Subjective well-being and economic and political conditions in Latin America

Lucía Macchia

A thesis submitted to the Department of Psychology

City, University of London

For the degree of Doctor of Philosophy

January 2020

Table of contents

List of tables

List of figures

Acknowledgements

First, I would like to thank my first supervisor, Dr Anke Plagnol, for believing in me since the first day. Thank you for being so patient and supportive every time I came up with a crazy idea! I would also like to thank my second supervisor, Professor Peter Ayton, for his guidance and encouragement during the PhD process.

I would like to thank my wonderful co-authors and those who joined me in this journey for their great advice and support: Richard A. Easterlin, Nattavudh Powdthavee, Ashley Whillans, Dan Ariely, Heather and Andreas Kappes, Stian Reimers, Carol Graham, Christian Krekel, Richard Layard, Joaquin Navajas, Eduardo De Giusti and the amazing team at the Wellbeing Research Centre at the University of Oxford.

I would also like to thank my friends from home: Candela, Camila, Martin, Bel, Ana, Mariu, Marta, Nico, Anto, Cherman and Flor; the ones in London: Pau, Mechi, Cata, Martu, Manuel and Fede; my Cambridge girls: Nica and Grace; all the PhD students from the Psychology department at City, especially Jenny and KaiJia, and City, University of London for the financial support which made this work possible.

I would like to say special thanks to my mum, my dad, my brother and my aunt for their immense support and encouragement even though I think they still don't know how my everyday life looks like.

Declaration

I hereby declare that the work in this thesis is my own, is original and has not been submitted in whole or in part for consideration for any other degree or qualification in this, or any other University. I grant powers of discretion to the University Librarian to copy this thesis in part or in whole without further reference to me. This permission covers only single copies for study purposes. The contents of this thesis are subject to normal conditions of acknowledgement.

The following sections of this thesis have been published or submitted for publication.

Some parts of the introduction:

Macchia, L., & Plagnol, A.C. (2019). The subjective well-being political paradox: Evidence from Latin America. Chapter in: Mariano Rojas (ed.). *The Economics of Happiness: How the Easterlin Paradox Transformed our Understanding of Wellbeing and Progress.* Oxford University Press.

Plagnol, A.C., & Macchia, L. (2018). Economics of subjective well-being: Evaluating the evidence for the Easterlin Paradox. Chapter in: Ayse K. Uskul and Shige Oishi (eds.). *Socioeconomic Environment and Human Psychology: Social, Ecological, and Cultural Perspectives.* Oxford University Press, ISBN: 9780190492908.

Chapter 2:

Macchia, L., Easterlin, R.A., & Plagnol, A.C. Trends and fluctuations in subjective well-being in Latin America since the 1990s. *Target: World Development.*

Chapters 3:

Macchia, L., & Plagnol, A.C. Associations between political orientation and subjective well-being across the electoral cycle in Latin America**.** *Revise and resubmit: Social Forces.*

Chapter 4:

Macchia**,** L., & Plagnol, A.C. (2019). Life satisfaction and confidence in national institutions: Evidence from South America. *Applied Research in Quality of Life, 14(3), 721-736.* https://doi.org/10.1007/s11482-018-9606-3

Chapter 5:

Macchia, L., Plagnol, A.C., & Powdthavee, N. (2019). Buying happiness in an unequal world: Rank of income more strongly predicts wellbeing in unequal countries. *Personality and Social Psychology Bulletin.* https://doi.org/10.1177/0146167219877413

Abstract

This thesis investigates whether macroeconomic and political conditions, governments' and individuals' political orientation and citizens' confidence in national institutions are associated with citizens' subjective well-being in Latin America. The work presented in this thesis aims to contribute to the large body of research that examines subjective well-being as a measure of social well-being and progress. This thesis focuses on Latin America, a region with a turbulent economic and political past that has rarely been the centre of subjective well-being studies. Specifically, I explore the association between economic and political indicators in a period of profound economic reforms in the region (1996-2016). The study included in chapter 2 demonstrates that trends and fluctuations of economic indicators are associated with trends and fluctuations of subjective well-being. Chapter 3 shows that governments' and individuals' political orientation are associated with citizens' subjective well-being and that subjective well-being varies over the electoral cycle. Chapter 4 provides evidence that citizens' confidence in national institutions is positively associated with citizens' subjective well-being. Finally, chapter 5 demonstrates that income inequality, one of the most relevant socio-economic problems of the region, moderates the association between income rank (a measure that involves comparisons of income) and subjective well-being. The studies included in this thesis reveal how economic and political conditions are associated with one of the ultimate goals of every society, citizens' well-being, in a region with a turbulent economic and political past like Latin America.

Chapter 1. Introduction and literature review

Introduction

Prior research has shown that individual, macroeconomic and political circumstances are associated with subjective well-being (SWB). Healthier, more educated, married and employed people report, on average, higher life satisfaction than those with poorer health status, lower level of education and those who are not married and are not in full time employment (e.g., Blanchflower & Oswald, 2004; Dolan, Peasgood, & White, 2008; Oswald, 1997; Shields & Price, 2005). Similarly, those who live in a country with higher Gross Domestic Product (GDP), lower unemployment and inflation rates, higher social protection spending and higher quality governmental institutions are also more satisfied with their life (e.g., Alesina, Di Tella, & MacCulloch, 2004; Clark & Oswald, 1994; Di Tella, MacCulloch, & Oswald, 2003; Helliwell & Huang, 2008). In this thesis, I focus on Latin America, a region with a turbulent economic and political past, that has rarely been the centre of subjective well-being studies. Specifically, I explore whether macroeconomic and political conditions, governments' and individuals' political orientation and citizens' confidence in national institutions are associated with citizens' subjective well-being. In addition, I examine whether income inequality moderates the association between income rank (i.e., a form of relative income) and subjective well-being. The association between income (absolute and relative) and subjective well-being has been the focus of an extensive debate in the literature. Exploring how this relationship is moderated by income inequality in Latin America is particularly relevant because the region has presented historically high levels of income inequality, a socio-economic factor that has been found to be associated with subjective well-being.

In this chapter, I firstly describe the economic and political history of the region focus of this thesis, Latin America. Then, I discuss previous findings and relevant theories on subjective well-being. Specifically, I present definitions and components of subjective

well-being, and describe domain satisfaction and known predictors of subjective well-being including income, economic and political conditions. I also discuss the association between income inequality and subjective well-being. Finally, I discuss the structure of this thesis.

Latin America: Economic and political history

I focus on Latin America, a region which has received less attention from subjective well-being researchers than the US and Europe. After gaining independence from European colonial countries between 1810 and 1830 and the establishment of independent and autonomous governments around 1850, most Latin American countries experienced a prolonged period of political and economic difficulties. In the political sphere, many countries, including Argentina, Bolivia, Brazil, Chile, Mexico, Paraguay, Peru, Uruguay and Venezuela, experienced coups d'états in the late 1960s and 1970s. When military forces took control of the state, people lost their right to vote and freedom of movement. As a result of these unexpected political overhauls, the role of the state as a mediator between citizens' lives and the economic and political spheres declined (Serrano, 2010). The impact of coups d'états on Latin American societies likely continues to affect the attitudes of Latin American residents towards democratic processes in the form of elections today. For example, Argentina experienced six coups d'états during the last two centuries, lasting up to seven years, with the most recent one occurring in the 1970s. These political upheavals are actively remembered with a national holiday and marches in memory of the victims of these violent episodes. Political instability negatively affected economic growth in Latin America during the 1950-1985 time period (De Gregorio, 1992), with likely consequences for today's living standards and, thus, how people evaluate economic circumstances in the region. In the 1980s, a number of Latin American dictatorships suffered from severe internal crises and a

decline in power, triggering a shift to democratic governments. Since then, democratic elections are held every four or six years, depending on the country.

During the 1990s, most Latin American countries were governed by right-leaning governments that implemented policies recommended by the US government and international financial institutions in Washington, such as the International Monetary Fund and the World Bank. A crucial characteristic of the economic conditions in Latin American countries during the 1990s was the high level of external debt that governments obtained from the International Monetary Fund and the World Bank to improve economic stability and reduce the poverty rate. Consequently, institutional reforms during the 1990s focused on fiscal discipline and debt repayment, which markedly affected social spending across Latin America with possibly detrimental effects on subjective well-being. Other policies implemented under the influence of the US government and international financial institutions, which are often referred to as the Washington Consensus, addressed spending priorities, tax reform, interest rates, exchange rates, trade policy, foreign direct investment, privatisation, deregulation and property rights (Williamson, 1993).

Between 1999 and 2002, the most powerful economies of the region, among them Argentina and Brazil, experienced a severe economic crisis and the right-leaning policies implemented in the 1990s were largely abandoned. Those living in Latin American countries that were affected by the economic crisis expressed less support for market policies in 2000 and 2001 than in other Latin American countries, and mean happiness levels decreased over the same time period (Graham & Sukhtankar, 2004).

As a consequence of the crisis, starting in 2003, voters expressed their discontent by voting for left-leaning parties, prompting a marked shift from right-leaning to left-leaning governments in Latin America. Many Latin American countries cancelled their debts with the International Monetary Fund and the World Bank, ushering in a period of autonomy and

sovereignty in economic decision making, and, as a consequence, numerous right-leaning government programs were replaced with policies that were intended to improve citizens' well-being. These new policies led to the re-nationalisation of airlines, pension systems, and oil and gas companies. They further incentivised local production while impeding imports, which contributed to a dramatic reduction in unemployment and a subsequent increase in personal income. Moreover, the role of the state as a provider of social protection increased after 2000 (Martín-Mayoral & Sastre, 2017) and since then, social protection coverage has been extended in a number of Latin American countries (Cecchini, Filgueira, & Robles, 2014). Public social spending has been found to be an important predictor of different happiness patterns in Latin America (Switek, 2012). Increased social protection spending improved the social safety and led to improved access to education and healthcare. For instance, governments launched social programmes which aimed to reduce or eliminate poverty by aiding families who live under the poverty line conditional upon children's school attendance and vaccinations.

In this thesis, I focus on associations between subjective well-being and some of the key economic indicators that were affected by the reforms implemented as a result of the Washington Consensus, namely, the GDP per capita, the unemployment rate, the inflation rate, the governments' spending on social protection and the governments' political orientation.

The profound macroeconomic changes that took place in Latin America were accompanied by high levels of income inequality and in the last 20 years, the region has ranked among the most unequal in the world (Gasparini & Cruces, 2013). The most unequal countries in Latin America were 97% more unequal[1] than high-income countries such as

[1] In these cases, inequality was measures by the Gini Index. The Gini Index is a measure of income inequality that ranges between 0 and 1 denoting higher levels of income inequality with scores closer 1.

Norway, Sweden and Finland (Bolivia, Panama, Honduras, Brazil and Colombia). Moreover, between 1997 and 2007, the mean Gini Index of Latin America was 54% higher than the mean Gini Index of one of the poorest countries in the world, Liberia. These statistics highlight the importance of using the Latin American region as a test case to understand the consequences of high levels of income inequality on citizen's subjective well-being. In one of the chapters of this thesis, I explore the role of income inequality as a moderator of the relationship between income rank and subjective well-being in 18 Latin American countries.

The data employed in my studies were collected between 1996 and 2016 across 18 Latin American countries – a period of relative political stability in which transfers of political power happened in almost all cases as a result of elections[2] and of important economic reforms that led to changes in governments' political orientation. The not-so-distant, turbulent political past of most Latin American countries calls for research that explores how these economic and political conditions are associated with one of the ultimate goals of every government: citizen's subjective well-being. Based on prior research conducted in the US and Europe (e.g., Blanchflower & Oswald, 2004b; DiTella et al., 2003) described in the following sections of this thesis, I expect to find associations between the indicators that were affected by the macroeconomic and political changes in the region and subjective well-being. However, I do not expect to find marked differences with the studies conducted in other Western regions, due to the great influence Latin America has from European countries. I believe that Latin America is a region worth exploring because the indicators that have been found to be associated with subjective well-being experienced important changes in the last twenty years.

[2]A big exception is the 2009 coup d'état in Honduras. Although citizens' rights guaranteed by the Constitution were suspended, the coup d'état lasted for six months and in January 2010 a new government went into power as a result of democratic elections. This episode was relatively short in comparison to the ones occurred in the 1970s. See Chapter 3 Appendix for more details.

Finally, Latin America has been continuously under-represented in the psychological literature. According to a formal analysis, only about 1% of the articles ever published in psychology journals have focused on Latin America (Arnett, 2008; Nielsen, Haun, Kärtner, & Legare, 2017). In addition, Latin America has rarely been the focus of subjective well-being studies. Indeed, most studies on subjective well-being involve Western populations such as the US and Europe (e.g., Blanchflower & Oswald, 2004b, 2008; Powdthavee, Plagnol, Frijters, & Clark, 2019; Whillans, Dunn, Smeets, Bekkers, & Norton, 2017). Given that psychological processes do not unfold in a similar way in different cultural contexts (Henrich, Heine, & Norenzayan, 2010) it is important to look at regions other than the Western countries typically explored in the psychological literature.

Subjective well-being: Definitions and domains

Subjective well-being encompasses individuals' own evaluations of well-being. 'Quality of life' and 'happiness' have been extensively used as measures of people's SWB. However, SWB is a broad umbrella term that includes three complex constructs: hedonic well-being, eudaimonic well-being, and affective well-being (Diener, Suh, Lucas, & Smith, 1999; The Organisation for Economic Co-operation and Development, 2013). Most of the large, nationally representative surveys[3] that underpin much of the current research on the determinants of SWB include single-item measures of SWB, however, a complete picture of people's SWB cannot be achieved if one of these constructs is missing (Dolan, 2014; Seligman, 2011; Seligman, Parks, & Steen, 2004). Overall, SWB measures have been found to be reliable and valid (e.g., Diener, Inglehart, & Tay, 2013; Daniel Kahneman & Krueger, 2006).

[3] For instance, the German Socio Economic Panel (GSOEP), the British Household Panel Study (BHPS), the UK Household Longitudinal Study (UKHLS), the Household, Income and Labour Dynamics (HILDA) Survey, or the World Values Survey.

Hedonic well-being

The phenomenon of hedonia suggests that the maximisation of positive emotional experiences, such as pleasure or enjoyment, and the minimisation of negative or unpleasant experiences, such as pain or sadness, lead to a higher level of well-being (Kahneman, 1999). The exposure to most positive and negative experiences may have short-term effects on well-being because people partially adapt to changes in life circumstances (Frederick & Loewenstein, 1999). However, for some life events, such as unemployment, divorce, death of a spouse and disability, this phenomenon called hedonic adaptation does not occur or is incomplete because these events seem to have a long-lasting effect on people's well-being (Lucas, 2007).

The most popular measure of hedonic well-being is life satisfaction, which denotes people's own assessment of quality of life (Diener, Emmons, Larsen, & Griffin, 1985). For example, people can evaluate their satisfaction with life through a question that asks respondents to rate their life satisfaction on a scale from 0 to 10, with 0 denoting completely dissatisfied and 10 completely satisfied. Other examples are the 5-item Satisfaction with Life Scale (SWLS; Diener et al., 1985) and the Cantril Ladder of Life question (Cantril, 1965). In the latter, respondents are asked to state how they feel about their life using an imaginary ladder in which the lower step (0) represents the worst possible life and the highest step (10) denotes the best possible life.

Eudaimonic well-being

Hedonia and eudaimonia have been considered the two big parts that compose people's subjective well-being (see Deci & Ryan, 2008). While hedonia is related to pleasure, eudaimonia is associated with one's sense of meaning or purpose in life (Deci &

Ryan, 2008; Waterman, 2008). Eudaimonia is based on the idea that people experience greater subjective well-being when they get to develop their potential and thus, enjoy self-actualisation and self-fulfilment (Henderson & Knight, 2012; Waterman et al., 2010).

To date, eudaimonic well-being measures are rarely found in large, nationally representative surveys. One notable exception can be found in the 2006 and 2012 personal and social well-being modules in the European Social Survey (ESS), which includes several eudaimonic well-being measures (Huppert et al., 2009), which can be used to assess flourishing across Europe (Huppert & So, 2013). In this thesis, I focus on hedonic and affective well-being.

Affective well-being

Affective well-being refers to people's feelings and emotions in real-time (Kahneman & Krueger, 2006). This dimension of subjective well-being is related to one's immediate conditions, experiences, states, and moods instead of evaluation of one's life as a whole (Kahneman & Krueger, 2006). Affective well-being consists of positive affect (e.g., happiness, enjoyment) and negative affect (e.g., sadness, anger, worry). These two constructs can be used separately (positive vs negative affect) or combined to create a measure of overall affective well-being (see Diener, Smith, & Fujita, 1995; Watson, 1988 for a review).

In large-scale datasets, measures of affective well-being are more popular than those of eudaimonic well-being. For example, The Gallup World Poll, one of the datasets used in this thesis, includes questions about respondents' daily experiences with the following format "*Did you experience the following feelings during a lot of the day yesterday? How about enjoyment?*", "*Did you smile or laugh a lot yesterday?*", "*How about happiness?*", "*Did you feel well-rested yesterday?", "How about worry?*"; "*How about stress?*"; "*How*

about anger?"; "*How about sadness?".* These questions allow researchers to study positive and negative affect across countries around the world.

Domain satisfaction

One question that researchers have been trying to answer in the last decades is what do people actually think about when they rate their well-being? In 1965, Hadley Cantril published a book based on a worldwide survey that he conducted to investigate people's concerns and definitions of best and worst possible lives. The domains of life that were most frequently mentioned by respondents across countries concerned economic circumstances, family, and health (Cantril, 1965). A more recent study that analysed data from an open-ended question in the British Household Panel Study about how people define quality of life similarly found that individuals frequently mention health, family, and finances (Plagnol & Scott, 2011). In addition to life satisfaction and measures of positive and negative affect (e.g., happiness, sadness), in this thesis I will use two measures that are associated with individuals' financial satisfaction, namely people's evaluation of their own and their country's economic situation and one measure that is connected to the political domain: individuals' satisfaction with democracy.

