

Life Satisfaction and Confidence in National Institutions: Evidence from South America

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Abstract A number of South American countries experienced turbulent democratic, political and economic upheaval over the last 40 years in the form of coup d'états in the 1970s, tumultuous elections, and repeated severe economic crises, some of which happened fairly recently. Starting in 2010, a number of court proceedings across the region have made past military coup d'états the focus of national conversations. South American citizens may, therefore, have lost confidence in national institutions that have repeatedly disappointed their trust and expectations; a situation with potentially detrimental effects on their well-being. Using eight waves of the Gallup World Poll collected between 2009 and 2016 across ten South American countries, we investigate to what extent people's confidence in financial institutions, the honesty of elections, the military, the judicial system, the national government and the police is associated with people's current and expectation of future life satisfaction. We find that people who report confidence in these six institutions rate their current and expected life satisfaction, on average, to be higher than those who lack these types of institutional confidence, even after controlling for demographic factors and macroeconomic indicators. In addition, we investigate changes over time for all six measures of confidence in institutions as well as for current and expectation of future life satisfaction. Our results suggest that governments' investments in well-functioning institutions may contribute positively to subjective well-being in a society. However, our analysis is correlational and we thus cannot rule out reverse causality.

Keywords Confidence in national institutions · Subjective well-being · Life satisfaction · South America

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Introduction

What happened to people's confidence in national institutions in South America between 2009 and 2016? Given South America's turbulent economic and political history it can be expected that confidence in institutions has been similarly volatile over time. However, do changes in confidence in national institutions actually matter for a society? To investigate this question, we will look at associations between confidence in six national institutions and subjective well-being in South America.

Subjective well-being indicators are frequently employed to investigate the well-being consequences of life circumstances at the individual (micro) level, such as health, friendships, changes in marital status, education, and social capital (e.g., Blanchflower and Oswald 2004; Putnam 2001). However, people's quality of life is also affected by the functioning of the government, which establishes and regulates institutions that provide many services crucial for individual well-being (e.g.; Frey and Stutzer 2000; Helliwell and Huang 2008). The present study focuses on subjective well-being and its association with six self-reported measures that may serve as indicators of government quality, namely people's confidence in six national institutions. The objectives of this study are twofold. We first examine trajectories of confidence in six national institutions and subjective well-being in ten South American countries over time and, second, discuss associations between these measures. In particular, we investigate whether indicators of confidence in these institutions are significant predictors of individual subjective well-being. The six national institutions include financial institutions, the military, the judicial system, elections, the national government as well as the police. Subjective well-being is assessed in the form of current life satisfaction and expectation of future life satisfaction. We observe a significant downward trend in confidence in financial institutions, the honesty of elections, the judicial system and the national government and a significant upward trend in confidence in the police between 2009 and 2016. The results further show a significant downward trend in subjective well-being during the same time period. Confidence in these six national institutions is significantly positively associated with individual subjective well-being.

Geographically, we focus on South America, a region with a turbulent democratic, political and economic past which severely affected the relationship between its national institutions and citizens. During the 1970s, a number of South American governments were overthrown in coup d'états and replaced by military governments which showed little respect for human rights and the judiciary. For example, during the 1970s, non-democratic governments in Argentina, Chile, Brazil and Uruguay used the military and police units to kidnap, torture and execute political dissidents (Gunson et al. 1991). Peru and Colombia experienced similar human rights violations during the 1980s. These violent episodes were re-lived in court proceedings that took place more than 30 years later (around 2010) during democratic governments (Amnesty International Report 2016/2017 2017; Goñi 2017), thus vividly refreshing citizens' memories of these military governments. Recollections of past political turmoil and human rights abuses may still influence people's confidence in the military, the police, democratic elections and the judicial system. With respect to the economy, the region witnessed numerous sudden and repeated economic crises (De Gregorio 1992; Ocampo 2009; Naim 2015); with the most recent ones occurring in 2001 and 2015 in addition to the impact of the global financial crisis in 2008. The economic instability of the region

may thus affect people's confidence in financial institutions. Using data from the Latinobarómetro, Lagos Cruz-Coke (2001) shows that only a small percentage of the population trusts the judiciary, the police, the national congress and political parties; a result which is in line with the level of institutional trust found in post-communist Europe (Rose and Haerper 1999). The author suggests that these low levels of institutional trust are related to historical, social and institutional factors. We would therefore expect to see changes in confidence in institutions over time in South America.

