, CPI is corruption perceptions index, lnY is logged GDP per capita, X is a set of control variables and e is an error term. We estimated the model using fixed effect regions to take into account the effect on time invariant unobserved characteristics of each country.

Figure 1: Corruption Perception Index in Latin America

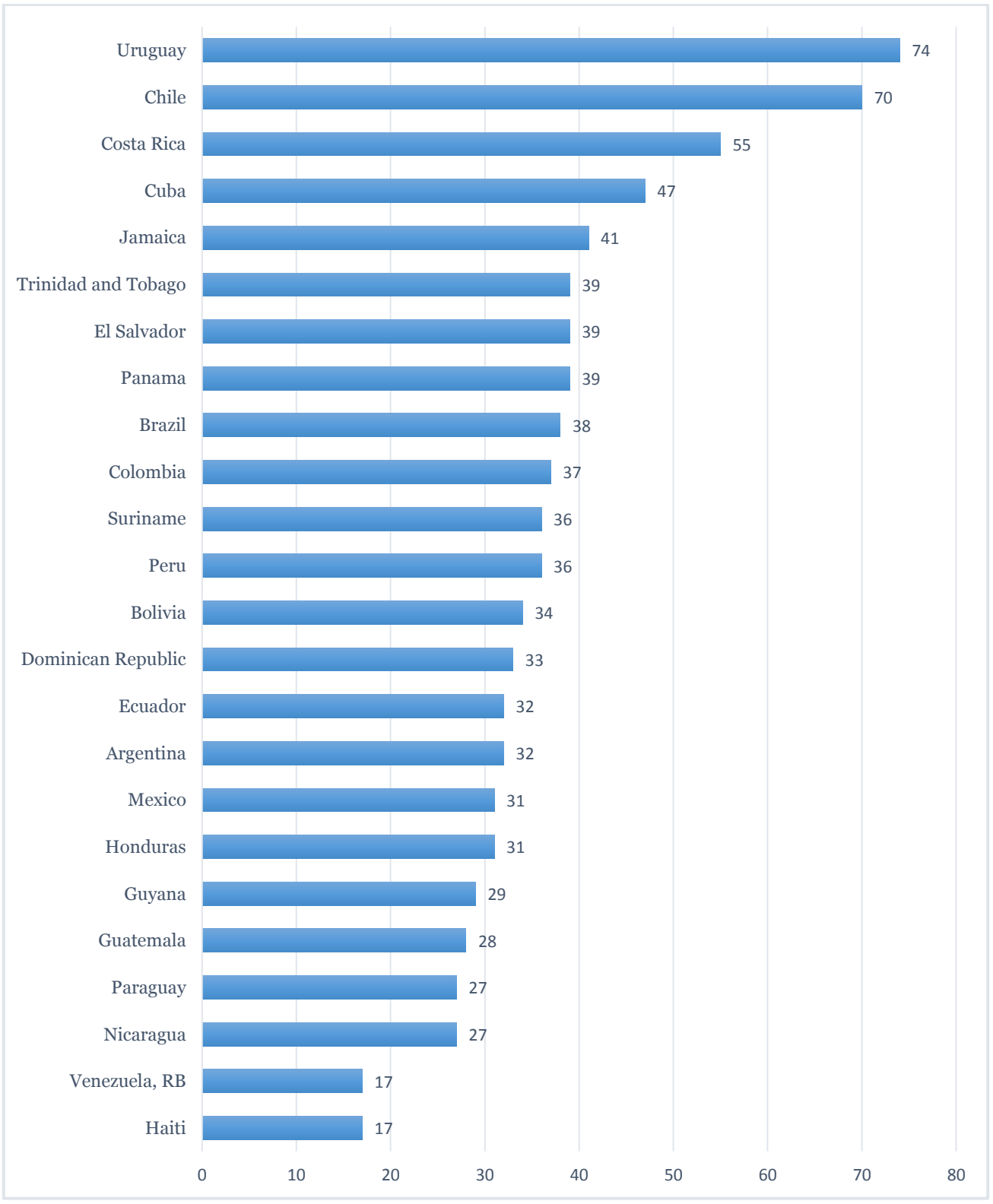

Figure 2: Corruption Perceptions Index in East Asia

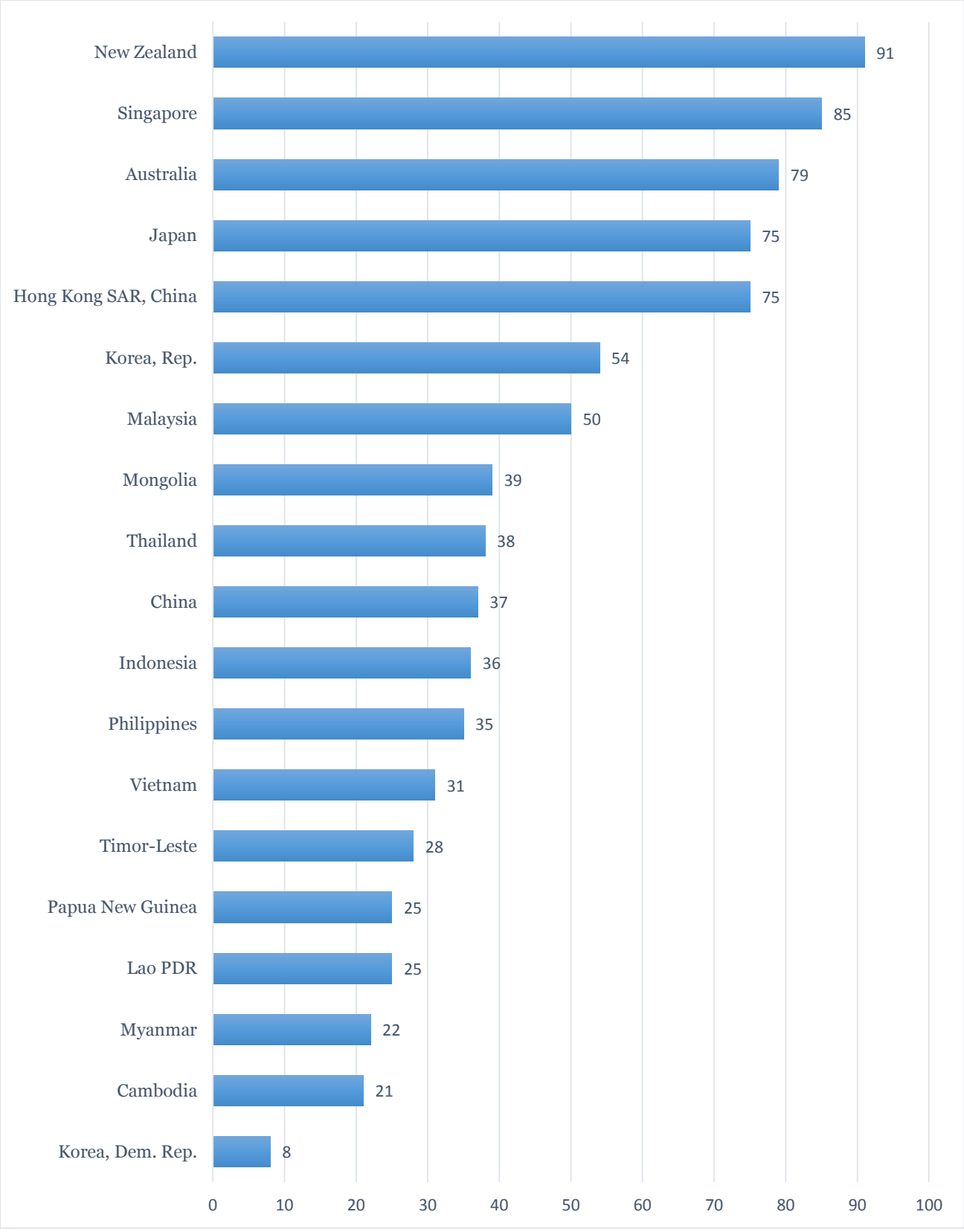

Figure 3: Corruption vs. Life Satisfaction in Latin America, 2015

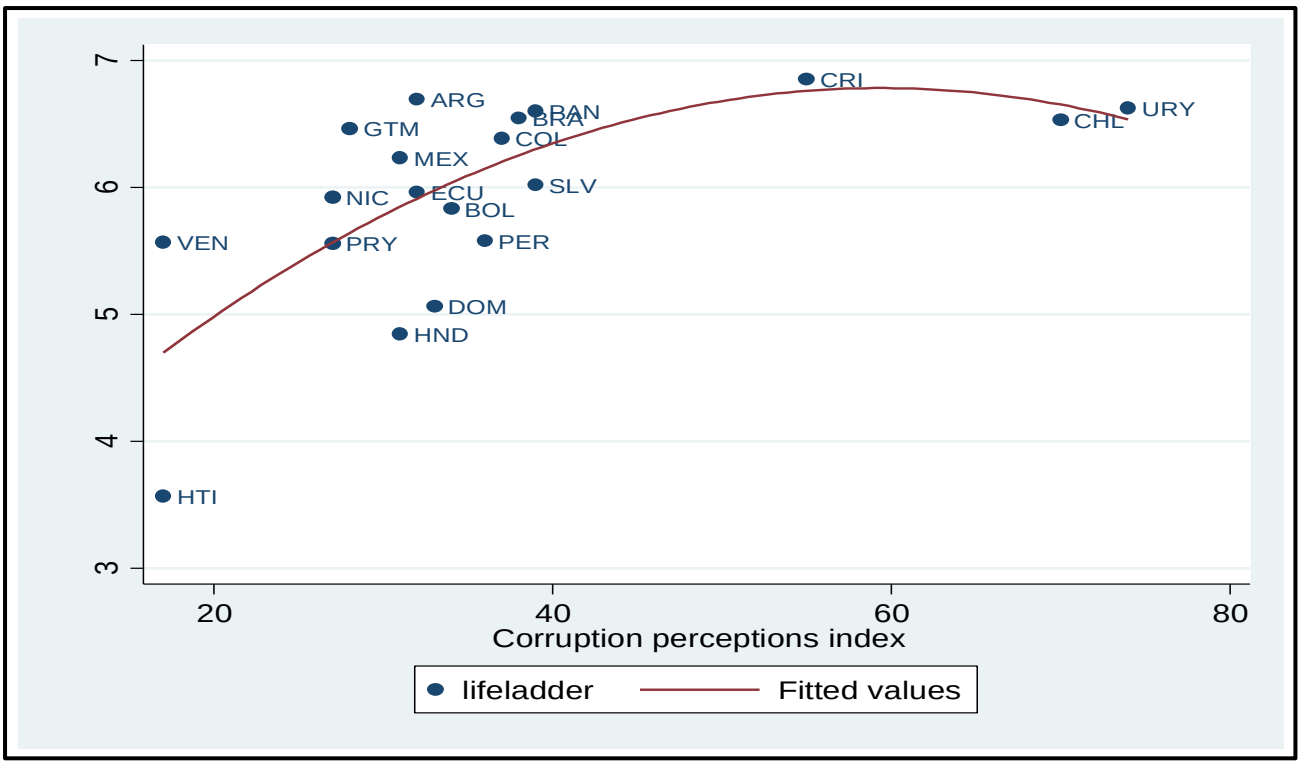

Figure 4: Corruption vs. Life Satisfaction in East Asia and Pacific, 2015