Subjective well-being seems to vary across both nonpecuniary and pecuniary domains. On one hand, changes in nonpecuniary domains, such as family life and health, have been found to present a lasting effect on happiness (Easterlin, 2003). On the other, prior research shows that happiness is influenced by pecuniary domains such as people's socioeconomic status, own financial situation and personal income (Easterlin & Sawangfa, 2007). In chapter 5 of this thesis, I will explore whether the association between income (in rank and relative form) and subjective well-being is moderated by income inequality in Latin America. The association between personal income and subjective well-being has been

extensively explored, with many studies emphasising the importance of relative income as compared to absolute income (e.g., Blanchflower & Oswald, 2004; Easterlin, 1974; McBride, 2001). Studies usually found small correlations between SWB and pre-tax income (e.g., r=0.17-0.20 in Lucas & Schimmack, 2009). However, absolute income has been found to have a greater positive effect on subjective well-being when it helps people to meet their basic needs (Diener and Biswas-Diener, 2002; Oswald, 1997). In general, rich people are happier than poor individuals but after a certain level, additional income is not associated with increased subjective well-being (Frey & Stutzer, 2002). Estimates of the income threshold after which additional income is not associated with a further increase in SWB vary across studies, ranging from $10,000 (Frey & Stutzer, 2002), to $15,000 (Layard, 2005), to $75,000 (Kahneman & Deaton, 2010). Beyond these amounts, basic needs are met and additional money no longer improves individuals' well-being. Furthermore, additional income is often accompanied by an increase in material aspirations that become more difficult to fulfil (Diener & Biswas-Diener, 2002; Stutzer, 2004), and individuals tend to compare their income to that of their peers (Ferrer-i-Carbonell, 2005). Therefore, people feel worse off if their income is lower than that of the members of their comparison group (Luttmer, 2005). Moreover, additional income does not have any effect on subjective well-being if the income of those in the relevant reference group is also increased (Weinzierl, 2005). It has been repeatedly shown that people adapt quickly to changes in income (Easterlin, 1995), possibly because of more frequent social comparison in the economic than in the non-economic domains.

Studies have further shown that the direction of causality in the happiness-income relationship might in fact run both ways, i.e. money does not necessarily make people happier and happier people may be more likely to make more money (Graham, Eggers, & Sukhtankar, 2004; Schyns, 2001). For instance, psychological distress and poor mental

health may diminish people's employment options, and lead to marital breakdown and social exclusion. Happy people may also benefit from better social capital (especially bridging social capital) which could provide them with more career opportunities. It has also been found that happy people tend to make more money later (Diener & Biswas-Diener, 2002), though Oishi, Diener, and Lucas, (2007) found that moderately satisfied, rather than the most satisfied, people make the most.

Macroeconomic and political conditions and subjective well-being

When people are asked about what makes their life better or worse, they rarely refer to the economic and political conditions of the country they live in. However, a great body of research suggests that economic and political circumstances of a country are associated with citizens' subjective well-being (Di Tella et al., 2003; Dorn, Fischer, Kirchgassner, & Sousa-Poza, 2007; Easterlin, 1974; Helliwell & Huang, 2008; Stevenson & Wolfers, 2008). In the next section, I present prior findings that show that macroeconomic indicators, such as the Gross Domestic Product (GDP), unemployment rate and inflation rate, as well as political aspects, such as governments' political orientation, show strong associations with citizen's subjective well-being. The association between macroeconomic and political circumstances and subjective well-being in Latin America is the focus of this thesis.

Macroeconomic covariates of subjective well-being

Indicators of a country's economic growth or wealth, such as the Gross Domestic Product, have traditionally been regarded as the key measures of societal progress. For a long time, the answer to the question "what could a government do to increase citizens' well-being?" has been to increase the country's level of income. However, after studying the

relationship between income and happiness for decades, researchers have arrived at mixed conclusions (e.g., Di Tella et al., 2003; Easterlin, 1974; Stevenson & Wolfers, 2008).

In 1974, Richard Easterlin (1974) found that *at a specific point in time*, GDP seems to be significantly positively associated with subjective well-being but that *over time* the association between economic output and subjective well-being is nil. This finding was later called the Easterlin Happiness-Income paradox and constitutes the first empirical finding on the association between income at the country level and subjective well-being (Easterlin, 1974). Many researchers have been exploring this paradox in different contexts. For example, Easterlin, Angelescu McVey, Switek, Sawangfa, and Smith Zweig (2010) found that this paradox holds both in developed and developing countries and, confirming the first part of the Easterlin paradox, Di Tella et al., (2003) found that in the cross-section in Europe and the US GDP per capita is positively associated with individual SWB. However, this paradox has been challenged by other researchers who found a positive association between income and subjective well-being at the country level over time (e.g., Stevenson & Wolfers, 2008).

If economic growth, indeed, does not 'improve the human lot' (Easterlin, 1974), may other macroeconomic factors shape individual subjective well-being? One of the major contributions of this thesis is to consider other macroeconomic and political factors that may influence people's subjective well-being, such as the unemployment and inflation rates, governments' political orientation and income inequality.

Both the unemployment and the inflation rate have been found to be negatively associated with individual subjective well-being in the UK, the US and some European countries, including Belgium, the Netherlands, Germany, Denmark, Ireland, Luxembourg and Spain (Clark, 2003; Clark & Oswald, 1994; DiTella et al., 2003; DiTella, MacCulloch, & Oswald, 2001). However, this association may depend on individual political orientation:

Di Tella and MacCulloch (2005) have shown that politically left-leaning individuals care more about the unemployment rate than right-leaning individuals. The influence of the economy on subjective well-being can further be seen in the impact of economic crises on SWB. For instance, based on 2002 Latinobarómetro data, Graham and Sukhtankar (2004) found that satisfaction with market policies and with democracy decreased in the year after the big 2001 economic crisis.

Political covariates of subjective well-being

One of the main goals of a government is to ensure its citizens' well-being (e.g., Nussbaum, 2004; Rasmussen, 2006), thus, researchers and policymakers have been debating the level of government intervention, mainly in the form of welfare state provisions, that may increase citizens' well-being (e.g., Bjørnskov, Dreher, & Fischer, 2007, 2010; Booth, 2012; Flavin, Pacek, & Radcliff, 2014; O'Donnell & Oswald, 2015; Veenhoven, 2000).

Evidence on the associations between governmental policies and subjective well-being is mixed. On one hand, Veenhoven (2000) did not find a significant relationship between welfare provisions, measured by social security expenditures, and how healthy and happy people are in a sample of 41 countries (1980-1990). Similarly, using data from the World Values Survey with 74 countries, Bjørnskov et al. (2007) found that life satisfaction is negatively associated with government consumption spending: when the share of *general* government consumption spending on GDP increased, citizens reported lower life satisfaction. However, the government consumption spending measure used by Bjørnskov et al. (2007) did not include social transfers and capital formation spending and it did not allow for discrimination of the different categories of spending.

On the other hand, employing data for OECD countries collected between 1981 and 2007, Flavin et al. (2014) found that citizens were more satisfied with their lives when government intervention in the economy in the form of government spending and labour

market regulations, increased. In Latin America, public social spending (e.g., health, housing, and social security) is one of the most important factors that contribute to individuals' happiness (Switek, 2012). Along the same lines, using World Values Survey data from 1990 to 2000, Radcliff (2001) found that the extent and quality of a country's welfare provisions were positively associated with citizens' subjective wellbeing. Moreover, the studies that show a positive association between welfare-state policies and subjective well-being show that this relationship is stronger than the one between subjective wellbeing and GDP (Pacek & Radcliff, 2008b; Radcliff, 2001).

Past research showed that individuals' subjective well-being is positively associated with democratic processes: respondents who resided in countries that allow a greater degree of participation in the political process reported higher levels of SWB (Owen, Videras, & Willemsen, 2008), those who used to take active part in voting in Latin America reported higher life satisfaction (Weitz-Shapiro & Winters, 2011) and individuals with pro-democracy attitudes reported higher levels of happiness (Graham & Pettinato, 2001). In addition, subjective well-being has been found to be positively associated with both the performance of a government and people's perceptions of its functioning (Bok, 2010), successful democratic traditions (Dorn et al., 2007; Frey & Stutzer, 2000; Inglehart, Foa, Peterson, & Welzel, 2008) and governance quality (Helliwell, Huang, Grover, & Wang, 2014; Helliwell & Huang, 2008; Ott, 2011).

Political orientation

A government's political orientation is typically associated with specific policies, and thus, may create different *expectations* among citizens. For instance, left-leaning governments typically tend to advocate income redistribution in order to reduce income and wealth inequalities (Kenworthy & Pontusson, 2005; Scruggs & Allan, 2006), which are

known to be negatively associated with subjective well-being (Oishi, Kesebir, & Diener, 2011). In addition, higher levels of welfare spending, typically associated with left-leaning governments, have been found to be associated with reduced poverty and lower unemployment rates (Brady, 2005; Kenworthy, 1999), which, in turn, are clearly linked to higher subjective well-being (e.g., Oswald, 1997).

On average, citizens in countries with left-leaning governments report higher subjective well-being than those living in countries with right-leaning governments (Bok, 2010; Radcliff, 2001). At the individual level, political orientation has also been found to be related to subjective well-being. Napier and Jost (2008) found that right-leaning individuals report, on average, higher subjective well-being than left-leaning individuals – a finding which is somewhat at odds with the macro-level finding of happier citizens under left-leaning governments. This could be due to a number of individual differences between right-leaning and left-leaning individuals that may influence their subjective well-being. For instance, system-justification theory (Jost & Banaji, 1994; Jost & Hunyady, 2003) can be applied to describe political conservativism as a system-justifying ideology in which people tend to rationalise economic, social and political circumstances without questioning the current situation (Jost, Nosek, & Gosling, 2008b). For instance, income inequality has been found to have detrimental effects on people's subjective well-being (Alesina et al., 2004). However, due to system-justifying beliefs, right-leaning individuals are more likely than left-leaning individuals to consider high levels of income inequality to be fair and legitimate, and thus, are less affected by the negative hedonic consequences of societal inequalities (Jost, Glaser, Kruglanski, & Sulloway, 2003). At the same time, system-justifying ideologies or beliefs are linked to higher levels of life satisfaction and positive affect and lower levels of negative affect (Lerner, 1980; Major, 1994; Wakslak, Jost, Tyler, & Chen, 2007).

Okulicz-Kozaryn, Holmes and Avery (2014) found that associations between individuals' political orientation and subjective well-being are independent from the governments' political orientation. Similarly, individuals who live in a country with a left-leaning government report higher life satisfaction than individuals who live in a country with a right-leaning government regardless of their personal political orientation. This finding helps explain the seemingly paradoxical observation of happy right-leaning individuals and happy citizens in countries with left-leaning governments, an observation which the authors call the 'subjective well-being political paradox' (Okulicz-Kozaryn et al., 2014).

Income inequality

Income inequality and subjective well-being

In chapter 5 of this thesis, I explore whether income inequality moderates the association between income rank and subjective well-being in Latin America, a region with particularly high levels of income inequality. Income inequality is associated with economic growth, inflation and unemployment rates, which, as discussed earlier, are associated with subjective well-being. For instance, in countries with high income inequality, economic growth happens more slowly (e.g., Alesina & Rodrik, 1994; Banerjee & Duflo, 2003; Barro, 2000) and is less likely to be sustained over time (Berg & Ostry, 2017). In Brazil, high inflation and unemployment rates seem to be responsible for the high levels of income inequality the country experienced in the 1980s (Cardoso, Barros, & Urani, 1995).

Evidence for the relationship between income inequality and subjective well-being is, however, mixed: whereas a number of studies found that income inequality is negatively associated with subjective well-being (Fahey & Smyth, 2004; Hagerty, 2000; Schwarze & Härpfer, 2007), some other studies have shown a positive or nil association between income

inequality and subjective well-being (e.g., Berg & Veenhoven, 2010; Haller & Hadler, 2006; Katic & Ingram, 2018).

Income inequality is associated with social ills that are negatively associated with subjective well-being. For instance, in countries with greater income inequality people are more likely to suffer from mental illness (Burns, Tomita, & Kapadia, 2014), depression (Messias, Eaton, & Grooms, 2011) and obesity (Pickett, Kelly, Brunner, Lobstein, & Wilkinson, 2005). In addition, more unequal areas have higher crime rates (Hsieh & Pugh, 1993) and more cases of drug abuse (Pickett & Wilkinson, 2015). In the US, income inequality, measured by the Gini Index (a commonly used measure of income inequality that ranges between 0: low inequality and 1: high inequality), is negatively associated with happiness, an effect that holds only for individuals with lower-income (vs higher-income) (Oshio & Kobayashi, 2010). In Germany, changes in income inequality affected life satisfaction negatively over time between 1985 and 1998 (Schwarze & Härpfer, 2007). In Japan, people who live in more unequal regions report lower levels of happiness (Oshio & Kobayashi, 2010). This situation is also present in Latin America: the uneven distribution of income is negatively associated with life satisfaction (Oishi & Kesebir, 2015). Indeed, using 2004 Latinobarómetro data, Graham and Felton, (2006) found that income inequality seems to bring much less happiness for the poor and to make the rich moderately happier because it provides an advantage for the rich and a disadvantage for the poor. Alesina et al., (2004) found that income inequality is negatively associated with happiness. Specifically, they suggested that in Europe the poor and those who lean more left politically are more affected by national income inequality; in contrast, in the US the rich are more affected. The authors have argued that perceptions of social mobility can explain the different findings in these two regions. People in the US believe that they live in a more mobile society, which would allow them to move up the income ladder if they worked hard. However, Europeans believe

that they live in a less mobile society and that the chance of moving up is quite low regardless of how hard they work. These ideas may explain that in the US the rich are more bothered by income inequality because the risk of losing their status is high whereas in Europe, the poor are more affected by income inequality because the chance of moving up is very low.

Some investigators, however, have shown no link between income inequality and subjective well-being (e.g., Berg & Veenhoven, 2010). In a sample of 90,000 individuals across 70 countries, the association between income inequality and subjective well-being was nil (Bjørnskov, Dreher, & Fischer, 2008). This finding replicated in a sample of adult Russians in the 1990s: changes in the income inequality of the country did not accompany changes in life satisfaction (Senik, 2003). In some other cases, income inequality was positively associated with subjective well-being (Haller & Hadler, 2006; Katic & Ingram, 2018; Rözer & Kraaykamp, 2013). These mixed findings suggest that there might be critical moderators of the link between income inequality and subjective well-being.

Prior research has explored the psychological moderators that may help to explain the association between income inequality and subjective well-being. These psychological moderators may also help to explain whether and when income inequality moderates the association between income rank and subjective well-being that I examine in chapter 5 of this thesis. The positive association between income inequality and subjective well-being is moderated by people's relative socioeconomic status, beliefs about social mobility, egalitarian preferences, and institutional trust (e.g., Napier & Jost, 2008; Oishi et al., 2011). Indeed, in a context with higher income inequality, individuals who enjoy a better socioeconomic standing are happier, presumably because they are in a better position when they compare their socioeconomic status with that of other citizens. Additionally, those who

believe that upward social mobility is possible and those who have less egalitarian preferences enjoy higher subjective well-being (Katic & Ingram, 2018).

With regard to the moderators of the negative association between income inequality and subjective well-being, Oishi, Kesebir, and Diener (2011) have shown that, in the US, income inequality was negatively associated with the subjective well-being of lower-income people but not with the subjective well-being of higher-income people and that this association was explained by perceived unfairness and lack of trust. Social comparison seems to be another reason why people report lower subjective well-being in an unequal context in the US (Cheung & Lucas, 2016); those who lived in an unequal context that provided a good scenario to compare one's economic situation to that of other people reported lower life satisfaction. Studying 65 countries from the World Values Survey, Katic and Ingram (2018) found that under high levels of income inequality, people who believed that the distribution of income was unfair and those who believed that hard work leads to success reported lower SWB. The 'status anxiety hypothesis' is another explanation of the negative consequences that income inequality has on people's subjective well-being (Layte & Whelan, 2014). This hypothesis suggests that the wider status hierarchy that income inequality generates in a society brings anxiety about one's status in that hierarchy. Using a sample of 31 European countries, Layte and Whelan (2014) found that individuals who lived in a country with lower income inequality reported less status anxiety than those who lived in a country with higher income inequality. This anxiety relative to social status has harmful consequences for health and well-being (Pickett & Wilkinson, 2015).

Income and subjective well-being in unequal contexts

As discussed in the previous section, social comparison is one of the most important psychological processes that may explain the relationship between subjective well-being and

income. Social comparison theory was originally introduced in the 1950s and it refers to the idea that people need an external standard against which to judge their abilities (Buunk & Gibbons, 2007; Festinger, 1954; White, Langer, Yariv, & Welch, 2006). Social comparison is "the process of thinking about information about one or more other people in relation to the self" (Wood, 1996, p. 520-521) and, thus, allows people to evaluate their situation by comparing themselves to relevant others, i.e., their peers or a specific reference group (e.g., people of same gender, age, country, level of education, employment status).