Background

A country's gross domestic product (GDP) has traditionally been regarded to be the key measure of societal progress. However, its many limitations (e.g., Stiglitz et al. 2009) encouraged scholars to consider alternative measures to assess societal well-being (e.g., Diener et al. 2015; Dolan and White 2007). In recent years, several governments have adopted the use of subjective well-being measures to complement GDP (e.g., in the UK: Hicks et al. 2013; O'Donnell and Oswald 2015). In our study, we assess the relationship between respondents' subjective well-being and confidence in six institutions in ten South American countries. Economic and political determinants of subjective well-being that have previously been investigated include GDP, government quality, satisfaction with democratic processes and different types of polices (Dorn et al. 2007; Helliwell and Huang 2008); we will discuss each one in turn below. Although GDP is significantly positively associated with subjective well-being at a specific point in time (e.g., Di Tella et al. 2003; Stevenson and Wolfers 2008), the Easterlin Happiness-Income paradox (Easterlin 1974) suggests that over time the association between economic output and subjective well-being is nil, a finding which Easterlin and colleagues also confirmed in more recent studies (e.g., Easterlin et al. 2010). If economic growth, indeed, does not 'improve the human lot' (Easterlin 1974), do any other macro-level factors affect subjective well-being? How well a government functions and thus provides essential services for its citizens, may be more crucial for individual well-being.

A government's ability to maintain and regulate essential institutions is partly reflected in government quality which has been found to be positively associated with subjective well-being. Using data from the World Values Survey and a governmental quality measure from the Governance Matters IV database (Kaufmann et al. 2005), Helliwell and Huang (2008) find that the quality of a government strongly dominates per capita income when explaining international differences in life satisfaction. Indicators of the quality of governance that are positively associated with life satisfaction include voice and accountability, stability and lack of violence, government effectiveness, the regulatory framework, the rule of law, and control of corruption (Helliwell 2003), as well as the quality of economic-judicial and political institutions in general (Bjørnskov et al. 2010).

The functioning of a government is also reflected in policies, democratic events and the performance of certain macroeconomic indicators. Citizens who live in countries with liberal governments, usually associated with policies that aim to improve people's quality of life, are more likely to report higher subjective well-being than citizens who

live in countries led by conservative governments (Bok 2010; Pacek and Radcliff 2008; Radcliff 2001). Similarly, institutions of direct democracy (e.g., referenda) and federalism (Frey and Stutzer 2000), successful democratic traditions (Dorn et al. 2007; Inglehart et al. 2008) and individuals' pro-market and pro-democracy attitudes (Graham and Pettinato 2001) have been found to be positively associated with subjective well-being. Some economic indicators that are affected by governmental policies and interventions, such as the unemployment and inflation rate, display a negative relationship with subjective well-being (Clark and Oswald 1994; Di Tella et al. 2001).

Using data from the Eurobarometer survey across EU member countries, Hudson (2006) studies the relationship between institutional trust and life satisfaction. The author finds that people who report trust in the national government, the European Central Bank, the law, the United Nations and the European Union report higher life satisfaction than people who say they do not trust these national institutions. Jovanović (2016) collected his own data and created a five-item scale of institutional trust in Serbia. People answered how much they trust the following national institutions on a 11-point Likert-type scale: the government, local authorities, the judiciary, the police, and the media (e.g., newspaper, television). The study suggests that in Serbia the role of institutional trust in predicting three indicators of subjective well-being (life satisfaction, positive and negative affect) is limited; a result that is not in accordance with previous studies.

Using data from the Gallup World Poll, Clausen et al. (2011) find a significant negative association between confidence in the six national institutions employed in this study and corruption. Moreover, confidence in the police is significantly negatively associated with higher homicide rates and significantly positively associated with the level of democracy in a country (Jang et al. 2010).

To the best of our knowledge, citizens' confidence in national institutions in South America has so far not received any attention in the literature on subjective well-being. Our study fills this gap in the literature by first examining patterns in the average level of confidence in six national institutions and in current and expectation of future life satisfaction between 2009 and 2016. We then analyse the relationship between confidence in national institutions and subjective well-being in order to establish to what extent declining or increasing institutional confidence may matter for societal well-being. As in the EU (Hudson 2006), we expect to find a positive relationship.

Data and Methods

Data

We employ data from the Gallup World Poll which was collected in ten South American countries -Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Paraguay, Peru, Uruguay and Venezuela - between 2009 and 2016. The data are repeated cross-sections that are representative of the population in every country in each survey year. Although the Gallup World Poll provides data for the 2005–2016 time period, we chose to restrict our dataset to the shorter 2009–2016 time span because of the availability of a larger number of countries and variables in these years. Our final sample of 57,390 observations covers ten countries and eight survey years.