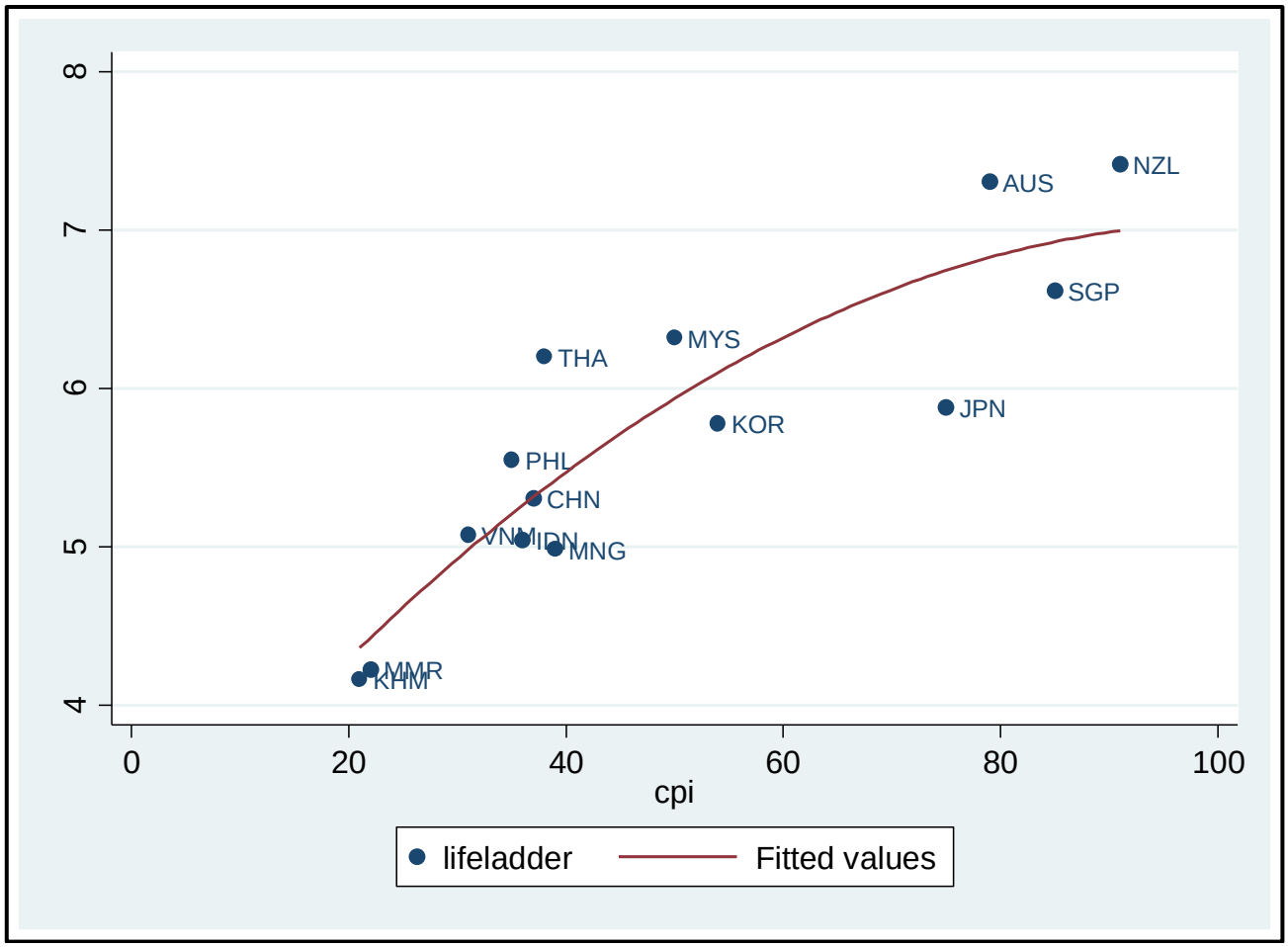

Table 1: Descriptive Stats					
Variable	**Description**	**Mean**	**SD**	**Min**	**Max**
SWB	Life satisfaction index,	5.43	1.13	2.69	8.02
CPI	Corruption perceptions index	14.31	19.88	0.4	92
lnY	GDP per capita, logged, PPP international dollars	8.94	1.24	5.51	11.83
Unemployment	Unemployment rate, %	8.92	6.31	0.1	39.3
Democracy	Democracy index	4.55	2.00	1	7
Inflation	GDP deflator, %	39.21	501.62	-31.57	26762.00
Life expectancy	Average life expectancy, years	68.10	9.72	27.61	85.42

Results

The main results are reported in Table 2. Column 1 estimated the effect of CPI on SWB using data for all the 157 countries in our sample. We found that CPI has U shaped association with SWB. This implies that low levels of corruption have positive effect on SWB, as for, example it fosters economic growth. **The curve turns when countries reach 55 points in CPI scale** (approximate to the levels of Costa Rica in 2015). We also found that economic development has significant positive impact on SWB. When GDP per capita increases by 10%, SWB rises by 0.1 points.

In column 2, we now restricted our sample to Latin American countries. Again, we found that CPI has U shaped link with SWB in Latin America. The results are further supported by figure 3, which suggests a clear nonlinear link between anti-corruption policies and SWB. In addition, we also found that **the effect of economic growth is stronger on life satisfaction in Latin America**. For instance, when GDP per capita increases by 10%, SWB rises by 0.17 points.

In column 3, we now re-estimated these associations for East Asia and Pacific countries. On this side we found that corruption is insignificantly related to SWB in this region. Moreover, we documented that the effect of economic growth on SWB was smaller compared to Latin America.