One result stemming from such comparisons may be that relative standing matters more for one's well-being than absolute standing. Easterlin postulated in the original 1974 article, based on Duesenberry's relative income explanation (Duesenberry, 1949), that relative income may be more important for happiness than absolute income. According to this view, subjective well-being does not depend on one's absolute consumption (income) but on the ratio of one's consumption to that of relevant other people. In other words, the well-being derived from owning a certain good depends partly on the amount that relevant others have of that good. Subjective well-being therefore varies directly with one's own income and inversely with the incomes of others. For instance, past research has demonstrated that an individual's income is negatively associated with happiness when the income of the neighbours is higher (Luttmer, 2005). Moreover, people are more satisfied with their lives when their income is higher than that of their reference group and they are even more satisfied with their lives the larger their earnings are in comparison to those of their reference group (Ferrer-i-Carbonell, 2005). Employing a dataset with more than 1.5 million US citizens, Cheung and Lucas (2016) found that income inequality moderates the relationship between relative income and subjective well-being. Indeed, the authors found a negative relationship between county income and life satisfaction when income inequality was high. Social identity theory (see, e.g., Tajfel & Turner, 1979) could serve as an

explanation for these findings. This theory suggests that people tend to adopt the same values and behaviours as others in their reference group in order to preserve their own identity, self-esteem, and reputation. Therefore, in an inequal society in which people put high a value on rank and status, those whose income is higher than that of those in their reference group may be more likely to enjoy higher well-being.

Another form to assess relative income is income rank. The income-rank hypothesis suggests that people gain well-being when the ranked position of their income is higher within their reference group (Boyce, Brown, & Moore, 2010). Boyce et al (2010) found that people whose income ranked higher in their reference group reported higher life satisfaction and that absolute and relative income (i.e., the respondent's income relative to the mean income of the reference group) had no effect on well-being. In one of the chapters of this thesis I explore whether income inequality moderates the association between income rank and subjective well-being in Latin America.

Aim of this thesis

Past research demonstrates that economic and political conditions may affect people's subjective well-being. The study of these conditions becomes relevant as it informs governments on what may increase the well-being of a society. The aim of this thesis is to explore the way in which economic conditions and political events are associated with people's SWB in Latin America, a region with a particular economic and political past. The research question (RQ) below frames the work in this thesis.

RQ: What are the associations between economic and political conditions and citizens' subjective well-being in Latin America?

Contributions and applications

Societal well-being is typically one of the main goals of governments. Understanding associations between economic and political aspects and people's subjective well-being can thus inform government policy and help the advancement of a society and societal welfare. With this thesis, I expect to contribute to the subjective well-being literature in several ways. First, I explore a region that has been overlooked across disciplines, including the psychological literature. Second, I consider economic and political measures that are associated with citizens' well-being other than GDP and also subjective measures in addition to life satisfaction. Third, I create measures that represent the electoral cycle (i.e., measures that capture the time period before and after democratic elections) in the 18 Latin American countries that are not available in any data set to date. Most importantly, this thesis is directed to governments and policymakers by providing further empirical evidence that could support initiatives that advocate the use of subjective well-being as a measure of societal progress.

Structure of the thesis

This thesis explores the research question detailed above in the following chapters:

In Chapter 2, I focus on trends and fluctuations in economic and political conditions and their association with citizens' subjective well-being using the Latinobarómetro survey. Specifically, I introduce further literature on this topic, and I conduct time-series analyses to get quantitative evidence for these associations. I explore the following economic and political measures: The log of GDP per capita, unemployment rate, inflation rate, social protection spending and governments' political orientation. This analysis is a first pass at the research question as it examines the general association between Latin American economic

and political circumstances and citizens' subjective well-being across 17 countries[4] over a time span of about 20 years (1996-2015).

In Chapter 3, I examine the role of government's political orientation as an important determinant of citizens' subjective well-being and whether well-being changes systematically across the electoral cycle. Specially, I introduce literature on the association between economic and political conditions and different aspects of subjective well-being. In addition, I conduct regression analyses to explore how governments' and individuals' political orientations are associated with citizens' evaluations of their country's and their own economic situation, satisfaction with democracy and life satisfaction. In this chapter, I also use the Latinobarómetro survey with 18 Latin American countries and data for the 1996-2015 time period.

In Chapter 4, I investigate the association between people's confidence in national institutions and two measures of subjective well-being: current and expected life satisfaction. Using data from the Gallup World Poll that covers 18 Latin American countries and eight survey years (2009-2016), this study contributes to the general research question as it focuses on aspects connected to the political domain and their relationship with citizens' subjective well-being.

The profound macroeconomic and political changes that occurred in Latin America in the late 1990s and early 2000s were accompanied by high levels of income inequality. In Chapter 5, I look at whether income inequality moderates the association between income rank (i.e., the ranked position of an individual's income in his or her reference group) and life satisfaction. In this study, I employ data from the Gallup World Poll with the same 18 Latin American countries and survey years employed in the study presented in chapter 4. I

[4] This study excludes the Dominican Republic due to missing values in the dependent variable.

introduce literature on the topic and run several statistical models to explore whether and how income inequality moderates one of the most debated associations in the literature: the association between income and subjective well-being.

In Chapter 6, I present a summary of the findings of each chapter and I discuss practical and theoretical implications of the results. In addition, I consider the limitations of the work and suggestions for future research.

Table 1.1 presents the input and output of each chapter of this thesis, information about the dataset and methods used as well as the hypotheses tested. In the case of the introduction and general discussion of this thesis, the table shows topics covered in both sections and concluding remarks from each descriptive chapter.

Chapter summary

This chapter presents definitions of SWB, its general predictors and findings on the association between macroeconomic indicators, political circumstances, income inequality and SWB. In addition, this chapter discusses the recent economic and political history of Latin America and the contribution of this thesis to the body of research that supports the importance of subjective well-being as a measure of societal progress. In the next chapter, I present time series analyses that examine the association between macroeconomic and political indicators and subjective well-being around the era of the Washington Consensus.

Table 1.1: Overview of thesis chapters

Chapter	Data/input	Hypotheses	Methods	Results/output
Chapter 1: Introduction and literature review	This chapter contains literature review on the following topics: -Subjective well-being: -Definitions and general predictors -Economic covariates -Political covariates -Income inequality -Economic and political history of Latin America	-	Literature review	-Extensive literature review on SWB and its determinants, economic and political conditions and SWB. -Aim and structure of the thesis -General research question: • What are the associations between economic and political conditions and citizens' subjective well-being in Latin America?
Chapter 2: Beyond the Washington Consensus: subjective well-being in Latin America since the 1990s	-The Latinobarómetro -17 Latin American countries -1996-2005 time period -Trends N=17 -Fluctuations N=271	*Hypotheses about trends* **H1:** There will be a significant negative association between the trend growth rate of subjective well-being and the trend growth rate of the unemployment rate. **H2:** There will not be a significant association between the trend growth rate of subjective well-being and the trend growth rate of GDP per capita **H3:** There will be a significant negative association between the trend growth rate of subjective well-being and the trend growth rate of the inflation rate.	Time series analyses: trends and fluctuations.	The results of this chapter confirm hypotheses 1, 2, 5, 6, 7 and 8 and do not provide evidence for hypotheses 3 and 4.

		H4: There will be a significant positive association between the trend growth rate of subjective well-being and the presence of left-leaning governments. **H5:** There will be a significant positive association between the trend growth rate of subjective well-being and the average level of governments' social protection spending. *Hypotheses about fluctuations* **H6:** Deviations from the trend of subjective well-being will be significantly negatively associated with deviations from the trend of the unemployment rate. **H7:** Deviations from the trend of subjective well-being will be significantly positively associated with deviations from the trend of the log of GDP per capita. **H8:** Deviations from the trend of subjective well-being will be significantly negatively associated with deviations from the trend of the inflation rate.		

Chapter	Data/input	Hypotheses	Methods	Results/output
Chapter 3: Perceptions of economic circumstances and subjective well-being in Latin America: Associations with political orientation and changes across the electoral cycle	-The Latinobarómetro -18 Latin American countries -1996-2015 time period (except for life satisfaction: 2004-2007 and 2009-2015) N= 327,028	**H1:** People who live in a country with a left-leaning government will rate their country's and their own economic situation better and will be more satisfied with the democracy of the country and with their lives than those who live in a country with a right-leaning government. **H2:** People who lean politically more to the right will rate their country's and their own economic situation better and will be more satisfied with the democracy of the country and with their lives than those who lean politically more to the left. **H3:** People will rate their country's and their own economic situation better and will be more satisfied with the democracy of the country and with their lives in periods around planned elections.	-Ordered logit regressions.	This chapter confirms hypotheses 1 (except for life satisfaction), hypotheses 2 fully and hypotheses 3 partially.
Chapter 4: Life satisfaction and confidence in national institutions in Latin America	-The Gallup World Poll -18 Latin American countries -2009-2016 time period -N= 102,405	**H1**: Respondents who report confidence in financial institutions, the military, the judicial system, elections, the national government and the police will report higher current and expected life satisfaction.	-Time trend analyses of citizens' confidence in national institutions.	This chapter confirms hypothesis 1.

			-Ordinary least squares (OLS) with country and year fixed effects.	
Chapter 5: Buying happiness in an unequal world: Rank of income more strongly predicts well-being in more unequal countries	-The Gallup World Poll -18 Latin American countries -2009-2016 time period -N= 111,566	**H1:** Individuals whose income ranks higher than that of other people in their reference group will report higher life satisfaction. **H2:** Income inequality moderates the association between income rank and life satisfaction. **H3:** Individuals whose income ranks higher than that of other people in their reference group will be more likely to report having felt positive daily emotional experiences. **H4:** Income inequality moderates the association between income rank and positive daily emotional experiences. **H5:** Individuals whose income ranks higher than that of other people in their reference group will be less likely to report having felt negative daily emotional experiences. **H6:** Income inequality moderates the association between income rank and negative daily emotional experiences.	-Ordinary least squares (OLS) with country and year fixed effects. -Ordered logit regressions with country and year fixed effects. -Multi-level models with country as random intercepts.	The results of this study confirm hypotheses 1, 2 fully and hypotheses 3, 5 and 6 partially. However, this study does not provide evidence for hypothesis 4.
Chapter 6: General discussion	Literature from chapters 1-5, results from chapters 2-5	-	Review and discussion	Practical and theoretical applications, limitations and suggestions for future work

Chapter 2. Beyond the Washington Consensus: subjective well-being in Latin America since the 1990s

Introduction

In this chapter, I use subjective well-being data drawn from the Latinobarómetro to understand how trends and fluctuation of macroeconomic factors, governments' social protection spending, and governments' political orientation are associated with people's subjective well-being, measured by people's evaluation of their own economic situation. This study focuses on a time period of profound macroeconomic fluctuations, severe economic crises and major structural changes in policies in Latin America, 1996-2015. The magnitude of the macroeconomic fluctuations observed between 1996 and 2015 in Latin America provides a good testing ground for observing associations between macroeconomic variables and subjective well-being. The aim of this study is to explore the well-being consequences of the changes in macroeconomic indicators and political aspects in the years around the Washington Consensus.

The term Washington Consensus was coined by John Williamson (Williamson, 1990) who prepared a list of policy reforms that the US government and international financial institutions in Washington were urging Latin American countries to implement to deal with the fiscal crisis some countries in the region were facing. The ten proposed policy instruments addressed fiscal discipline, spending priorities, tax reform, interest rates, exchange rates, trade policy, foreign direct investment, privatization, deregulation and property rights. Although the term 'Washington Consensus' has often been criticised, it is still being used to describe the economic reforms of the 1990s which were spread around the world through the practice of 'conditionality'. The term describes how international loans to governments can be conditional on the implementation of policy reforms (Babb, 2013).

Historically, Latin America has been a volatile region with several episodes of political violence and economic instability (for an overview see Justino & Martorano, 2018). During the 1990s, many Latin American governments implemented policies recommended by the Washington Consensus that aimed to increase economic growth at the expense of social protection (see Introduction for more detail). A crucial characteristic of the economic conditions in Latin American countries during the 1990s was the high level of external debt that governments obtained from international financial institutions. The main goal of this strategy was to achieve economic growth alongside economic stability and reduction of the poverty rate. Consequently, institutional reforms during the 1990s focused on fiscal discipline and debt repayment, which markedly affected social spending.

As a consequence of the Washington Consensus' policies, between 1999 and 2002, many Latin American countries experienced economic crises and the neoliberal policies implemented in the 1990s were left behind. Latin American citizens who lived in countries that were affected by economic crises expressed less support for market policies in 2000 and 2001 and reported lower levels of happiness than in other Latin American countries (Graham & Sukhtankar, 2004).

Starting in 2003, Latin America experienced a shift from right to left-leaning policies. These new policies led to the re-nationalisation of airlines, pension systems, and oil and gas companies that, together with the incentives to local production and reduction of imports, contributed to a dramatic reduction in unemployment and a subsequent increase in personal income. As a consequence of the abrupt changes in macroeconomic policies, the inflation rate also showed marked movements in the 1996-2015 time period, ranging from 19.9% in 1996 to 4.06% in 2015.

One of the main decisions Latin American governments made after the end of the Washington Consensus was to extend social protection coverage with the aim of increasing societal well-being (Cecchini et al., 2014). Indeed, public social spending has been found to be associated with happiness in Latin America (Switek, 2012). Since 2000, increased social protection spending in Latin America improved social safety and led to better access to education and healthcare. For instance, governments launched social programmes which aimed to reduce or eliminate poverty by aiding families who live under the poverty line conditional upon children's school attendance and vaccinations.

Countries that are known for generous social policies and well-established social safety nets, such as the Nordic countries, are often found at the top of world happiness rankings (e.g., Helliwell, Layard, & Sachs, 2018). In addition, the domains that are positively affected by increased social spending, such as health and education, are significantly associated with subjective well-being. Ill health has repeatedly been shown to be negatively associated with subjective well-being (Shields & Price, 2005) whereas education has been found to be positively associated with SWB (Dolan et al., 2008). The latter relationship was also found in Latin America, but not in models in which relative economic standing is included (Graham & Pettinato, 2001).

Economic growth was one of the goals of the Washington Consensus policies - often at the expense of social protection - as has been pointed out by some of its critics (Marangos, 2009). The association between economic growth and subjective well-being has long been a topic of interest in the subjective well-being literature, starting with the seminal study which initiated the field (Easterlin, 1974). It has been found that at one point in time, GDP per capita is significantly positively associated with subjective well-being (Deaton, 2008; Di Tella et al.,

2003; Sacks, Stevenson, & Wolfers, 2010; Stevenson & Wolfers, 2008). However, over time, the association between economic growth and subjective well-being is nil (Easterlin, 1974), a finding which is now known as the Easterlin Happiness-Income paradox and which holds in developed and developing countries (Easterlin, 1995). Potential improvements in rates of economic growth following the Washington Consensus policy reforms in Latin America would therefore not necessarily be accompanied by increases in subjective well-being. Especially if economic growth does not benefit people equally and leads to rising income inequality, an aspect that has been found to be negatively associated with happiness (Alesina et al., 2004).

Both the unemployment rate and the inflation rate are negatively associated with people's well-being (Clark & Oswald, 1994), though the unemployment rate has been found to be a stronger predictor of subjective well-being than the inflation rate (DiTella et al., 2001). In Latin America, unemployment and self-employment are both negatively associated with individuals' subjective well-being (Graham & Pettinato, 2001).

Although a large body of research discussed the association between subjective well-being and macroeconomic factors, (e.g., DiTella et al., 2003, 2001), the effects of business cycle volatility on subjective well-being have not been the subject of active debate in the literature. One exception is Wolfers' (2003) study which suggests that greater unemployment volatility has detrimental effects on subjective well-being. The same holds for inflation volatility, although the effects are smaller.

In this study, I look at trends (movements in the long-term) and fluctuations (movements in the short-term) in macroeconomic factors and subjective well-being, measured by evaluation of own economic situation, in Latin America between 1996 and 2015 – two decades of important macroeconomic fluctuations and major structural changes in policies influenced by the

Washington Consensus. These key economic indicators include the unemployment and the inflation rate, the log of GDP per capita and governments' spending on social protection. Due to the emergence of left-leaning governments that were elected in the region since 2003, I also consider governments' political orientation. Respondents who reside in countries with left-leaning governments tend to report higher subjective well-being than those living in countries with right-leaning governments (Bok, 2010; Radcliff, 2001). Governments on the left end of the political spectrum are generally more likely to invest in areas that affect key aspects of an individual's life (Green-Pedersen, 2004), which may partly explain this observation.

In this chapter, following Easterlin, Angelescu McVey, Switek, Sawangfa, & Smith Zweig (2010), I conduct time series analyses that include trends and fluctuations of subjective well-being and macroeconomic indicators. The aim of this study is to explore the trends and fluctuations of macroeconomic indicators in a period of profound macroeconomic reforms. The trend analyses involve the trend growth rates (i.e., average annual change) of subjective well-being and macroeconomic indicators and provide information about the behaviour of these measures in the long-term. The fluctuations analyses involve the deviation of subjective well-being and macroeconomic indicators from the respective trend providing information about the movement of these measures in the short-term. See the methods section for more details on these analyses. This study extends Easterlin et al (2010) by exploring a larger time period (1996-2015 vs 1996-2006) that includes more than ten years of left-leaning governments in Latin America (2003-2015). Furthermore, I employed additional independent variables such as the inflation rate, governments' political leaning and social protection spending.

Based on the literature on the association between macroeconomic factors and subjective well-being, I test the following hypotheses covering the 1995-2015 time period in Latin America.

Hypotheses about trends

H1: There will be a significant negative association between the trend growth rate of subjective well-being and the trend growth rate of the unemployment rate.

H2: There will not be a significant association between the trend growth rate of subjective well-being and the trend growth rate of GDP per capita

H3: There will be a significant negative association between the trend growth rate of subjective well-being and the trend growth rate of the inflation rate.

H4: There will be a significant positive association between the trend growth rate of subjective well-being and the presence of left-leaning governments.