Measures

Dependent Variables

We use Cantril's Ladder of Life Scale (1965), both in relation to present and future well-being, to evaluate the relationship between subjective well-being and confidence in national institutions in South America. Our first dependent variable, *Life satisfaction – Present*, is based on the following question: "Please imagine a ladder with steps numbered from zero at the bottom to ten at the top. Suppose we say that 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, assuming that the higher the step the better you feel about your life, and the lower the step the worse you feel about it? Which step comes closest to the way you feel?"

Our second dependent variable is *Life satisfaction – Future*, a measure that is based on a very similar question, but reflects people's expectations of future life satisfaction by adding at the end of the description of the ten steps: "Just your best guess, on which step do you think you will stand on in the future, say about five years from now?" As can be inferred from the questions, the scale of both dependent variables ranges from 0 to 10 with higher values denoting a higher level of life satisfaction.

Main Independent Variables

Five of our six measures of confidence in national institutions are based on the following question "In 'your country' do you have confidence in each of the following, or not? How about *the financial institutions, the honesty of elections, the military, the judicial system, the national government?*" Confidence in each of these national institutions represents a different independent variable with answer categories 'yes' and 'no'. We code these as dummy variables with 1 denoting 'yes' and 0 denoting 'no'.

The variable *Confidence in the police* is based on the following question "In the city or area where you live, do you have confidence in the local police force, or not?" with answer categories 'yes' (1) and 'no' (0).

Control Variables

We consider socio-demographic factors that have been found to be associated with subjective well-being as additional explanatory variables: age, gender, level of education, income, marital and employment status (e.g., Frey and Stutzer 2002). Previous research suggests that subjective well-being is U-shaped in age, i.e., it declines until middle age followed by a gradual increase (e.g., Blanchflower and Oswald 2008; Frijters and Beatton 2012; Graham and Pettinato 2001); therefore, we model age as non-linear by including both age and age squared. As women report, on average, higher subjective well-being than men (e.g., Alesina et al. 2004), we further include gender as a control variable in our models. Unemployment and divorce or marital separation are usually negatively associated with subjective well-being (e.g., Clark 2003; Clark and Oswald 1994) and we thus include in our models the respondent's employment and marital status. We also consider the respondent's highest level of

education (e.g., Blanchflower and Oswald 2004) and household income (e.g., Oswald 1997) as these are usually positively associated with subjective well-being. Our measure of income represents annual household income in international dollars adjusted for inflation, thus making the income measure comparable across time and between countries. Our dataset contains households that report a household income of 0. We therefore use the log of annual household income plus one international dollar, i.e. $\log(\text{household income} + 1)$, in our regressions as it is not possible to take the log of 0.

We also include three macroeconomic indicators which may influence people's confidence in national institutions and that have previously been found to be associated with subjective well-being: the unemployment rate (% of total labour force, World Bank 2017), the inflation rate (CPI, annual %, United Nations 2017) and the log of gross domestic product (GDP) per capita (in constant 2010 US\$, World Bank 2017)¹. Table 1 shows the summary statistics of the variables included in the analysis.

Analytical Strategy

We first fit ordinary least squares (OLS) trend lines for each of the six variables denoting confidence in national institutions and for the two dependent variables denoting subjective well-being over the full time span available in our dataset. The trend curves were computed by regressing each of the eight variables on survey year. We also tried specifications in which time (survey year) was modelled as non-linear by adding the square of time, but the coefficient for this variable was not significant and we therefore continued with the models that include time as linear. In a second step, we examine the relationship between respondents' confidence in national institutions and subjective well-being using ordered logit and OLS regressions, as our two dependent variables – Cantril's ladder questions about present and future well-being – can be interpreted as being ordered categorical or continuous. The results are similar for both methods and are thus robust to methodology (we report the OLS results in Table 2. The ordered logit results are available from the authors upon request). It has been shown previously that treating subjective well-being measures as either cardinal or ordinal does usually not change results (Ferrer-i-Carbonell and Frijters 2004). The first set of regressions contains only socio-demographic variables as control variables; we add macroeconomic indicators in a second set of regressions. Both model specifications include country and year fixed effects to account for similarities in cultural, political and economic circumstances within countries and in specific survey years.