In columns 4-6 we now introduce remaining control variables in our model. For the global sample we find that only unemployment rates are negatively linked to life satisfaction. For the sample of Latin America countries, we find that life expectancy is instrumental to increasing wellbeing: a 10-year increase in life expectancy is associated with 1.9 points increase in SWB. For the sample of East Asia and Pacific, we find that unemployment rates are detrimental to wellbeing.

Table 2: Main Results						
	(1)	(2)	(3)	(4)	(5)	(6)
CPI	-0.005***	-0.008*	-0.002	-0.004**	-0.017***	-0.002
	(0.002)	(0.005)	(0.005)	(0.002)	(0.006)	(0.005)
CPI2	0.000**	0.000*	0.000	0.000*	0.000***	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
lnY	1.102***	1.699***	0.924***	0.904***	1.535**	1.141**
	(0.140)	(0.464)	(0.308)	(0.182)	(0.682)	(0.460)

Unemployment				-0.032***	0.025	-0.096**
				(0.007)	(0.036)	(0.044)
Democracy				-0.008	0.006	-0.072
				(0.037)	(0.130)	(0.115)
Inflation				-0.001	-0.003	0.010
				(0.002)	(0.006)	(0.007)
Life expectancy				-0.010	0.193***	-0.043
				(0.012)	(0.069)	(0.061)
_cons	-4.642***	-9.555**	-3.176	-1.795	-22.303***	-1.318
	(1.278)	(4.237)	(2.904)	(1.559)	(6.533)	(3.735)
N	1234	199	141	1084	181	120
adj. R^2	-0.084	-0.014	-0.009	-0.079	0.037	0.009
Sample	All	Latin America	East Asia	All	Latin America	East Asia
Standard errors in Parentheses, * p<0.1, ** p<0.05, *** p<0.01						

In Table 3, we test the robustness of our main results for Latin America. We add a number of alternative control variables to our empirical mode. We add GDP growth from World Bank (column 1), remittances as % of GDP from World Bank (column 2), age dependency ration from World Bank (column 3) and KOF index of globalization (column 4). Again CPI has U-shaped association with SWB.

Table 3: Robustness Test for Latin America

	(1)	(2)	(3)	(4)
CPI	-0.017***	-0.016***	-0.015**	-0.016***
	(0.006)	(0.006)	(0.006)	(0.006)
CPI2	0.000**	0.000**	0.000**	0.000**
	(0.000)	(0.000)	(0.000)	(0.000)
lnY	1.665**	1.360*	1.579**	1.585**
	(0.686)	(0.688)	(0.680)	(0.696)

Unemployment	0.025	0.020	0.041	0.028
	(0.036)	(0.036)	(0.037)	(0.037)
Democracy	0.032	-0.025	-0.048	0.012
	(0.131)	(0.133)	(0.135)	(0.131)
Inflation	-0.004	-0.000	-0.003	-0.003
	(0.006)	(0.007)	(0.006)	(0.006)
Life expectancy	0.181**	0.199***	0.300***	0.186***
	(0.070)	(0.074)	(0.099)	(0.071)
GDP growth	-0.013			
	(0.009)			
Remittances		0.001		
		(0.041)		
Age ratio			0.037	
			(0.024)	
Globalization				-0.004
				(0.010)
Constant	-22.703***	-20.969***	-32.531***	-22.085***
	(6.516)	(7.080)	(9.380)	(6.573)
N	181	178	181	180
adj. R^2	0.044	0.039	0.046	0.037
Standard Errors in Parentheses, * p<0.1, ** p<0.05, *** p<0.01				

Conclusion

The aim of this study was to assess the relationship between corruption and SWB at different regions. Recent studies suggested that corruption remains rampant on many developing countries hampering FDI inflow, economic growth and fostering crime rates. Our results extend this research by showing that corruption is related to SWB in Latin America. On this region, Chile and Uruguay have high scores on CPI index, while other countries score well below 60. This implies that reducing corruption levels will foster not only economic progress in the region but also represents increase SWB of citizens.

Our results also suggested that the effect of economic growth is stronger on life satisfaction in Latin America than in the rest of the world. For instance, when GDP per capita increases by 10%, SWB rises by 0.17 points.

Turning to East Asia and Pacific, we found also that CPI was insignificantly related to SWB in this region.

Future studies, should assess the link between CPI and SWB using individual survey data from Latin America to contribute further to this strand of research. In addition, due to the lack of long-spanning data, we were not able to use more sophisticated methods such as generalized methods of moments in our study.

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