H5: There will be a significant positive association between the trend growth rate of subjective well-being and the average level of governments' social protection spending.

Hypotheses about fluctuations

H6: Deviations from the trend of subjective well-being will be significantly negatively associated with deviations from the trend of the unemployment rate.

H7: Deviations from the trend of subjective well-being will be significantly positively associated with deviations from the trend of the log of GDP per capita.

H8: Deviations from the trend of subjective well-being will be significantly negatively associated with deviations from the trend of the inflation rate.

Methods

Data

In this chapter, I use data from the Latinobarómetro (Latinobarómetro, 2016), an annual survey which includes 18 countries in Latin America with about 1,000 respondents per country in each survey year. The data are repeated cross-sections which are representative of the population in the majority of the countries in the year of data collection. The measures included in this study are described as follows.

-*People's evaluation of their own economic situation:* Following Easterlin et al (2010), I used people's evaluation of their own economic situation as the dependent variable. This measure does not constitute a measure of subjective well-being but rather a factor that contributes to subjective well-being (Cantril, 1965). The measure that represents people's evaluation of their own economic situation was collected in 17 Latin American countries in most survey years between 1996 and 2015. Respondents were asked: "In general, how would you describe your present economic situation and that of your family?" with answer categories ranging from very good (1), good (2), about average (3), bad (4) to very bad (5). The measure was reverse coded so that a higher value denotes a better evaluation of one's economic situation. The Latinobarómetro data are not available in 1999, 2007, 2012 and 2014; therefore, these years were excluded from the analysis.

The Latinobarómetro further includes a question on life satisfaction. However, the response categories of the life satisfaction measure changed several times in the years before 2004 and, after careful consideration, I deem this measure to be unsuitable for this analysis for two reasons. First, given that the goal of this study is to explore the association between subjective well-being and the macroeconomic movements that happened around the Washington

Consensus, the years before 2004 were key for this analysis. Second, in a time series analysis, like the one conducted in this chapter, the number of survey years serves as the number of observations, thus, eliminating seven survey years (1996-2003)[5] would have resulted in a considerable reduction in the number of observations, thus, undermining the power of the study. As a result, I decided to use people's evaluation of their own economic situation as the answer categories remained the same during the whole survey period and provided a larger number of survey years.

-*Macroeconomic indices and policy measures:* The macroeconomic indicators were obtained from World Development Indicators (World Bank, 2017), a specific World Bank publication of global development data, and the International Labour Organization (International Labour Organization, 2017). The measure denoting governments' political orientation was created based on information from 1) the Database of Political Institutions (The Database of Political Institutions, 2015), an Inter-American Development Bank database containing electoral results, and 2) the Political Database of the Americas (Political Database of the Americas, 2015), a Georgetown University compilation of electoral results and political parties in Latin America.

I included the following standard macroeconomic indices from the sources described above: the *unemployment rate*, as a percentage of the total labour force in each country (WDI Series); the *log of GDP per capita* (in constant 2010 US$, WDI Series); and the *inflation rate* (WDI Series), as measured by the consumer price index (CPI). In addition, I created a measure of governments' *average political orientation* (DPI and PDA), which shows the average political orientation of the parties in power in each country over the whole sample period. This measure

[5] Latinobarómetro does not provide data for 1999.

ranges from 1 (right-leaning) to 3 (left-leaning). In this study, I employ the same measure of governments' political orientation I used in a later chapter. However, in this case, I took the average of the governments' political orientation measure in the whole period of analysis to make the variable suitable for the time series analysis I conducted in this chapter. I further included an indicator of social policy programmes which consists of the *average social protection spending* in a country as a percentage of GDP (ILO).

Statistical analyses

This study involves two types of time series analysis: time trends and the annual deviations from these trends (fluctuations). In order to perform the time trends analysis, I fitted Ordinary Least Squares (OLS) trend lines for each country over the full time span for evaluation of own economic situation, the unemployment rate, the log of GDP per capita and the inflation rate. Then, I took the estimated coefficient of the OLS regressions and created a new data set with 17 observations, one per country. I further included the average of political orientation and social protection spending by country in the whole period of analysis. To conduct the fluctuations analyses, I computed the deviation of the actual value from the fitted trend value in each country and year. This method yielded a new dataset with 271 observations[6].

To explore the extent to which trends and deviations of evaluation of own economic situation were associated with trends and deviations in economic and political conditions, I computed bivariate regressions of evaluation of own economic situation on each of the macroeconomic and political measures, and multiple regressions with evaluation of own

[6] The multiplication of the 17 countries by the 16 survey years involved in this analysis yielded 272 observations. However, because macroeconomic data are not available for Venezuela in 2015, the final number of observations for the fluctuations analysis was 271.

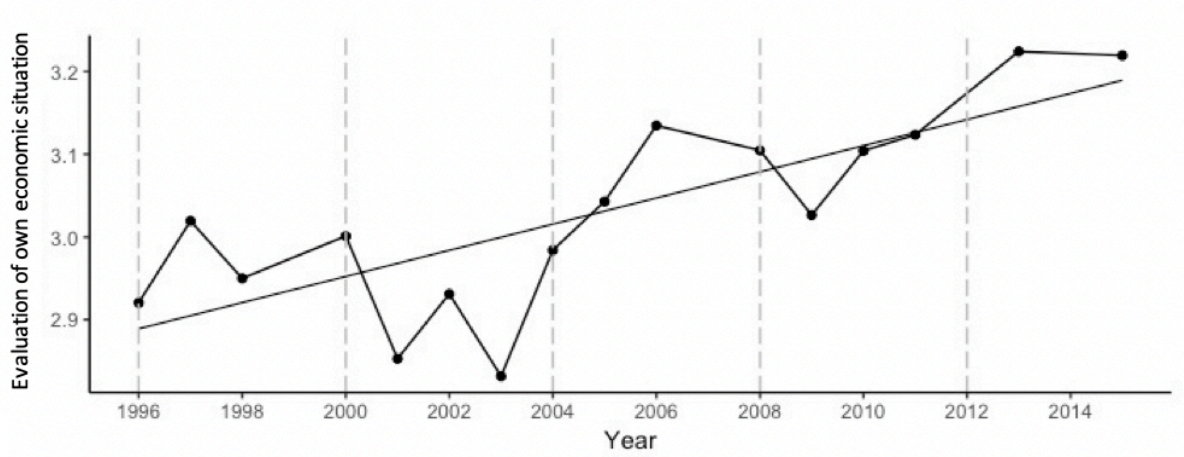
economic situation as the dependent variable and different combinations of predictors. Finally, I complemented the statistical analyses with graphs in order to detect synchronous movements of the variables in both trends and fluctuations.

Results

Trends in evaluation of own economic situation

Before testing the hypotheses of this study, I looked at the trends in each of the measures involved in these analyses. Did evaluation of own economic situation change in Latin America over the 1996-2015 time period? Starting in 1996, evaluation of own economic situation showed an upward trend across Latin America (Figure 2.1).

Figure 2.1: Average annual evaluation of own economic situation, 17 Latin American countries, 1996-2015.



Note: The fitted regression is $y = 2.866 + 0.019x$ (where x = survey wave, range 1-16)
t-stats: intercept = 71.63; slope = 4.61. Adj. $R^2 = 0.57$.

This upward time trend was significant in 12 of the 17 Latin American countries studied here. Venezuela, Mexico, Ecuador and Honduras showed a statistically non-significant upward trend in evaluation of own economic situation, and two countries, namely El Salvador and Guatemala, displayed a statistically non-significant downward trend over the same period (Table 2.1).

Table 2.1: Trend coefficients for evaluation of own economic situation, 17 Latin American countries in rank order, 1996-2015.

Country	*Evaluation of own economic situation*
Mean	**0.019*****
Argentina	0.047***
Uruguay	0.036**
Brazil	0.034***
Panama	0.030*
Peru	0.028***
Nicaragua	0.025*
Colombia	0.022*
Ecuador	0.020
Paraguay	0.019**
Venezuela	0.015
Bolivia	0.014*
Costa Rica	0.014**
Chile	0.012*
Mexico	0.008
Honduras	0.007
Guatemala	-0.001
El Salvador	-0.005

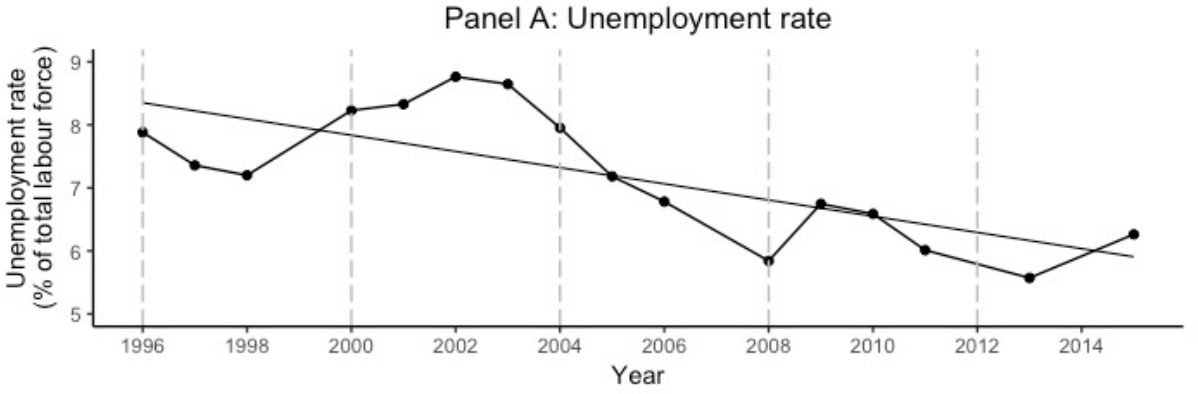
Note: *p<0.5; **p<0.01; ***p<0.001

Trends in economic and political conditions

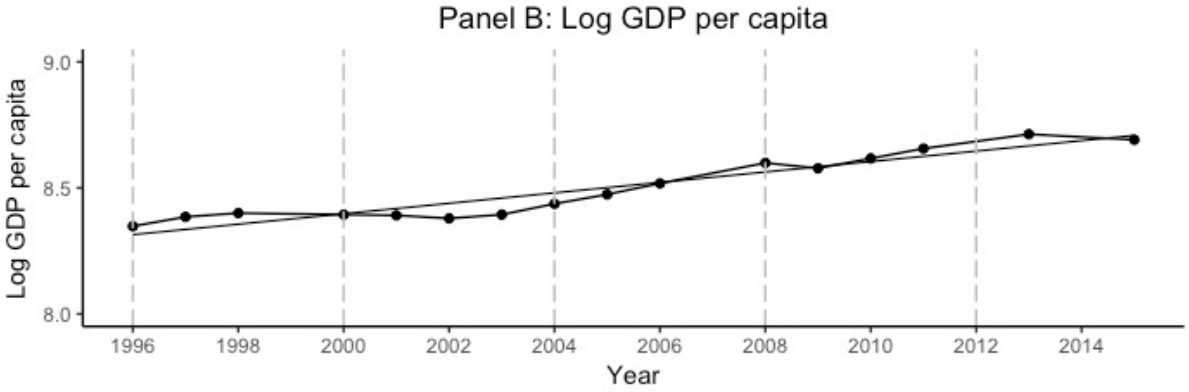
On average, unemployment rates declined between 1996 and 2015 in Latin America (Figure 2.2, panel A). More specifically, eight of the 17 Latin American countries included in this study showed a significant downward trend. However, in Brazil, Chile, Ecuador and Paraguay, the unemployment rate displayed a statistically non-significant downward trend whereas it showed a significant upward trend in Costa Rica and Nicaragua and a statistically

non-significant upward trend in Guatemala, Honduras and Mexico (Table 2.2, panel A). The log of GDP per capita increased overall (Figure 2.2, panel B), and in each of the 17 Latin American countries included in the analysis (Table 2.2, panel B). On average, the inflation rate decreased significantly over the 1996-2015 time period (Figure 2.2, panel C), and, more specifically, in nine of the 17 countries. However, Bolivia, Brazil, Chile, Nicaragua, El Salvador and Venezuela showed a statistically non-significant downward trend whereas Panama and Argentina displayed a significant upward trend over the period of analysis (Table 2.2, panel C).

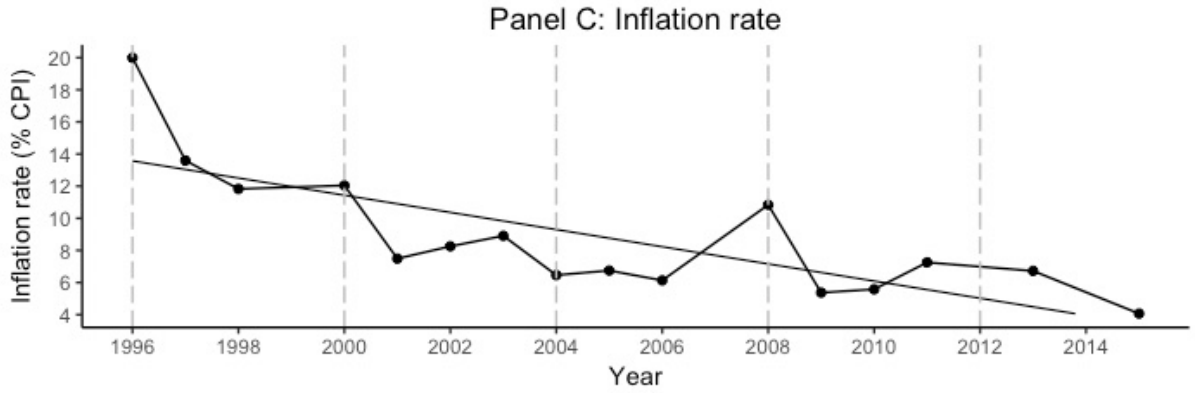
Figure 2.2: Trends in indicators of economic and political conditions, 17 Latin American countries, 1996-2015.



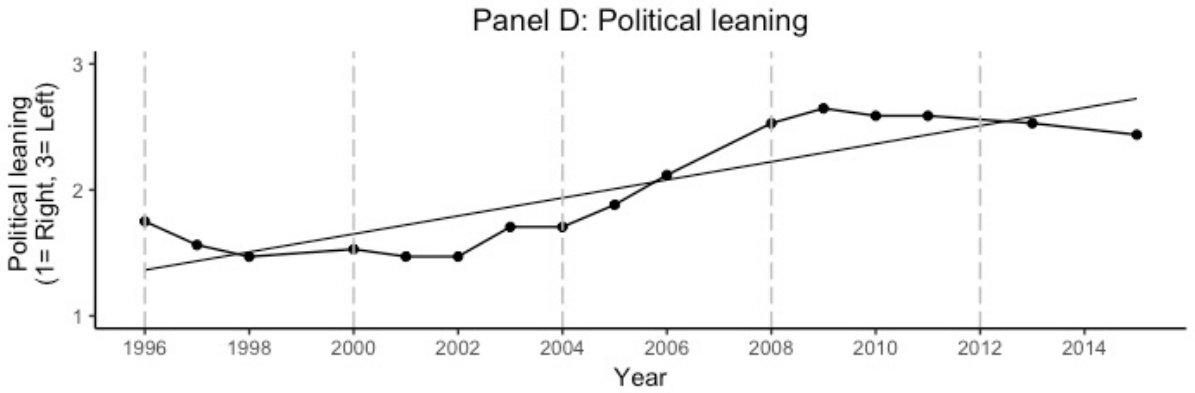
Note: The fitted regression is $y = 8.552 - 0.158x$ (where x = survey wave, range 1-16)
t-stats: intercept = 23.08; slope = -4.12. Adj. $R^2 = 0.52$.



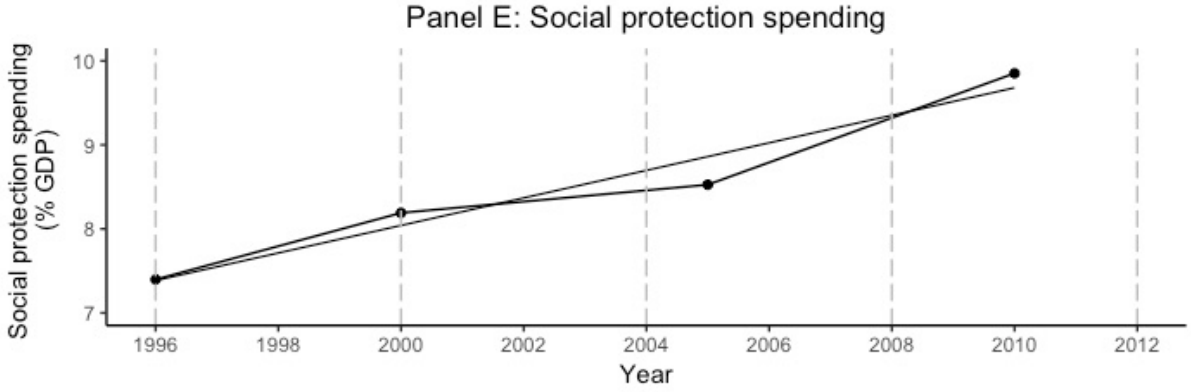
Note: The fitted regression is $y = 8.285 + 0.025x$ (where x = survey wave, range 1-16)
t-stats: intercept = 396.2; slope = 11.6. Adj. $R^2 = 0.89$.



Note: The fitted regression is $y = 14.414 - 0.656x$ (where x = survey wave, range 1-16)
t-stats: intercept = 10.53; slope = -4.64. Adj. $R^2 = 0.58$.



Note: The fitted regression is $y = 1.254 + 0.088x$ (where x = survey wave, range 1-16)
t-stats: intercept = 10.24; slope = 6.93. Adj. $R^2 = 0.76$.