Results

Trends in Confidence in National Institutions and Life Satisfaction

What can be said about trends in confidence in the six national institutions over the 2009–2016 time period? Confidence in financial institutions, the honesty of elections, the judicial system and the national government display a significant downward trend

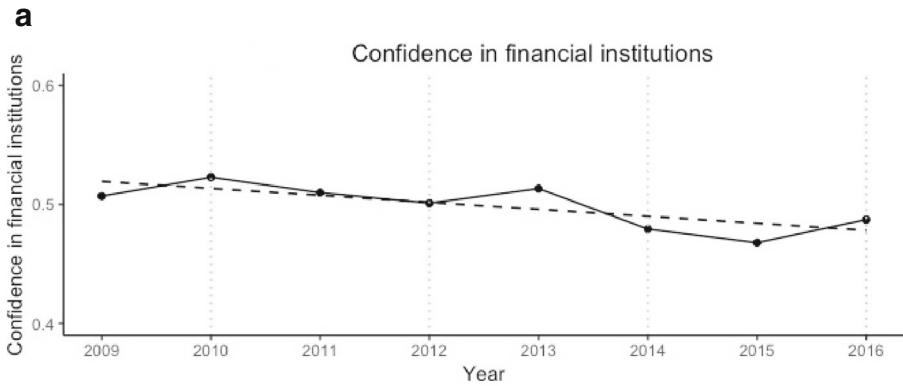
¹ GDP per capita data are not available for Venezuela in 2014, 2015 and 2016.

Table 1 Summary statistics

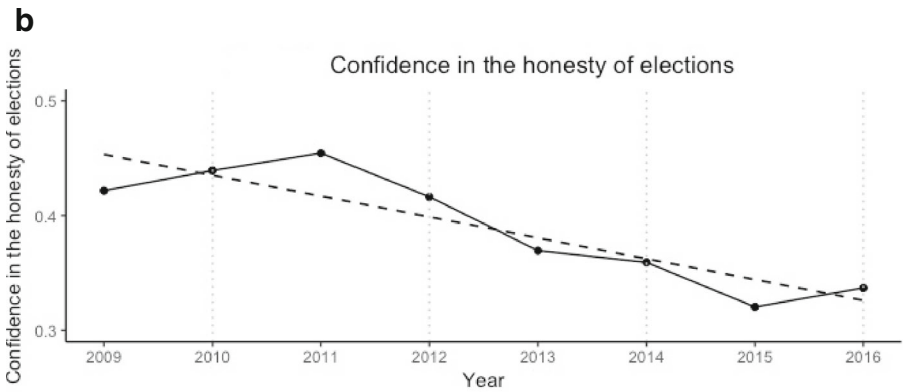
Variable	N	Mean (%)	St. Dev.	Min	Max
Life satisfaction – Present	76,169	6.164	2.277	0	10
Life satisfaction – Future	69,882	7.462	2.393	0	10
Confidence in financial institutions	71,390	0.499	0.500	0	1
Confidence in the honesty of elections	72,189	0.389	0.488	0	1
Confidence in the military	72,257	0.503	0.500	0	1
Confidence in the judicial system	72,343	0.327	0.469	0	1
Confidence in the national government	72,800	0.433	0.495	0	1
Confidence in the police	73,058	0.490	0.500	0	1
Male	76,884	39.8%			
Age	76,884	44.895	17.934	18	100
Level of education					
Elementary education (up to 8 years of basic education)	75,759	35.3%			
Four years of education beyond high school and/or a 4-year college degree	75,759	10.5%			
Three years of secondary education and some education beyond secondary education (9–15 years)	75,759	54.2%			
Marital status					
Single/never married	75,932	27.2%			
Domestic partner	75,932	15.7%			
Married	75,932	39.1%			
Separated	75,932	6.1%			
Divorced	75,932	3.2%			
Widowed	75,932	8.7%			
Employment status					
Employed full-time for an employer	75,924	26.3%			
Employed full-time for self	75,924	16.1%			
Employed part-time, but want full-time	75,924	6.7%			
Employed part-time, but do not want full-time	75,924	6.2%			
Unemployed	75,924	7.3%			
Out of the workforce	75,924	37.4%			
Log of annual household income +1 (in US dollars)	76,884	8.995	1.291	0	14.050
Log of GDP per capita	74,039	8.886	0.609	7.567	9.617
Unemployment rate	76,884	6.569	2.143	2.300	12.070
Inflation rate	76,884	14.220	40.946	1.500	350.00

(Fig. 1, panels a, b, d and e) whereas confidence in the police improves significantly over the same time period (Fig. 1, panel f).