Note: The fitted regression is $y = 6.568 + 0.769x$ (where x = survey wave, range 1-16)
t-stats: intercept = 18.08; slope = 5.80. Adj. $R^2 = 0.92$.

Table 2.2: Trend coefficients for the unemployment rate, log of GDP per capita and the inflation rate, 17 Latin American countries in rank order, 1996-2015.

A		*B*		*C*	
Country	*Unemployment rate*	*Country*	*Log GDP per capita*	*Country*	*Inflation rate (CPI)*
Mean	**-0.158*****	***Mean***	**0.025*****	***Mean***	**-0.656*****
Panama	-0.801***	*Panama*	0.051***	*Ecuador*	-3.107*
Argentina	-0.714***	*Peru*	0.044***	*Venezuela*	-1.888
Venezuela	-0.423*	*Uruguay*	0.033***	*Mexico*	-1.309**
Colombia	-0.329**	*Costa Rica*	0.032***	*Colombia*	-1.049***
Uruguay	-0.228***	*Chile*	0.031***	*Honduras*	-0.964***
Ecuador	-0.162	*Colombia*	0.029***	*Uruguay*	-0.748*
Peru	-0.162***	*Bolivia*	0.026***	*Costa Rica*	-0.695***
Bolivia	-0.121**	*Nicaragua*	0.026***	*Paraguay*	-0.407*
El Salvador	-0.102**	*Ecuador*	0.024***	*Guatemala*	-0.345*
Paraguay	-0.079	*Honduras*	0.024***	*Peru*	-0.331*
Brazil	-0.061	*Argentina*	0.023***	*El Salvador*	-0.262
Chile	-0.014	*Brazil*	0.023***	*Nicaragua*	-0.233
Guatemala	0.018	*El Salvador*	0.021***	*Brazil*	-0.219
Honduras	0.077	*Paraguay*	0.017**	*Chile*	-0.195
Mexico	0.095	*Guatemala*	0.015***	*Bolivia*	-0.039
Nicaragua	0.156*	*Venezuela*	0.014*	*Panama*	0.229
Costa Rica	0.201**	*Mexico*	0.011***	*Argentina*	0.666

Note: *p<0.5; **p<0.01; ***p<0.001

On average, governments' political orientation in Latin America shifted more towards the left of the political spectrum between 1996 and 2015 (Figure 2.2, panel D). This political shift was accompanied by an increase in social protection spending during the same time period (Figure 2.2, panel E).

Table 2.3 provides a more comprehensive picture of the political orientation of the government in each country averaged over the whole time period. Honduras, Mexico and Guatemala remained on the right side of the political spectrum although Latin America as a whole experienced a shift from right to left-leaning governments between 1996 and 2015 (Panel

A). In general, average political orientation and average social protection spending across all countries move together: most of the countries that ranked high on average political orientation, indicating left-leaning governments, do so too on average social protection spending[7] (Panel B).

Table 2.3: Mean political orientation and mean social protection spending (% of GDP) between 1996-2015, 17 Latin American countries in rank order.

A		*B*	
Country	*Mean political orientation*	*Country*	*Mean social protection spending*
Mean	**2.0**	***Mean***	**8.49**
Venezuela	2.9	*Brazil*	17.75
Chile	2.8	*Uruguay*	17.53
Ecuador	2.8	*Argentina*	16.67
Brazil	2.7	*Costa Rica*	12.77
Argentina	2.4	*Chile*	11.03
Bolivia	2.2	*Bolivia*	10.28
Costa Rica	2.2	*Colombia*	8.95
Peru	2.2	*El Salvador*	6.54
Uruguay	2.1	*Mexico*	5.99
Nicaragua	2.0	*Venezuela*	5.99
Colombia	1.8	*Peru*	5.83
Panama	1.8	*Nicaragua*	5.55
El Salvador	1.7	*Panama*	5.02
Paraguay	1.6	*Paraguay*	5.00
Guatemala	1.4	*Guatemala*	3.87
Mexico	1.4	*Honduras*	3.30
Honduras	1.0	*Ecuador*	2.32

Time trend analysis

To what extent were trends in evaluation of own economic situation related to trends in economic and political factors? Bivariate regression analyses indicate that the relationship between the trend growth rate of evaluation of own economic situation and the trend growth rate

[7] Social protection spending contains only four data points per country: 1996, 2000, 2005 and 2010.

of GDP per capita was positive although significant only at the 10% level (*b*= .560, *p*= .087; Table 2.4, column 2). The trend growth rate of evaluation of own economic situation was significantly negatively associated with the trend growth rate of the unemployment rate (*b*= -.027, *p*= .02; Table 2.4, column 1). The trend growth rate of the unemployment rate explained more of the variance in the trend growth rate of evaluation of own economic situation than the trend growth rate of the log of GDP per capita (Unemployment rate *Adj.* R^2= .263 vs Log of the GDP per capita *Adj.* R^2= .128; Table 2.4). However, average social protection spending explained more of the variance in the trend growth rate of evaluation of own economic situation than the trend growth rate of the unemployment rate (Average social protection spending *Adj.* R^2= .291). With regard to the inflation rate, the time series patterns did not provide a statistical explanation of the course of evaluation of own economic situation in Latin America over the 1996-2015 time period (*b*= .004, *p*=.15; Table 2.4, column 3)

Average social protection spending was significantly positively associated with the trend growth rate of evaluation of own economic situation (*b*= .002, *p*=.01; Table 2.4, column 5). However, there is no evidence for an association between trend growth rate of evaluation of own economic situation and average governments' political orientation (*b*= .01, *p*= .1; Table 2.4. column 4), although, in Latin America, governments on the left side of the political spectrum are usually more likely to increase social protection spending.

Table 2.4: Bivariate OLS regressions of trend growth rate of evaluation of own economic situation on trend growth rate of economic variables, average political orientation and average social protection spending, 17 Latin American countries, 1996-2015.

	Dependent variable: Trend growth rate of evaluation of own economic situation				
	(1)	(2)	(3)	(4)	(5)
Trend growth rate of Unemployment rate	-0.027*				
	(0.010)				
Trend growth rate of Log GDP per capita		0.560			
		(0.306)			
Trend growth rate of Inflation rate (CPI)			0.004		
			(0.004)		
Average Political orientation				0.010	
				(0.006)	
Average social protection spending					0.002*
					(0.001)
Constant	0.015***	0.004	0.022***	-0.002	0.006
	(0.003)	(0.009)	(0.004)	(0.012)	(0.006)
Observations	17	17	17	17	17
R^2	0.309	0.182	0.064	0.168	0.335
Adjusted R^2	0.263	0.128	0.002	0.112	0.291
Residual Std. Error (df = 15)	0.012	0.013	0.013	0.013	0.011
F Statistic (df = 1; 15)	6.723*	3.347	1.031	3.023	7.569*

Note: *p < .05, **p < .01, ***p < .001. Regression table shows unstandardised regression coefficients with standard errors in parentheses.

In the multivariable regression analyses shown in table 2.5, I tested models with different combinations of predictors to get a better sense of the relationship between the trend growth rate of subjective well-being and the trend growth rate of the macroeconomic indicators. Based on prior research (Clark, 2003; Easterlin et al., 2010), I took the unemployment rate and GDP per capita as the main economic indicators of interest. Therefore, these predictors are the focus of models 1 to 4 and 5 to 7 of table 2.5, respectively. These analyses show that the trend growth rate of the unemployment rate and average social protection spending were the significant predictors

of the trend growth rate of evaluation of own economic situation in Latin America over the 1996-2015 time period. The significantly negative association between the trend growth rate of evaluation of own economic situation and the trend growth rate of the unemployment rate (UR) was present in the regression models that also controlled for the trend growth rate of the inflation rate (UR: *b*= -.025, *p*= .033; Table 2.5, column 2), average governments' political orientation (UR: *b*=-.024, *p*= .039; Table 2.5, column 3) and average social protection spending (UR: *b*= -.023, *p*= .018; Table 2.5, column 4) in separate models. When controlling for the trend growth rate of GDP per capita, the association between the trend growth rate of evaluation of own economic situation and the trend growth rate of the unemployment rate was only significant at the 10% level (*b*= -.022, *p*= .063; Table 2.5, column 1). However, the association between trend growth rate of evaluation of own economic situation and the trend growth rate of GDP per capita was not significant in any of the regression models that include other macroeconomic and political measures (Table 2.5, columns 5 to 7). Social protection spending was significantly positively associated with the trend growth rate of evaluation of own economic situation when including the trend growth rate of unemployment rate as another predictor (*b*= .001, *p*= .014; Table 2.5, column 4), and when keeping the trend growth rate of log of GDP per capita constant in a separate model (*b*= .001, *p*= .017; Table 2.5, column 5). Most importantly, social protection spending was significantly positively associated with the trend growth rate of own economic situation when I included the trend growth rate of the unemployment rate, the trend growth rate of log of GDP per capita and average governments' political orientation in the same regression model (*b*= .001, *p*= .043; Table 2.5, column 8).

Overall, these results confirm hypotheses 1, 2 and 5. The trend growth rate of evaluation of own economic situation and the trend growth rate of the unemployment rate were significantly

negatively associated. There was no significant association between the trend growth rate of evaluation of own economic situation and the trend growth rate of GDP per capita. The trend growth rate of evaluation of own economic situation and the average level of government's social protection spending were significantly positively associated.

Contrary to my predictions, the analyses presented in this study do not provide evidence for hypotheses 3 and 4. The trend growth rate of evaluation of own economic situation and the trend growth rate of the inflation rate were not significantly negatively associated and the trend growth rate of evaluation of own economic situation and the presence of left-leaning governments were not significantly positively associated.

Table 2.5: Multivariable OLS regressions of trend growth rate of evaluation of own economic situation on trend growth rates of economic variables, average political orientation and average social protection spending, 17 Latin American countries, 1996-2015.

	Dependent variable: Trend growth rate of Evaluation of own economic situation							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Trend growth rate of Unemployment rate	-0.022	-0.025*	-0.024*	-0.023*				-0.018
	(0.011)	(0.011	(0.010)	(0.009)				(0.009)
Trend growth rate of Log GDP per capita	0.337				0.505	0.505	0.476	0.289
	(0.300)				(0.331)	(0.292)	(0.258)	(0.0254)
Trend growth rate of Inflation rate (CPI)		0.002			0.002			
		(0.003)			(0.004)			
Average political orientation			0.007			0.009		0.003
			(0.005)			(0.005)		(0.005)
Average social protection spending				0.001*			0.001*	0.001*
				(0.0005)			(0.0005)	(0.0005)
Constant	0.007	0.017***	0.0004	0.004	0.007	-0.013	-0.006	-0.007
	(0.008)	(0.004)	(0.011)	(0.005)	(0.010)	(0.013)	(0.008)	(0.011)
Observations	17	17	17	17	17	17	17	17
R^2	0.367	0.330	0.394	0.559	0.198	0.314	0.466	0.611
Adjusted R^2	0.276	0.235	0.307	0.496	0.083	0.217	0.389	0.482
Residual Std. Error	0.011	0.012	0.011	0.010	0.013	0.012	0.011	0.010
	(df = 14)	(df = 14)	(df = 14)	(df = 14)	(df = 14)	(df = 14)	(df = 14)	(df = 12)
F Statistic	4.051*	3.451	4.546*	8.886***	1.728	3.211	6.099*	4.721**
	(df = 2; 14)	(df = 2; 14)	(df = 2; 14)	(df = 2; 14)	(df = 2; 14)	(df = 2; 14)	(df = 2; 14)	(df = 4; 12)

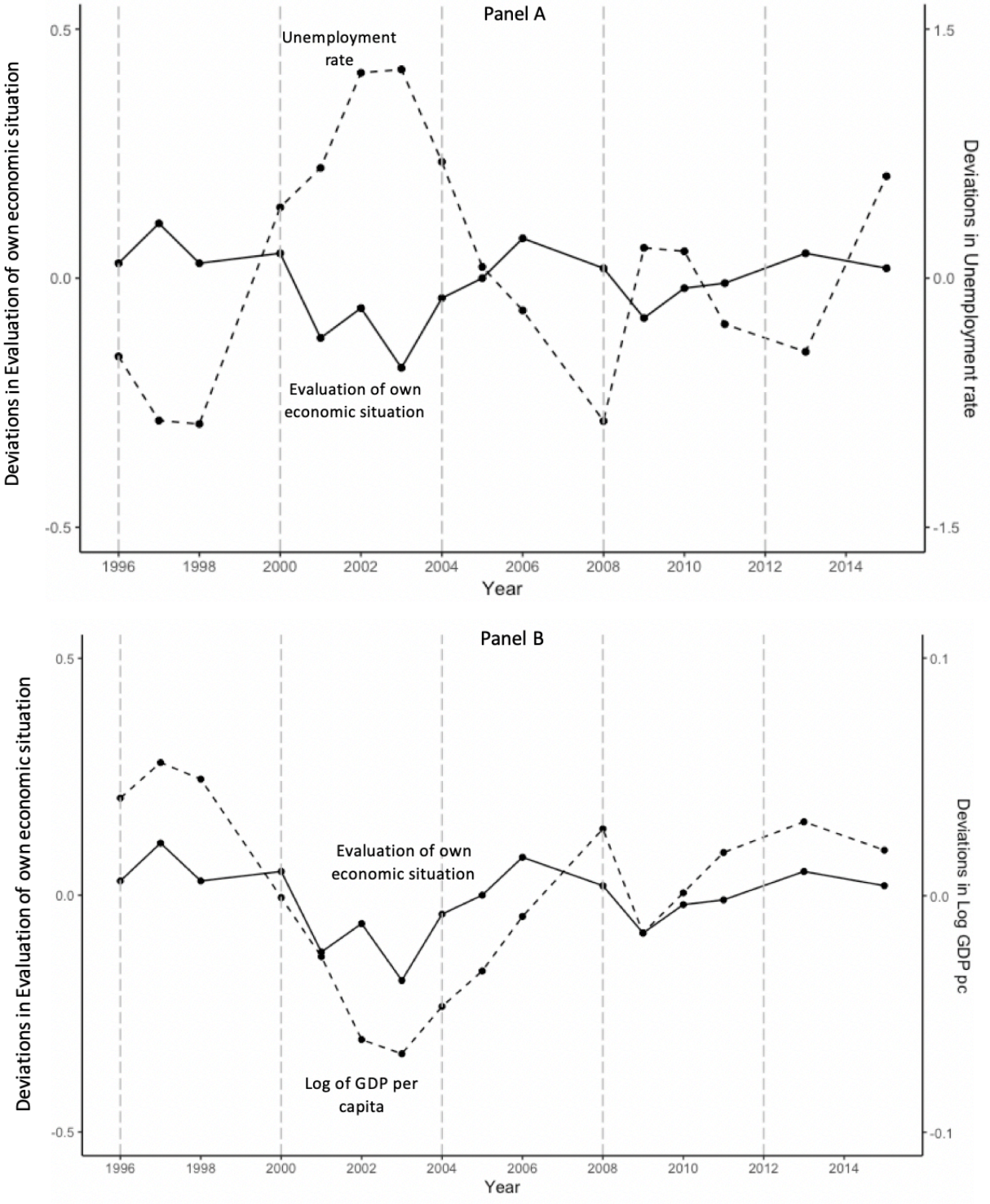
Note: *p < .05, **p < .01, ***p < .001. Regression table shows unstandardised regression coefficients with standard errors in parentheses.

Annual deviations from the trends

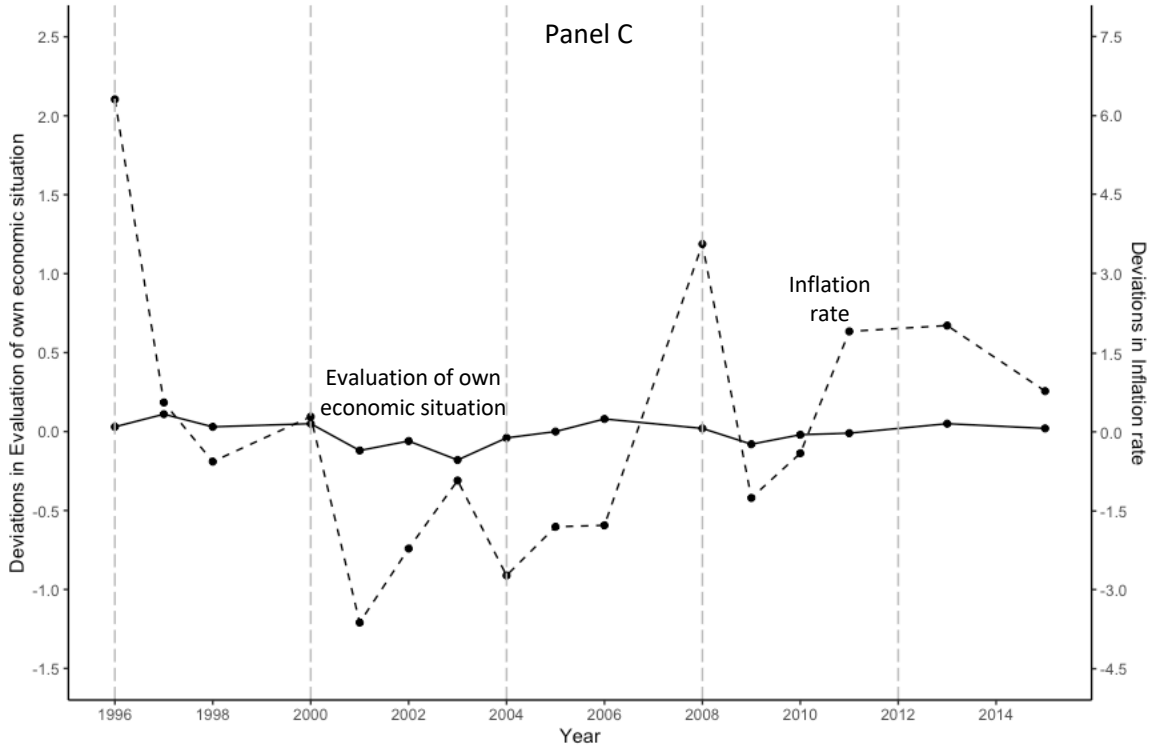
Did people's evaluation of own economic situation and economic conditions show synchronous movements over the 1996-2015 time period? Although such synchronous movements do not prove a causal relationship, they are nevertheless of interest. I fitted OLS trend lines for people's evaluation of own economic situation, the unemployment rate, the log of GDP per capita and the inflation rate over the full period of analysis for each of the Latin American countries. Then, I computed for each year the deviation of the actual value from the trend value and pooled the deviations for the 17 countries. I found that when the unemployment and inflation rates were below the trend, evaluation of own economic situation tended to be above, and when the unemployment and inflation rates were above the trend, evaluation of own economic situation was below. Similarly, when the log of GDP per capita was above (below) the trend, evaluation of own economic situation tended to be above (below).

In the 17 Latin American countries in my dataset, evaluation of own economic situation showed synchronous short-term movements with both the unemployment rate and the log of GDP per capita. I computed the mean of the deviations for the 17 countries in each year for evaluation of own economic situation, the unemployment rate, the log of GDP per capita and the inflation rate (Figure 2.3). The time series of the mean deviations of the unemployment rate show an increase around 2002 and another one around 2009. In contrast, the time series of the mean deviation of the GDP per capita show a decrease around 2002 and another one around 2009. Starting in 2003, evaluation of own economic situation showed an increase similar to that in the log of GDP per capita, a pattern which also mirrored the decrease in the unemployment rate.

Figure 2.3: Mean deviation from the trend of evaluation of own economic situation, unemployment rate, inflation rate and log GDP per capita, 17 Latin American countries, annually 1996–2015[8].



[8] Panel A and Panel C show the scale of the Unemployment rate and the Inflation rate, respectively, divided by 3. Panel B shows the scale of the Log of GDP per capita multiplied by 5.



To what extent can fluctuations in economic factors explain fluctuations in evaluation of own economic situation? The OLS analyses showed that, between 1996 and 2015, there was a significantly negative association between fluctuations in evaluation of own economic situation and fluctuations in the unemployment rate (b= -.040, p<.001; Table 2.6, column 1) and between fluctuations in evaluation of own economic situation and fluctuations in the inflation rate in the short term (b= -.003, p= .014; Table 2.6, column 3). I further observed a significantly positive association between fluctuations in evaluation of own economic situation and fluctuations in the log of GDP per capita in the short term (b= 1.169, p<.001; Table 2.6, column 2). Compared to the main findings of the trend analysis, fluctuations in the log of GDP per capita explained more of the variance in fluctuations in evaluation of own economic situation than fluctuations in the unemployment rate (Unemployment rate *Adj.* R^2= .079 vs GDP per capita *Adj.* R^2= .178; Table 2.6).

Multivariable OLS analyses highlighted the relevance of the unemployment rate, the log of GDP per capita and the inflation rate in explaining short term movements in evaluation of own economic situation (Table 2.7). It is worth noting that when I controlled only for fluctuations in the log of GDP per capita, the association between fluctuations in the unemployment rate and fluctuations in evaluation of own economic situation was significant only at the 10% level (*b*= -.013, *p*= .092; Table 2.7, column 1). However, when I controlled for fluctuations in the inflation rate the association between fluctuations in the unemployment rate and fluctuations in evaluation of own economic situation was significantly negative (*b*= -.043, *p*<.001; Table 2.7, column 2).

Table 2.6: Bivariate OLS regressions of deviations from the trend of evaluation of own economic situation on deviations from the trend of indicated variables, 17 Latin American countries, 1996-2015.

	Dependent variable: Deviation from the trend of Evaluation of own economic situation		
	(1)	(2)	(3)
Deviation from the trend of the Unemployment rate	-0.040***		
	(0.006)		
Deviation from the trend of the Log GDP per capita		1.169***	
		(0.135)	
Deviation from the trend of the Inflation rate (CPI)			-0.003*
			(0.001)
Country fixed effects	*Yes*	*Yes*	*Yes*
Constant	-0.003	-0.003	-0.002
	(0.033)	(0.031)	(0.035)
Observations	271	271	271
R^2	0.137	0.230	0.024
Adjusted R^2	0.079	0.178	-0.042
Residual Std. Error (df = 253)	0.130	0.123	0.139
F Statistic (df = 17; 253)	2.359**	4.436***	0.364

Note: *p < .05, **p < .01, ***p < .001. Regression table shows unstandardised regression coefficients with standard errors in parentheses.

The multivariable OLS analyses revealed a significant positive association between fluctuations in the log of GDP per capita and fluctuations in evaluation of own economic situation and a significantly negative association between fluctuations in the inflation rate and fluctuations in evaluation of own economic situation in all the models (Table 2.7). When I included all the macroeconomic measures in one single regression model the analyses showed a significantly positive association between fluctuations in the log of GDP per capita and fluctuations in evaluation of own economic situation and a significantly negative association between fluctuations in the inflation rate, fluctuations in unemployment rate and fluctuations in evaluation of own economic situation (Log of GDP per capita: b= .990, p<.001; Inflation rate: b= -.002, p<.001; Unemployment rate: b= -.016, p= .035; Table 2.7, column 4). It is worth also noting that the multiple regressions displayed a significantly negative association between evaluation of own economic situation and the inflation rate in the short term (fluctuations), but, as seen in the previous section, not in the long term (trends). These analyses suggest that, in the short-term, subjective well-being varies in lockstep with economic conditions, a finding that supports hypotheses 6, 7 and 8: between 1996 and 2015, fluctuations in evaluation of own economic situation were significantly negatively associated with fluctuations in the unemployment and the inflation rate and significantly positively associated with fluctuations in the log of GDP per capita.

Table 2.7: Multivariable OLS regressions of deviations from the trend growth rate of evaluation of own economic situation on deviations from the trend of indicated variables, 17 Latin American countries, 1996-2015.

	Dependent variable: Deviation from the trend of Evaluation of own economic situation			
	(1)	(2)	(3)	(4)
Deviation from the trend of Unemployment rate	-0.013	-0.043***		-0.016*
	(0.008)	(0.006)		(0.007)
Deviation from the trend of Log GDP per capita	0.990***		1.207***	0.990***
	(0.171)		(0.132)	(0.166)
Deviation from the trend of		-0.004***	-0.004***	-0.004***
		(0.001)	(0.001)	(0.001)
Country fixed effects	*Yes*	*Yes*	*Yes*	*Yes*
Constant	-0.003	-0.003	-0.003	-0.003
	(0.031)	(0.032)	(0.030)	(0.029)
Observations	271	271	271	271
R^2	0.238	0.178	0.267	0.280
Adjusted R^2	0.184	0.119	0.214	0.225
Residual Std. Error (df = 252)	0.123	0.127	0.120	0.120 (df = 251)
F Statistic (df = 18; 252)	4.380***	3.031***	5.090***	5.126*** (df = 19; 251)

Note: *p < .05, **p < .01, ***p < .001. Regression table shows unstandardised regression coefficients with standard errors in parentheses.

Discussion

The economic benefits of the neoliberal policies that were implemented under the Washington Consensus in Latin America peaked around 1996. However, an external debt crisis (1999-2002) put an end to these policies, ushering in an era of left-leaning governments starting around 2003. The aim of this study was to explore whether changes in economic indicators that may have been affected by these considerable policy changes were associated with subjective

well-being during the 1996-2015 time period. Overall, I observed an upward trend in evaluation of own economic situation over this time period. A trough in evaluation of own economic situation around 2002 may reflect the collapse of the neoliberal policies that were implemented in Latin America in the 1990s and, thus, the end of the Washington Consensus. The recovery of well-being starting in 2003 may be related to the election of left-leaning governments that subsequently implemented welfare policies.

Between 1996 and 2015, the trend in subjective well-being mirrored some of the trends in measures of economic and political conditions: while the unemployment and the inflation rate trended downward, the log of GDP per capita and social protection spending moved upward. At the same time, there was a gradual shift in governments' political orientation toward the left. In multiple regression analyses, only trends in the unemployment rate and the average social protection spending were significantly related to the trend in evaluation of own economic situation. Indeed, the trend growth rate of the unemployment rate was significantly negatively associated with the trend growth rate of evaluation of own economic situation whereas the average social protection spending was positively associated with trend growth rate of evaluation of own economic situation. It is worth noting that when I included the trend growth rate of the unemployment rate, the trend growth rate of the log of GDP per capita, average social protection spending and governments' political orientation in the same regression model only social protection spending was significantly positively associated with the trend growth rate of evaluation of own economic situation. In this full regression model, the association between the trend growth rate of the unemployment rate and the trend growth rate of evaluation of own economic situation was significant at the 10% level. Overall, these analyses suggest that at least in Latin America in the 1990s and early 2000s, trends in subjective well-being may have been

related to economic indicators that may have been affected by economic and political reforms. A reduction in the unemployment rate across the region and increases in social protection spending appeared to have contributed to improved perceptions of people's own economic situation over the 1996-2015 time period.

The three measures of economic conditions included in this study, namely the unemployment rate, the inflation rate and the log of GDP per capita, showed synchronous movements with evaluation of own economic situation. The fluctuations of the three measures of economic conditions showed a decrease around 2002, possibly reflecting the decline in neoliberal policies implemented under the Washington Consensus, followed by an increase starting in 2003. There was another decrease around 2009, which may reflect the consequences of the 2008 global financial crisis. The analyses also showed that the associations between macroeconomic variables and evaluation of own economic situation were different in the short term (fluctuations) and the long term (trends). In the long term, average social protection spending explained more of the variance in evaluation of own economic situation than the other macroeconomic and political indicators. In the short term, the log of GDP per capita explained more of the variance in evaluation of own economic situation than the other macroeconomic and political indicators.

The findings of this study are in line with the literature on subjective well-being and economic circumstances. Firstly, the Easterlin paradox suggests that economic growth is not associated with subjective well-being over time (Easterlin, 1974). In this chapter, I show that the relationship between the log of GDP per capita and subjective well-being is nil in the long term as the trends in these two measures are statistically unrelated. Second, the current study supports past research that showed that the unemployment and the inflation rate are negatively associated

with subjective well-being (DiTella et al., 2003; Wolfers, 2003) and that social protection spending is positively associated with subjective well-being (Switek, 2012).

Past research on subjective well-being showed that people who live in a country with a left-leaning government report higher subjective well-being than those who live in a country with a right-leaning government (e.g., Napier & Jost, 2008; Okulicz-Kozaryn et al., 2014). In this study, I found no association between average governments' political orientation and subjective well-being *over time*. It is worth noting that the measure of political orientation I used in this chapter is different from the measure of political orientation used in past research. In the current study, I calculated an average of governments' political orientation over the whole time span under analysis in order to look at the overall association between the political orientation of Latin American governments and subjective well-being. The inconclusive results of this measure may be related to the short scale the original political orientation measure presents (1-3), and thus, the results may be taken with caution.

Limitations and directions for future work

The main limitation of this study is the cross-sectional aspect of the data: the analyses are correlational and cannot establish causality. Synchronous time trends can only suggest a possible correlation between the macroeconomic indicators and subjective well-being but do not prove that a change in one cause a change in the other.

Life satisfaction is the most widely used measure of subjective well-being. However, the Latinobarómetro provides a question on life satisfaction of poor quality for the time series analyses conducted in this chapter: the answer categories of the question change in the first survey years (1996-2004). Eliminating the problematic years would have made the time span

shorter; thus, undermining the quality of the time series analyses. In addition, because the aim of this study was to look at the relationship between subjective well-being and changes in macroeconomic indicators around the Washington Consensus, the years before 2004 were essential for this analysis. Therefore, I decided to employ evaluation of own economic situation, the measure of higher quality based on its consistency over the survey years.

Another limitation of this work is the lack of measures that reflect actual policies implemented by Latin American governments. Social protection spending is only one aspect of government expenditure and other measures, such as government size, pro-redistribution, and pro-growth attitudes as well as levels of government expenditures in specific areas such as education and health, are necessary to understand the relationship between governments' actual policies and subjective well-being. To the best of my knowledge, these measures are scarcely available for Latin American countries, a situation that brings serious limitations to this type of study.

Chapter Summary

Using data for 17 Latin American countries between 1996 and 2015, I look at trends (movements in the long-term) and fluctuations (movements in the short-term) in subjective well-being as well as in macroeconomic indicators, such as the unemployment and the inflation rates, the log of GDP per capita and the level of social protection spending. I also look at the political orientation of the governments in power in Latin America over the whole period of analysis. I find that the trend in the unemployment rate is significantly negatively associated with subjective well-being whereas the average social protection spending is significantly positively associated with subjective well-being. In the short term, fluctuations of the three macroeconomic indicators

included in this study, namely the unemployment and inflation rates and the log of GDP per capita, show synchronous movements with subjective well-being.

Chapter 3. Perceptions of economic circumstances and subjective well-being in Latin America: Associations with political orientation and changes across the electoral cycle

Introduction

In the previous chapter, I discussed whether and how macroeconomic conditions were associated with subjective well-being in a period of macroeconomic reforms that promoted a shift in government political orientation. In this chapter, I explore the association between governments' political orientation and subjective well-being and whether subjective well-being varies over the electoral cycle.

One of the main goals of a government is to ensure its citizens' well-being (e.g., Nussbaum, 2004; Rasmussen, 2006) and how successful a government is in achieving this objective depends on the policies it implements. The types of policies that are advocated and implemented by the incumbent government typically depend on its political orientation. For instance, the promotion of equality and protection from economic, social and political hardship, achieved through governmental interventions usually characterise left-leaning governments (Green-Pedersen, 2004). In contrast, right-leaning governments typically avoid interference in economic decisions and promote a free market, thereby giving more power to interest groups. While parties that appear to promote left or right-leaning policies do not necessarily successfully implement such policies once they are in power, voters' *expectations* regarding government actions are likely influenced by the political orientation professed by political parties. These expectations, in turn, may influence people's perceptions of life under certain governments. In the present study, I explore to what extent a government's political orientation is associated with individuals' evaluations of economic circumstances and well-being. Do citizens fare better when governments adhere to certain political ideologies? And do these perceptions systematically vary over the electoral cycle?

In Latin America, the focus of the present study, right and left-leaning governments are historically associated with different types of policies and economic decisions. Typical policies implemented by left-leaning governments in Latin America include the re-

nationalisation of private companies which manage key services for the progress of the country (e.g., oil and gas, transport, water, telecommunication), as well as social programmes which aim to reduce or eliminate poverty by aiding families which live under the poverty line. In contrast, right-leaning governments typically implement free market policies and tend to avoid active interventions in social and economic decisions. For example, starting in the 1980s, many formerly state-owned companies were privatised following the election of more right-leaning governments (e.g., Bonnet, Dubois, Martimort, & Straub, 2011). However, not all parties find themselves at the extreme ends of the political left-leaning and right-leaning spectrum, and a number of Latin American governments can be classified as belonging to the centre.

In the current study, I examine the association between governments' political orientation and respondents' subjective well-being (SWB) in Latin America, a region which witnessed turbulent economic and political changes in the 20th century. I extend prior findings by examining various subjective measures: in addition to life satisfaction, the most commonly used measure in studies on the topic, I explore people's satisfaction with democracy and their evaluations of their country's and their own economic situation. In democracies, citizens can express their approval or disapproval of government performance during elections. I therefore further explore changes in these subjective measures over the electoral cycle and control for individuals' political orientation, socio-demographic factors and macroeconomic indicators. To the best of my knowledge, this is the first study to date that explores the association between a government's political orientation and subjective measures, and examines systematic changes over the electoral cycle in Latin America.

Background

Over the past two decades, researchers have increasingly advocated the use of subjective well-being measures as indicators of social progress (Diener 2000; Dolan and White 2006; Kahneman and Krueger 2006). These indicators can be used in conjunction with traditional measures of societal well-being, such as the gross domestic product (GDP), to guide policymakers in implementing new social policies and measuring their impact on society. Especially as GDP does not consider important aspects of an economy, such as a society's level of income inequality (Stiglitz, Sen, and Fitoussi 2009), which has been found to be a significant predictor of citizens' well-being (Alesina et al., 2004). For instance, in Latin America, income inequality is negatively associated with subjective well-being; possibly because it is seen as a signal of unfairness disadvantaging the poor in favour of the rich (Graham & Felton, 2006).

As mentioned earlier, numerous previous studies have explored the associations between economic and political factors and subjective well-being (e.g., DiTella et al., 2003; Easterlin, 1974; Frey & Stutzer, 2000). For instance, economic indicators, such as the unemployment and the inflation rate, have been found to be significantly associated with SWB (e.g., DiTella et al., 2003). In the political domain, prior research has shown that individuals' subjective well-being is positively associated with democratic processes: respondents who reside in countries that allow a greater degree of participation in the political process and those who take an active part in voting report higher levels of life satisfaction (Owen et al., 2008; Weitz-Shapiro & Winters, 2011). In addition, subjective well-being has been found to be positively associated with both the performance of a government, people's perceptions of its functioning (Bok, 2010) and governments' political orientation. People who live in a country with a left-leaning government report higher subjective well-being than those who live in a country with a right-leaning government (Bok, 2010). In

contrast, right-leaning individuals expressed higher subjective well-being than their left-leaning counterparts (Napier & Jost, 2008). Subjective well-being may predict people's voting decisions even more than standard macroeconomic factors (Ward, 2015). In the UK, people with higher levels of life satisfaction are more likely to support the incumbent government (Liberini, Redoano, & Porto, 2017). Relatedly, in Latin America, life satisfaction is a stronger predictor of the likelihood of success of the incumbent party than the GDP per capita growth rate (Martinez Bravo, 2016).