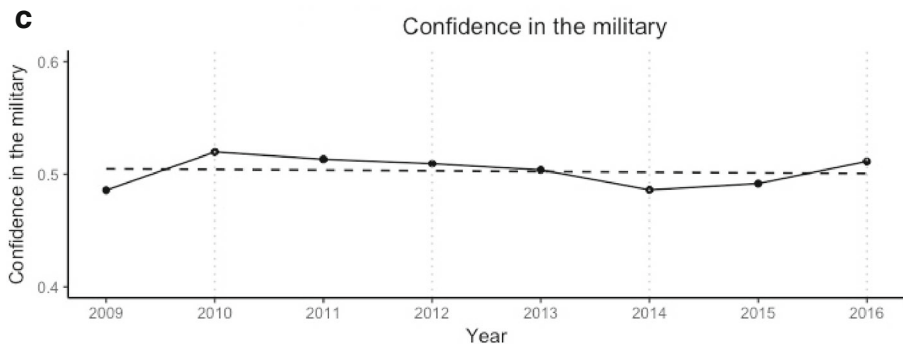
The pattern of life satisfaction, both present and future, over the 2009–2016 time period is in line with the overall trend in confidence in national institutions: current life satisfaction and expectation of future life satisfaction both show a significant downward trend (Fig. 2).



Note: The fitted regression is $y = 0.525 - 0.006x$ (where x = survey wave, range 1-8)
t-stats: intercept = 125.69; slope = -7.12. Adj. $R^2 = 0.001$.

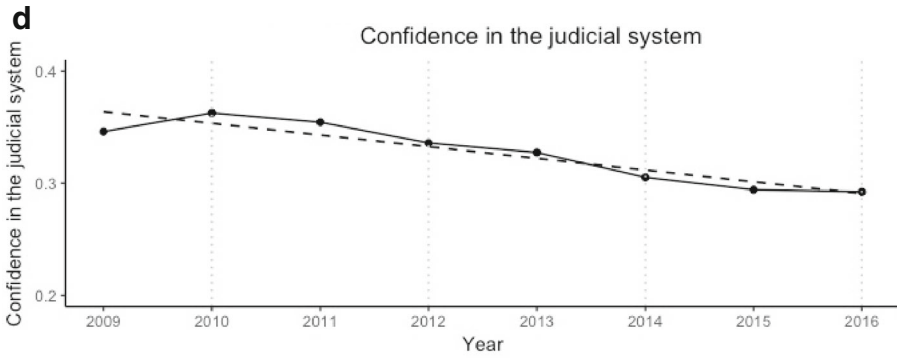


Note: The fitted regression is $y = 0.471 - 0.018x$ (where x = survey wave, range 1-8)
t-stats: intercept = 116.88; slope = -22.81. Adj. $R^2 = 0.007$.

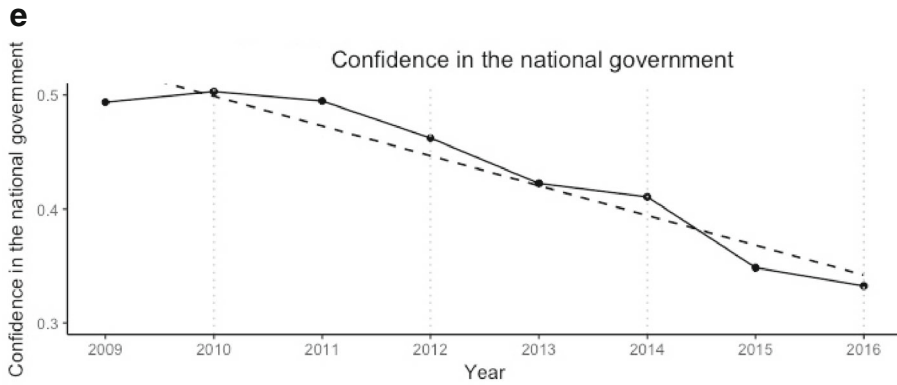


Note: The fitted regression is $y = 0.505 - 0.001x$ (where x = survey wave, range 1-8)
t-stats: intercept = 122.14; slope = -0.73. Adj. $R^2 = 0.0001$.