While I do not measure governmental policies directly in the present analysis, I postulate that a government's professed political orientation considerably affects citizens' views and *expectations* with regards to governmental actions. These expectations could therefore significantly influence people's subjective evaluations especially in times of elections when a change in government, and thus the governing party's political orientation, is a realistic possibility.

In the present study, I employ measures of subjective well-being and of people's evaluation of their own and their country's economic situation. To the best of my knowledge, this is the first study to date that explores the association between a government's political orientation and people's subjective economic evaluations in addition to life satisfaction. In this chapter I explore the following hypotheses:

H1: People who live in a country with a left-leaning government will rate their country's and their own economic situation better and will be more satisfied with the democracy of the country and with their lives than those who live in a country with a right-leaning government.

H2: People who lean politically more to the right will rate their country's and their own economic situation better and will be more satisfied with the democracy of the country and with their lives than those who lean politically more to the left.

H3: People will rate their country's and their own economic situation better and will be more satisfied with the democracy of the country and with their lives in periods around planned elections.

Method

Data

In this chapter, I used data from the Latinobarómetro, an annual survey which includes 18 countries in Latin America with about 1,000 respondents per country in each survey year (Latinobarómetro, 2016). The data are repeated cross-sections which are representative of the population in the majority of the countries in the year of data collection. Our final sample of 327,028 observations contains all 18 Latin American countries that are available in the dataset and covers 17 survey years between 1996 and 2015. Regressions that include the measure of people's evaluations of their own economic situation are based on a smaller sample as this question was not available in 2007. For the life satisfaction regressions, I only included the nine survey years (2004-2007, 2009-2015) in which the answer categories of the life satisfaction question remain the same.

Dependent variables

The aim of this chapter was to investigate associations between political orientation, individuals' perceptions of economic circumstances and subjective well-being. Additionally, I looked at whether these associations changed around the time of elections. For this purpose, I employed four dependent variables which assessed respondents' evaluations of economic circumstances from the macro and micro perspective and subjective well-being, measured by satisfaction with democracy and life satisfaction:

-*Evaluation of country's economic situation:* this measure was based on the question "In general, how would you describe the country's present economic situation?" Answer categories ranged from very good (1), good (2), about average (3), bad (4) to very bad (5) and were reverse coded so that a higher value denoted a more positive evaluation.

-*Evaluation of own economic situation:* Respondents were asked about their own economic situation: "In general, how would you describe your present economic situation and that of your family?" with answer categories ranging from very good (1), good (2), about average (3), bad (4) to very bad (5). These were reverse coded so that a higher value represented a better evaluation.

-*Satisfaction with democracy:* Respondents were asked about their satisfaction with the working of democracy in their country, with answers ranging from very satisfied (1), quite satisfied (2), not very satisfied (3) to not at all satisfied (4). This variable was reverse coded so that a higher value denoted a higher level of satisfaction with democracy.

-*Life satisfaction:* this measure was based on a question about people's life satisfaction "In general, would you say you are satisfied with your life? Would you say you are very satisfied (1), quite satisfied (2), not very satisfied (3) or not satisfied at all (4)?" This variable was reverse coded, such that a higher value denoted a higher level of life satisfaction. As mentioned in the previous chapter, the answer categories of this measure changed in the years before 2004. Therefore, in the study presented in this chapter, I only included the years between 2004-2007 and 2009-2015 because the answer categories were consistent across these years.

Political variables

I assessed political orientation both at the individual (micro) and government (macro) level.

-*Respondent's political orientation:* This micro-level variable was derived from the Latinobarómetro question "In politics, people normally speak of 'left' and 'right'. On a scale where 0 is left and 10 is right, where would you place yourself?". I kept the original coding.

-*Government's political orientation:* The Latinobarómetro does not include a measure indicating the present government's political orientation. I, therefore, added a measure to the dataset, which indicated whether the government in power at the time of the interview in the respondent's country was considered left-leaning, centre or right-leaning. This information was mainly based on entries in the Database of Political Institutions (2015). Any gaps in the data from the Database of Political Institutions were filled with information based on the Political Database of the Americas (2015), which lists the political party of the president elected in each country in the period covered by the Latinobarómetro. I further consulted the relevant literature on the topic to confirm the governments' political orientation classification (e.g., Flores-Macías, 2012; Freidenberg & Sáez, 2001; Middlebrook, 2000)[9].

I further created three additional indicator variables to assess changes in the dependent variables around the time of elections. These indicator variables denoted whether the interview took place in one of three time periods: 1. within 12 months before an election, 2. within 12 months after an election (after which the government's political orientation did not change), or 3. within 12 months after an election (after which the government's political orientation changed). For example, the second indicator variable took a value of one if the interview took place in the year after an election, in which a government with the same

[9] The Database of Political Institutions used the following criteria to classify the governments into right, centre and left-leaning. Initially, the classification came from the name of the political party. For example, parties with the terms "conservative" or "Christian democratic" in their names were classified as right-leaning whereas parties with the terms "communist", "socialist", or "social democratic" in their names were classified as left-leaning. In addition, the authors used the standard left-right scale that describes the level of state control of the economy that governments advocate and the tendency to make certain economic and political decisions. For instance, governments that advocate less state control of the economy and the strengthening of private enterprise were labelled as right-leaning whereas governments that advocate greater state control of the economy and a redistributive role were labelled as left-leaning (see Beck, Clarke, Groff, Keefer, & Walch, 2000).

political orientation as the previous one came into power or the same government was re-elected. In contrast, the third indicator variable captured that the interview took place in the year after a change in the government's political orientation. While the pre-election variable may denote anticipation of a planned electoral event, the two post-election indicator variables intended to capture actual political change and political continuity as a result of a successful democratic process. In models in which all three election period variables were included, the intercept (baseline period) thus captured time periods more than 12 months before or after an election. It is important to note that these variables only considered changes in the government as a result of elections. For example, cases in which the government changed due to the president's death or resignation were not taken into account in this analysis because such a change could not be anticipated.

It is worth noting that the date in which the Latinobarómetro survey was conducted may not coincide with the elections and government inaugurations dates across countries and years. Therefore, to match the Latinobarómetro dataset with the datasets that contain the political orientation variables and to create the elections variables, I considered the date in which the Latinobarómetro survey was conducted as well as election and governments inauguration dates across the 18 Latin American countries and the 17 survey years. The resulting tables can be found in the appendix of this chapter.

Other control variables

The analysis further accounted for three macroeconomic indicators which have previously been found to be associated with subjective well-being, namely the unemployment rate (% of total labour force), the inflation rate (CPI, annual %) and the log of gross domestic product (GDP) per capita (in constant 2010 US$). These were obtained from the World Bank (2017) as the original dataset does not include macroeconomic indices.

I also included socio-demographic micro-level variables, such as age, gender, employment status, and education. Previous research has shown that subjective well-being is U-shaped in age, i.e., it declines, on average, until middle age followed by an increase (e.g., (Blanchflower & Oswald, 2008; Frijters & Beatton, 2012; Graham & Pettinato, 2001). I, therefore, modelled age as non-linear by including both age and age squared. Gender was included as a control variable as women tend to report higher happiness than men (e.g., Alesina, Di Tella, & MacCulloch, 2004). The respondent's employment status was also included in the models as previous studies have consistently found unemployment to be negatively associated with subjective well-being (e.g., Clark, 2003; Clark & Oswald, 1994). I used 'self-employed' as the reference category in the regressions as it presented the largest share of respondents due to the large informal job sector in Latin America. In Latin America, associations between self-employment and subjective well-being appeared to depend on whether people were self-employed because of necessity or good opportunities (Cortés Aguilar, García Muñoz, & Moro-Egido, 2013), which reflected the heterogeneous nature of the category. Education (e.g., Blanchflower & Oswald, 2004) and income (e.g., Oswald, 1997) were both typically positively associated with subjective well-being. Perhaps not surprisingly, a previous study employing Gallup World Poll data for 16 Latin American countries showed higher levels of psychological distress among the poor compared to relatively wealthy individuals (Rojas, 2011). I included the respondent's socioeconomic status (as estimated by the interviewer) as a proxy for household income because the Latinobarómetro did not provide a direct measure of household income. To reflect the respondent's own perception of their income rather than just the interviewer's evaluation, I further included a subjective measure of financial circumstances: "Do the salary you receive and your total family income allow you to cover your needs in a satisfactory manner? Which of the following statements describes your situation? It is sufficient, can save (1); It is just

sufficient, doesn't have major problems (2); It is not sufficient, has problems (3); It is not sufficient, has big problems (4)". The four answer categories were reverse coded for the analysis, such that a higher value denoted a better subjective financial situation.

Additionally, I included year and country fixed effects as there might be further cultural, political and economic differences between countries that impact people's perceptions of economic circumstances and subjective well-being which were not captured by the other variables. I also used standard errors clustered at the country-year level (Moulton, 1990). All variables are described in Table 3.1.

Table 3.1: Summary statistics

Variable	*n*	*Mean*	*St. Dev.*	*Min*	*Max*
Evaluation of country's economic situation	324,846	2.579	0.933	1	5
Evaluation of own economic situation	305,577	3.020	0.805	1	5
Satisfaction with democracy	311,108	2.276	0.881	1	4
Life satisfaction	179,278	2.989	0.839	1	4
Government's political orientation					
Left	327,028	0.416	0.493	0	1
Centre	327,028	0.225	0.418	0	1
Right	327,028	0.352	0.478	0	1
Respondent's political orientation (right = 10)	252,125	5.457	2.705	0	10
12 months before election	327,028	0.262	0.440	0	1
12 months after election, *no* change in government's political orientation	327,028	0.130	0.336	0	1
12 months after election, *with* a change in government's political orientation	327,028	0.099	0.299	0	1
Unemployment rate	327,028	7.456	3.614	1.3	18.4
Inflation rate	325,828	9.084	10.956	-7.71	115.52
Log of GDP per capita	325,828	3.711	0.291	3.069	4.167
Male	327,019	0.486	0.5	0	1
Age	327,028	39.480	16.174	18	99
Level of education					
Without education	327,028	0.081	0.273	0	1
Between 1 and 6 years	327,028	0.287	0.453	0	1
Between 7 and 12 years	327,028	0.404	0.491	0	1
High school/academies/ Incomplete technical training	327,028	0.025	0.156	0	1
High school/academies/ Complete technical training	327,028	0.043	0.202	0	1
Incomplete university	327,028	0.081	0.273	0	1
Complete university	327,028	0.069	0.253	0	1
Employment status					
Self-employed	327,028	0.309	0.462	0	1
Temporarily out of work	327,028	0.062	0.241	0	1
Don't work / responsible for shopping and housework	327,028	0.224	0.417	0	1
Salaried employee in a private company	327,028	0.175	0.380	0	1
Salaried employee in a public company	327,028	0.082	0.274	0	1
Student	327,028	0.073	0.261	0	1
Retired	327,028	0.068	0.251	0	1
Socio-economic status	326,711	3.277	0.914	1	5
Financial ability to cover one's needs	320,091	2.423	0.848	1	4

Analytical strategy

All four dependent variables are ordered categorical, thus, I employed ordered logit regressions and included standard errors clustered at the country-year level (Moulton, 1990). Previous research has shown that interpreting subjective well-being indicators as cardinal, which would justify the use of OLS, usually yields similar results (Ferrer-i-Carbonell & Frijters, 2004).

In a first model specification, I assessed the association between political orientation, both at the government and individual level, and the four dependent variables. In a second model specification, I added the indicators of the electoral cycle to the previous model specification. All models included macroeconomic indicators and socio-economic factors as control variables as well as country and year fixed effects.

Results

I first investigated the relationship between political orientation at both the micro and macro level and four dependent variables denoting respondent's perceptions of economic circumstances as well as respondent's satisfaction with democracy and life satisfaction.

I found that when there was a centre or a right-leaning government in power, individuals rated their country's (*Centre*: b^*= -.403, p < .001, OR= 0.668; *Right*: b^*= -.374, p < .001, OR= 0.688; Table 3.2, column1) and their own economic situation worse (*Centre*: b^*= -.237, p < .001; OR= 0.789; *Right*: b^*= -.214, p < .001, OR= 0.807; Table 3.2, column3) and were, on average, less satisfied with the working of democracy of their country (*Centre*: b^*= -.369 p < .001, OR= 0.692; *Right*: b^*= -.309, p < .001, OR= 0.807; Table 3.2, column5), and with their lives (*Centre*: b^*= -.146 p < .001, OR= 0.734; *Right*: b^*= -.042, p= .06, OR= 0.959; Table 3.2, column7) than when there was a left-leaning government in power. In other words, respondents rated their own and their country's economic situation better and were, on

average, more satisfied with the working of democracy and with their lives under left-leaning governments than under any other type of government. It is worth noting that the relationship between right-leaning governments and life satisfaction was significant only at the 10% level (p= .06). This result may be influenced by the shorter time span of the life satisfaction measure (see Discussion section for more information about the limitations of this measure). In contrast, respondents who leaned to the right politically rated their own and their country's economic situation more positively (*Country*: b^*= .019, p < .001, OR= 1.019; Table 3.2, column 1. *Own*: b^*= .022, p < .001, OR= 1.022; Table 3.2, column 3) and were, on average, more satisfied with democracy (b^*= .030, p < .001, OR= 1.030; Table 3.2, column 5) and with their lives (b^*= .024, p < .001, OR= 1.022; Table 3.2, column 7) than those who described themselves as being more left-leaning.

The associations between the government's and respondent's political orientation and all four dependent variables still held after including indicator variables capturing the time periods before and after elections (with or without political change). During the year preceding an election, respondents rated their own economic situation better than in time periods more than 12 months before or after an election (i.e., the omitted time periods which are captured by the intercept) (b^*= .060, p < .001, OR= 1.062; Table 3.2, column 4). During the 12 months following an election (regardless of whether this election brought a change in the government's political orientation) respondents rated the economic circumstances of the country (*without change in political orientation:* b^*= .096, p < .001, OR= 1.101; *with change in political orientation:* b^*= .094, p < .001, OR= 1.098; Table 3.2, column 2) and their own economic situation better (*without change in political orientation:* b^*= .035, p < .001, OR= 1.036; *with change in political orientation:* b^*= .081, p < .001, OR= 1.085; Table 3.2, column 4) and were more satisfied with democracy than in the baseline period (*without change in political orientation:* b^*= .087, p < .001, OR= 1.091; *with change in political orientation:* b^*=

.134, $p < .001$, OR= 1.143; Table 3.2, column 6). However, life satisfaction does not seem to vary across the electoral cycle, neither before nor after the elections.

It is worth noting that the models showed that centre political orientation had a stronger negative association with the four dependent variables than the right political orientation. These coefficients were significantly different in model 1 (p=.032), model 2 (p=.03) and models 5, 6, 7 and 8 (p<.001). Further research is needed to explore the underlying causes of these results.

All the results were obtained after controlling for log of GDP per capita, unemployment and inflation rates and several socio-demographic factors, such as, gender, age, level of education, employment status, socioeconomic status, and financial ability to cover one's needs, and country and year fixed effects.

Men rated the economic situation of the country better and reported higher satisfaction with democracy than women. The negative coefficient of age and the positive coefficient of age squared imply that the association between the two dependent variables related to economic circumstances and life satisfaction and age was indeed U-shaped. People with any level of education reported a worse evaluation of the country's economic situation and lower satisfaction with democracy than people with no education. People with higher levels of education tended to rate their own economic situation and life satisfaction better than respondents with no education. As expected, those who were unemployed fared worse on the four dependent variables than those who were self-employed. Finally, people of higher socioeconomic status reported a better evaluation of both the country's and their own economic situation and life satisfaction whereas people with a better financial ability to cover their needs reported better evaluations of economic circumstances and higher subjective well-being.

With respect to macroeconomic indices, GDP per capita was significantly positively associated with all four dependent variables whereas the inflation rate was significantly negatively associated with these variables. However, the unemployment rate was significantly negatively associated with people's perceptions of their own and their country's economic situation and with satisfaction with democracy, but it was significantly positively associated with life satisfaction.