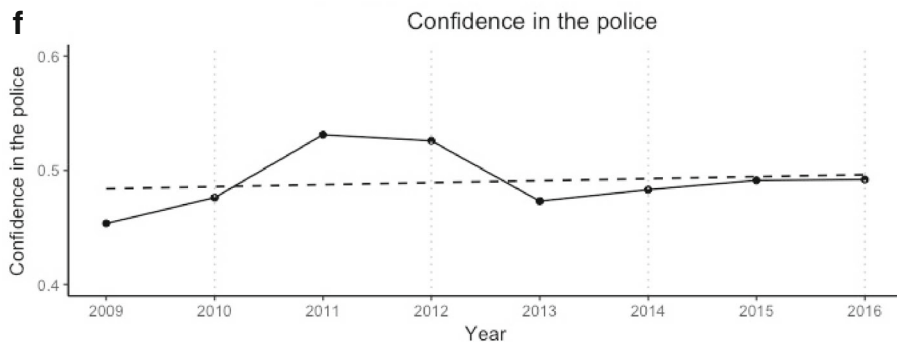
Fig. 1 Confidence in national institutions, annually from 2009 to 2016 in ten South American countries. Mean values (straight line) and fitted regression curve (dashed line)



Note: The fitted regression is $y = 0.374 - 0.010x$ (where x = survey wave, range 1-8)
 t-stats: intercept = 96.4; slope = -13.6. Adj. $R^2=0.003$.

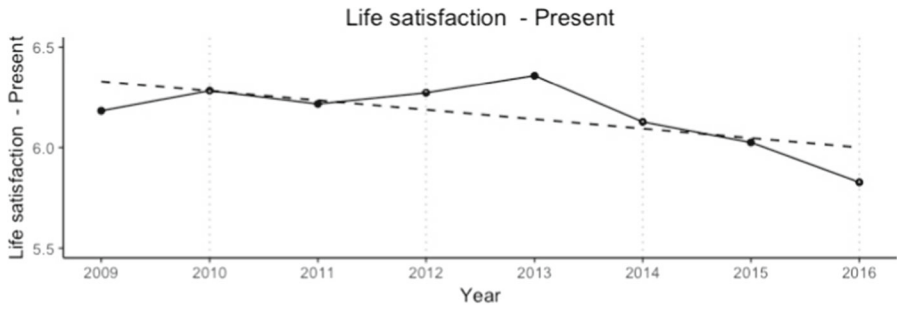


Note: The fitted regression is $y = 0.552 - 0.026x$ (where x = survey wave, range 1-8)
 t-stats: intercept = 135.8; slope = -32.6. Adj. $R^2 = 0.014$.

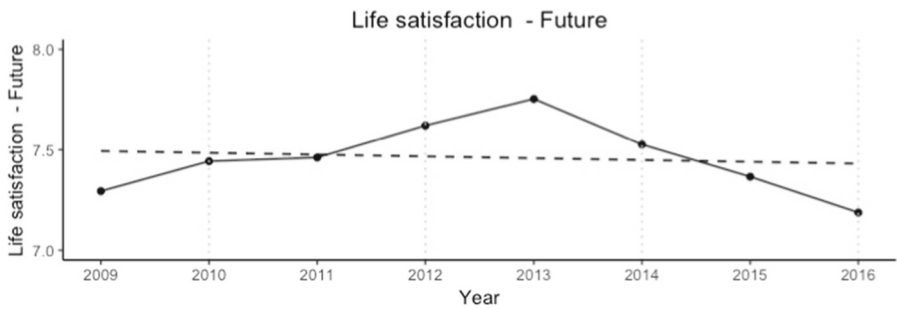


Note: The fitted regression is $y = 0.482 + 0.002x$ (where x = survey wave, range 1-8)
 t-stats: intercept = 117.68; slope = 2.165. Adj. $R^2 = 0.001$.

Fig. 1 continued.



Note: The fitted regression is $y = 6.376 - 0.047x$ (where $x =$ survey wave, range 1-8)
 t-stats: intercept = 348.08; slope = -12.96. Adj. $R^2 = 0.001$.



Note: The fitted regression is $y = 7.502 - 0.009x$ (where $x =$ survey wave, range 1-8)
 t-stats: intercept = 371.94; slope = -2.23. Adj. $R^2 = 0.001$.

Fig. 2 Life satisfaction present and future, annually from 2009 to 2016 in ten South American countries. Mean values (straight line) and fitted regression curve (dashed line)

Confidence in National Institutions and Subjective Well-Being

Over the period of analysis, confidence in national institutions and life satisfaction, both present and future, trend downwards. So, what can be said about the relationship between people's confidence in national institutions and subjective well-being in South America? During the 2009–2016 period, people who report confidence in financial institutions, the honesty of elections, the military, the judicial system, the national government and the police rate their current and expected life satisfaction higher than those who lack this type of institutional confidence (Table 2, columns 1 and 2, respectively). These results are obtained after controlling for socio-demographic factors that have previously been found to be associated with subjective well-being. Women report higher current and future life satisfaction than men. The negative coefficient of age and the positive coefficient of age squared indicate that the relationship between life satisfaction, both present and future, and age is U-Shaped: life satisfaction declines until middle age, followed by an increase thereafter. People who are married, report a higher level of education, are in paid employment and have a higher household income report, on average, higher current and future life satisfaction.

Table 2 Ordinary least squares regressions for present and future life satisfaction, ten South American countries, 2009–2016

Dependent variables	Life satisfaction – Future (4)			
	Life satisfaction – Present (1)	Life satisfaction – Future (2)	Life satisfaction – Present (3)	Life satisfaction – Future (4)
Confidence in financial institutions	0.176 ^{***} (0.021)	0.221 ^{***} (0.022)	0.168 ^{***} (0.021)	0.225 ^{***} (0.021)
Confidence in the honesty of elections	0.171 ^{***} (0.023)	0.138 ^{***} (0.024)	0.144 ^{***} (0.023)	0.109 ^{***} (0.024)
Confidence in the military	0.112 ^{***} (0.022)	0.094 ^{***} (0.023)	0.069 ^{***} (0.021)	0.053 ^{***} (0.022)
Confidence in the judicial system	0.103 ^{***} (0.025)	0.048 [*] (0.026)	0.080 ^{**} (0.025)	0.035 [*] (0.025)
Confidence in the national government	0.144 ^{***} (0.024)	0.213 ^{***} (0.025)	0.128 ^{***} (0.023)	0.201 ^{***} (0.024)
Confidence in the police	0.222 ^{***} (0.020)	0.123 ^{***} (0.022)	0.202 ^{***} (0.020)	0.110 ^{***} (0.021)
Male	-0.171 ^{***} (0.019)	-0.232 ^{***} (0.020)	-0.167 ^{***} (0.019)	-0.229 ^{***} (0.020)
Age	-0.045 ^{***} (0.003)	-0.061 ^{***} (0.003)	-0.044 ^{***} (0.003)	-0.061 ^{***} (0.003)
Age squared/100	0.036 ^{***} (0.003)	0.031 ^{***} (0.003)	0.035 ^{***} (0.003)	0.030 ^{***} (0.003)
Level of education (Ref.: Elementary education (up to 8 years of basic education))				
Four years of education beyond high school and/or a 4-year college degree	0.896 ^{***} (0.034)	0.817 ^{***} (0.036)	0.884 ^{***} (0.034)	0.808 ^{***} (0.035)
Three years of secondary education and some education beyond secondary education (9–15 years)	0.473 ^{***} (0.022)	0.475 ^{***} (0.024)	0.450 ^{***} (0.022)	0.467 ^{***} (0.023)
Marital status (Ref.: Married)				
Single/Never married	-0.106 ^{***} (0.025)	0.044 [*] (0.026)	-0.119 ^{***} (0.025)	0.030 [*] (0.026)
Domestic partner	-0.324 ^{***} (0.028)	-0.078 ^{***} (0.030)	-0.322 ^{***} (0.028)	-0.096 ^{***} (0.029)
Separated	-0.384 ^{***} (0.039)	-0.113 ^{***} (0.041)	-0.353 ^{***} (0.039)	-0.076 [*] (0.041)
Divorced	-0.120 ^{***} (0.053)	0.021 [*] (0.057)	-0.126 ^{**} (0.054)	0.002 [*] (0.056)
Widowed	-0.214 ^{***} (0.038)	-0.061 [*] (0.041)	-0.187 ^{***} (0.038)	-0.031 [*] (0.041)
Employment status (Ref.: Employed full time for an employer)				
Employed full-time for self	-0.217 ^{***} (0.029)	-0.128 ^{***} (0.030)	-0.208 ^{***} (0.029)	-0.106 ^{***} (0.030)

Table 2 (continued)

Dependent variables				
	Life satisfaction – Present (1) Life satisfaction – Future (2) Life satisfaction – Present (3) Life satisfaction – Future (4)			
Employed part-time, but want full time	-0.436*** (0.037) -0.245*** (0.039) -0.429*** (0.037) -0.238*** (0.039)			
Employed part-time, but does not want full time	0.038 (0.039) -0.028 (0.041) 0.026 (0.039) -0.026 (0.041)			
Unemployed	-0.597*** (0.040) -0.329*** (0.042) -0.611*** (0.040) -0.326*** (0.042)			
Out of the workforce	-0.085*** (0.025) -0.210*** (0.027) -0.077*** (0.026) -0.210*** (0.027)			
Log of annual household income +1 (in US dollars)	0.199*** (0.008) 0.177*** (0.008) 0.225*** (0.008) 0.191*** (0.008)			
Log of GDP per capita	- - 0.226 (0.301) 0.849*** (0.314)			
Unemployment rate	- - -0.090*** (0.014) -0.017 (0.014)			
Inflation rate	- - -0.010*** (0.003) -0.018*** (0.003)			
Country fixed effects	Included	Included	Included	Included
Year fixed effects	Included	Included	Included	Included
Constant	5.459*** (0.112)	7.275*** (0.118)	4.094 (2.815)	-0.104 (2.937)
Observations	57,390	53,484	55,107	51,458
Adjusted R ²	0.112	0.160	0.117	0.172
Residual Std. Error	2.132 (df=57,351)	2.175 (df=53,445)	2.097 (df=55,065)	2.106 (df=51,416)
F Statistic	191.076*** (df=38; 57,351)	268.145*** (df=38; 53,445)	179.418*** (df=41; 55,065)	261.389*** (df=41; 51,416)

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$. Standard errors in parentheses. 'df' stands for degrees of freedom

We add macroeconomic indicators in an additional set of regressions (Table 2, columns 3 and 4) and find that people who report confidence in five out of the six national institutions report higher current and expected future life satisfaction. However, people who report confidence in the judicial system only report higher current life satisfaction. The log of GDP per capita is significantly positively associated with people's expectations of future life satisfaction, the unemployment rate is significantly negatively associated with current life satisfaction whereas the inflation rate is significantly negatively associated with both dependent variables.

As our dependent variables are ordered categorical, we also employed ordered logit regressions, which do not assume cardinality of the dependent variable (results not shown. Available from the authors upon request). The similarity between the coefficients of the OLS and those of the ordered logit regressions is very high with respect to the significance and direction of effects.

Discussion and Conclusion

The present study analyses confidence in national institutions in South America in two steps. We first examine trends in confidence in six national institutions - namely, financial institutions, the honesty of elections, the military, the judicial system, the national government and the police - and subjective well-being over the period of analysis and, second, discuss the relationship between these national institutions and two measures of subjective well-being (current and expectations of future life satisfaction). We use data from the Gallup World Poll across ten South American countries collected between 2009 and 2016.

Confidence in the police shows a significant upward trend between 2009 and 2016; a result that may be related to the turbulent democratic past of the region. After years of non-democratic governments and frustrating elections, successful democratically elected governments may strengthen people's confidence in the police. In contrast, confidence in financial institutions, the honesty of elections, the judicial system and the national government displays a significant overall downward trend. These results may be related to the emergence of liberal governments² between 2009 and 2016 as these types of governments are publicly (e.g., in the media) associated with corruption (Castañeda 2016); a factor that is negatively associated with institutional trust (e.g., Jang et al. 2010). The time trends of current life satisfaction and expectation of future life satisfaction resemble those of confidence in national institutions as they both show a significant downward trend over the 2009–2016 time period.

Confidence in these six national institutions is significantly positively associated with both types of life satisfaction, a relationship that persists after controlling for socio-demographic and macroeconomic factors. However, confidence in the judicial system is no longer significantly positively associated with expected life satisfaction once macroeconomic factors are included.

The significant downward trends in confidence in four key national institutions and in our two measures of subjective well-being as well as the significantly positive

² In all countries except for Colombia which had centre-left governments instead of a clearly left-wing government.

relationship between these measures highlight the need for governments' investment in well-functioning institutions. The ability of governments to provide a trustworthy environment may be a key determinant of subjective well-being at the macro level. However, we cannot rule out that this association is merely spurious. The parallel downward trends in subjective well-being and several confidence indicators may have been caused by a third variable that we do not observe in our analysis.

In addition, as the Gallup World Poll data are cross-sectional we are not able to speculate about the direction of causality of these relationships. It is possible that low levels of subjective well-being that are caused by other circumstances lead people to express frustration with (and thus little confidence in) all aspects of their lives, including the six institutions studied in this paper. We thus cannot say with certainty that low confidence in institutions causes low subjective well-being; we can merely observe that there is an association between the two. Experimental research or panel data that allow researchers to link past events with current perceptions could establish much better whether South America's turbulent economic and democratic past, which is reflected in present levels of trust and confidence in institutions, still affects people's current as well as expectations of future life satisfaction. However, to the best of our knowledge, such data are currently not available. Our study therefore presents a first step in describing the role of institutions in this region for citizens' subjective well-being.

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