Finally, citizens' subjective well-being could have been influenced by external factors which consequences were not captured by the socio-demographic factors and the macroeconomic indicators considered in the models. Therefore, I included country and year fixed effects in the models to account for events that occurred in a specific country and year. All the results held after including country and year fixed effects in the models. Ordered logit estimates can be found in Table 3.2 and odd ratio coefficients in the appendix of the chapter in Table 3.6.A

Table 3.2: Ordered Logit Regressions with political orientation, electoral cycle indicators, socio-demographic and macroeconomic controls

	Dependent variables							
	Evaluation of country's economic situation		Evaluation of own economic situation		Satisfaction with democracy		Life Satisfaction	
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Government's political orientation (Ref: left)								
Centre	-0.403***	-0.396***	-0.237***	-0.237***	-0.369***	-0.362***	-0.146***	-0.149***
	(0.013)	(0.013)	(0.014)	(0.014)	(0.014)	(0.014)	(0.021)	(0.021)
Right	-0.374***	-0.366***	-0.214***	-0.210***	-0.309***	-0.297***	-0.042	-0.044
	(0.014)	(0.014)	(0.015)	(0.015)	(0.014)	(0.014)	(0.022)	(0.023)
Respondent's political orientation (right = 10)	0.019***	0.018***	0.022***	0.022***	0.030***	0.030***	0.024***	0.024***
	(0.001)	(0.001)	(0.002)	(0.002)	(0.001)	(0.001)	(0.002)	(0.002)
12 months before elections	-	-0.006	-	0.060***	-	0.007	-	0.001
		(0.010)		(0.010)		(0.010)		(0.014)
12 months after election, *no* change in government's political orientation	-	0.096***	-	0.035***	-	0.087***	-	-0.029
		(0.012)		(0.014)		(0.012)		(0.016)
12 months after election, *with* a change in government's political orientation	-	0.094***	-	0.081***	-	0.134***	-	-0.013
		(0.014)		(0.015)		(0.014)		(0.022)
Unemployment rate	-0.041***	-0.041***	-0.027***	-0.028***	-0.033***	-0.033***	0.011***	0.011***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.004)	(0.004)
Inflation rate	-0.012***	-0.012***	-0.003***	-0.003***	-0.007***	-0.007***	-0.008***	-0.008***
	(0.0005)	(0.0005)	(0.001)	(0.001)	(0.0005)	(0.0005)	(0.001)	(0.001)
Log of GDP per capita	5.484***	5.507***	3.290***	3.278***	3.069***	3.195***	1.352***	1.356***

	(0.015)	(0.015)	(0.017)	(0.017)	(0.0015)	(0.015)	(0.021)	(0.021)
Male	0.139***	0.139***	0.0004	0.001	0.042***	0.042***	0.018	0.018
	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)	(0.011)	(0.012)
Age	-0.016***	-0.016***	-0.040***	-0.040***	0.001	0.001	-0.029***	-0.029***
	(0.001)	(0.001)	(0.002)	(0.002)	(0.001)	(0.001)	(0.002)	(0.002)
Age squared/100	0.011***	0.011***	0.031***	0.030***	0.001	0.0004	0.027***	0.027***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Level of education (Ref: no education)								
Between 1 and 6 years	-0.119***	-0.121***	-0.060***	-0.065***	-0.056***	-0.057***	-0.017	-0.017
	(0.017)	(0.017)	(0.019)	(0.019)	(0.018)	(0.018)	(0.022)	(0.022)
Between 7 and 12 years	-0.158***	-0.162***	-0.033*	-0.038**	-0.157***	-0.158***	0.025	0.025
	(0.017)	(0.017)	(0.019)	(0.019)	(0.018)	(0.018)	(0.022)	(0.022)
High school/academies/ Incomplete technical training	-0.150***	-0.156***	0.019	-0.016	-0.222***	-0.220***	0.192**	0.093**
	(0.029)	(0.029)	(0.031)	(0.031)	(0.029)	(0.029)	(0.041)	(0.041)
High school/academies/ Complete technical training	-0.157***	-0.165***	0.089***	0.085***	-0.235***	-0.239***	0.115***	0.116***
	(0.025)	(0.025)	(0.027)	(0.027)	(0.025)	(0.025)	(0.033)	(0.034)
Incomplete university	-0.215***	-0.220***	0.059**	0.052**	-0.260***	-0.262***	0.118***	0.119***
	(0.022)	(0.022)	(0.024)	(0.024)	(0.022)	(0.022)	(0.029)	(0.029)
Complete university	-0.156***	-0.159***	0.233***	0.227***	-0.274***	-0.275***	0.219***	0.220***
	(0.022)	(0.022)	(0.024)	(0.024)	(0.023)	(0.023)	(0.030)	(0.030)
Employment status (Ref: self-employed)								
Temporarily out of work	-0.115***	-0.113***	-0.236***	-0.237***	-0.119***	-0.120***	-0.216***	-0.216***
	(0.017)	(0.017)	(0.018)	(0.018)	(0.017)	(0.017)	(0.023)	(0.023)
Don't work / responsible for shopping and house work	0.026*	0.027*	0.067***	0.069***	0.029*	0.029*	0.042***	0.042***
	(0.012)	(0.012)	(0.013)	(0.013)	(0.012)	(0.012)	(0.016)	(0.016)

Salaried employee in a private company	0.054*** (0.012)	0.055*** (0.012)	0.104*** (0.013)	0.104*** (0.013)	-0.002 (0.012)	-0.002 (0.012)	0.053*** (0.015)	0.053*** (0.015)
Salaried employee in a public company	0.145*** (0.015)	0.146*** (0.015)	0.170*** (0.016)	0.170*** (0.016)	0.073*** (0.015)	0.072*** (0.015)	0.168*** (0.020)	0.168*** (0.020)
Student	0.034 (0.018)	0.035 (0.018)	0.055*** (0.020)	0.056*** (0.020)	-0.047*** (0.018)	-0.046*** (0.018)	0.084*** (0.026)	0.084*** (0.026)
Retired	0.097*** (0.019)	0.096*** (0.019)	0.122*** (0.021)	0.125*** (0.021)	0.042*** (0.019)	0.040* (0.019)	0.065* (0.026)	0.065** (0.026)
Socioeconomic status	0.031*** (0.005)	0.031*** (0.005)	0.241*** (0.005)	0.241*** (0.005)	-0.0001 (0.005)	0.0003 (0.005)	0.176*** (0.007)	0.176*** (0.007)
Financial ability to cover one's needs	0.408*** (0.005)	0.407*** (0.005)	0.778*** (0.006)	0.778*** (0.006)	0.261*** (0.005)	0.261*** (0.005)	0.355*** (0.007)	0.355*** (0.007)
N	239,542	239,542	224,187	224,187	233,464	233,464	133,163	133,163
Pseudo R^2	0.164	0.164	0.213	0.214	0.113	0.113	0.132	0.132

Note: *p<0.05; **p<0.01; ***p<0.001. Models show ordered logit estimates with standard errors in parentheses. 18 Latin American countries were included from 1996 to 2015. 2007 is not included in Models 3 and 4 (Evaluation of own economic situation) as the question was not available in that survey year. Life satisfaction only includes 2004-2007, 2009-2015. All models include year and country fixed effects.

The first hypothesis of this study states that people who live in a country with a left-leaning government will rate their country's and their own economic situation better and will be more satisfied with the democracy of the country and with their lives than those who live in a country with a right-leaning government. These findings support this hypothesis except for life satisfaction: The life satisfaction of those who lived in a country with a right-leaning government was not significantly different from the life satisfaction of those who lived in a country with a left-leaning government.

Hypothesis 2 states that people who lean politically more to the right will rate their country's and their own economic situation better and will be more satisfied with the democracy of the country and with their lives than those who lean politically more to the left. The analyses presented in this chapter confirm this hypothesis.

This chapter also supports hypothesis 3 albeit partially. The only dependent variable associated with the 12 months preceding an election is people's evaluation of their own economic situation. The 12 months following an election, with and without a change in government's political orientation, were significantly positively associated with people's evaluation of the economic situation of their country and their own economic situation and with satisfaction with democracy. The electoral cycle did not have any relationship with citizens' life satisfaction.

Discussion

This study focused on Latin America, a region that experienced dramatic political and economic changes during the 20th century. I employed a sample of 18 Latin American countries over a time span of 9 to 17 years to explore associations between governments' and individuals' political orientation and respondents' subjective evaluations of the economy and their own well-being. As in other regions of the world, left and right-leaning governments in Latin America typically differ considerably with regards to the types of policies that they favour and implement. I thus speculated that respondents' *expectations* with regards to how incumbent or new governments may positively or negatively affect their lives will partly depend on the governmental party's declared political orientation. I further tested whether potential changes in the ruling party are associated with subjective evaluations of economic circumstances and well-being by examining whether these subjective measures vary systematically over the electoral cycle. I also considered individuals' own political orientation.

I found that, in Latin America, citizens rate their own and their country's economy better, report higher satisfaction with democracy and higher life satisfaction under left-leaning governments compared to right-leaning governments. At the same time, right-leaning respondents report better economic evaluations, higher satisfaction with democracy and higher life satisfaction than left-leaning individuals. This study constitutes a valuable contribution to the literature as it discusses a region that is rarely the focus of studies on subjective well-being and incorporates evaluative measures in addition to the usual life satisfaction measure.

These results are in line with past research that suggests that people's subjective well-being, usually measured as life satisfaction, tends to be higher under left-leaning governments (Bok, 2010; Radcliff, 2001). One explanation that has been put forward for this

observation is ‘livability theory’ which proposes that improvements in citizens’ living conditions resulting from social policies may lead to greater subjective well-being (Veenhoven, 2008; Veenhoven & Ehrhardt, 1995). Left-leaning governments are more likely to implement policies that ensure access to better healthcare and education, a pension system and unemployment protection (Bok, 2010; Scruggs & Allan, 2006) and thus improve citizens’ well-being. In contrast, past research also shows that right-leaning individuals report higher subjective well-being than left-leaning individuals even after accounting for a number of socio-economic factors. These findings could be explained by system-justification ideologies (Jost & Banaji, 1994; Jost & Hunyady, 2003) in that right-leaning individuals tend to consider economic circumstances, such as persistent income inequality, as fair and legitimate even though these conditions are typically associated with lower subjective well-being (Jost & Hunyady, 2003).

This seemingly paradoxical observation of happy right-leaning individuals and happy left-leaning countries, which could be described as a ‘subjective well-being political paradox’, has previously been found in Europe (Okulicz-Kozaryn et al., 2014). This study confirms that this ‘subjective well-being political paradox’ also exists in Latin America.

Furthermore, these evaluations appear to be sensitive to the electoral cycle. The anticipation of a peaceful planned election is significantly positively associated with a key aspect of personal well-being, namely, the evaluation of people’s own economic situation: in the 12-month period before an election, respondents rate their own economic situation better than during the baseline period (the time not within 12 months of an election). These results also imply that a peaceful democratic process is positively associated with people’s perceptions of economic circumstances and subjective well-being: respondents’ evaluation of both the country's and their own economic situation and satisfaction with democracy are higher in the 12 months following an election, with or without a change in the government’s

political orientation. The success of a democratic event in countries with a turbulent political history may strengthen people's belief in the working of democracy and citizens may feel more agency in their country's democratic process. However, on average, life satisfaction does not vary across the electoral cycle. The different associations of the periods close to electoral events and life satisfaction in comparison to the other three dependent variables reinforce the idea that life satisfaction is a broader concept of subjective well-being which can be influenced by many other factors.

Limitations and future research

The results need to be considered in light of several limitations due to the nature of the data and future research should take these into account. The Latinobarómetro contains repeated cross-sectional data, which do not allow us to comment on the direction of causality as I do not have observations for the same individuals over time. In a region with a turbulent political past, feelings of uncertainty can be present before an election and, thus, influence people's perceptions of the country's economic situation, satisfaction with democracy and life satisfaction. However, in order to test this, additional measures of a country's economic and political circumstances as well as of people's subjective well-being would be necessary. I considered a number of political and macro-economic measures, such as governmental social expenditure, market penetration, government size and scope, for inclusion in the study. However, these data are rarely available for the Latin American countries studied here and I could not obtain them for the survey years included in this study. Good quality data of these measures are available for OECD countries but only two of the 18 Latin American countries included in this study, Chile and Mexico, are OECD members. It is worth noting that this study does not aim to evaluate which type of policies are better for people's subjective well-being and I acknowledge that I cannot measure the direct impact of governmental policies on

subjective well-being by looking at political orientation. I thus restricted the analysis to an investigation of the association between political orientation and subjective evaluations of the economy and the respondent's own well-being. Future studies could model specific policies to evaluate their impact on subjective well-being and other subjective evaluations.

One of the most important limitations of this study is the restricted availability of measures that would allow us to classify Latin American governments according to different criteria, such as the actual policies implemented by them. I relied on widely respected resources, the Database of Political Institutions and the Political Database of the Americas, to classify governments as left, centre, or right-leaning. This classification could in some cases be questioned and it would be good to confirm these results using a classification scheme that relies more on actual government policies. This would allow us to draw valuable conclusions about associations between social and economic policies, and well-being. I listed the full classification of Latin American governments in the Appendix of this chapter to allow readers to evaluate the coding of political orientation.

Despite these limitations, this study provides valuable insights into the relationship between perceptions of economic circumstances and subjective well-being and governments' and individuals' political orientation, and how these evaluations are sensitive to elections in a region that experienced a turbulent democratic and political past. This study thus constitutes a valuable contribution to further study of subjective well-being in Latin America.

Chapter summary

In this chapter I examine the role of a government's political orientation as an important determinant of individuals' subjective evaluations of economic circumstances and well-being, and how these evaluations vary systematically across the electoral cycle. Analysing 17 waves of the Latinobarómetro survey, which includes 18 Latin American

countries, I find that people rate their own and their country's economic situation better and report higher life satisfaction and satisfaction with democracy under left-leaning governments compared to right-leaning and centre governments. However, on the individual level, right-leaning respondents report better economic evaluations and higher subjective well-being than left-leaning respondents. Economic evaluations and subjective well-being vary across the electoral cycle: on average, respondents rate their own economic situation better in the year before an election than in any other period, and economic perceptions and satisfaction with democracy are rated more highly in the 12 months following an election regardless of whether a change in the political orientation of the government occurred. However, life does not vary across the electoral cycle. This study provides valuable insights into the relationship between perceptions of economic circumstances and subjective well-being and governments' and individuals' political orientation, and how these evaluations are sensitive to elections in a region that experienced a turbulent democratic and political past.

Chapter Appendix

Table 3.3.A: Coding of governments' political orientation.

Country	Period	President	Political Party	Political orientation
Argentina	1995-1999	Carlos Menem	Justicialist Party (PJ)	Right
	1999-2001	Fernando De La Rúa	Alianza	Centre
	22/12/2001 - 30/12/2001	Adolfo Rodríguez Saá	Justicialist Party (PJ)	Right
	2/02/2002 - 25/05/2003	Eduardo Duhalde	Justicialist Party (PJ)	Right
	2003-2007	Néstor Kirchner	Front of Victory (FPV)	Left
	2007-2011 and 2011-2015	Cristina Fernández de Kirchner	Front of Victory (FPV)	Left
	2015-2015	Mauricio Macri	Let's change	Right
Bolivia	1997-2001	Hugo Banzer	Nationalist Democratic Action	Right
	2001-2002	Jorge Quiroga	Christian Democratic Party	Right
	2002-2003	Gonzalo Sánchez de Lozada	Revolutionary Nationalist Movement	Centre
	2003-2005	Carlos Mesa	Independent	Centre
	2005-2006	Eduardo Rodríguez	Independent	Centre
	2006-2010, 2010-2015, 2015-2015	Evo Morales	Movement for Socialism	Left
Brazil	1995-2002	Fernando Henrique Cardoso	Brazilian Social Democracy Party (PSDB)	Centre
	2003-2010	Luiz Inácio Lula da Silva	Workers' Party (PT)	Left
	2011-2014, 2014-2016	Dilma Rousseff	Workers' Party (PT)	Left

Country	Period	President	Political Party	Political orientation
Chile	1994-2000	Eduardo Frei Ruiz-Tagle	Christian Democratic Party - (Coalition of Parties for Democracy)	Left
	2000-2006	Ricardo Lagos Escobar	Party for Democracy - (Coalition of Parties for Democracy)	Left
	2006-2010	Michelle Bachelet Jeria	Socialist Party - (Nueva Mayoría)	Left
	2010-2014	Sebastián Piñera Echenique	National Renewal - (Coalición)	Centre
	2014-2015	Michelle Bachelet Jeria	Socialist Party - (Nueva Mayoría)	Left
Colombia	1994-1998	Ernesto Samper Pizano	Colombian Liberal Party	Centre
	1998-2002	Andrés Pastrana Arango	Colombian Conservative Party	Right
	2002-2010	Álvaro Uribe Vélez	Democratic Centre	Centre
	2010-2014, 2014-2015	Juan Manuel Santos Calderón	Social Party of National Unity	Centre
Costa Rica	1994-1998	José Maria Figueres Olsen	National Liberation Party	Left
	1998-2002	Miguel Rodríguez Echeverría	Social Christian Unity Party	Right
	2002-2006	Abel Pacheco de la Espriella	Social Christian Unity Party	Right
	2006-2010	Óscar Arias	National Liberation Party	Left
	2010-2014	Laura Chinchilla	National Liberation Party	Left
	2014-2015	Luis Guillermo Solís	Citizens' Action Party	Left

Country	Period	President	Political Party	Political orientation
Dominican Republic	1996-2000	Leonel Antonio Fernández Reyna	Partido de la Liberación Dominicana	Centre
	2000-2004	Rafael Hipólito Mejía Domínguez	Partido Revolucionario Dominicano	Left
	2004-2012	Leonel Antonio Fernández Reyna	Partido de la Liberación Dominicana	Centre
	2012-2016, 2016-2015	Danilo Medina Sánchez	Partido de la Liberación Dominicana	Centre
Ecuador	*Between 1997 and 1998 there were three interim presidents. 1997 government's political party was coded as NA in The Database of Political Institutions, (2015).*			
	1998-2000	Jamil Mahuad	Popular Democracy	Centre
	2000-2003	Gustavo Noboa	Popular Democracy	Centre
	2003-2005	Lucio Gutiérrez	Patriotic Society Party	Centre
	2005-2007	Alfredo Palacio	Independent	Centre
	2007-2009, 2009-2013, 2013-2015	Rafael Correa	Movimiento Alianza PAIS	Left
El Salvador	1994-1999	Armando Calderón Sol	Nationalist Republican Alliance	Right
	1999-2004	Francisco Flores Pérez	Nationalist Republican Alliance	Right
	2004-2009	Antonio Saca	Nationalist Republican Alliance	Right
	2009-2014	Mauricio Funes	Farabundo Martí National Liberation Front	Left
	2014-2015	Salvador Sánchez Cerén	Farabundo Martí National Liberation Front	Left

Country	Period	President	Political Party	Political orientation
Guatemala	1996-2000	Álvaro Arzú	National Advancement Party	Right
	2000-2004	Alfonso Portillo	Guatemalan Republican Front	Right
	2004-2008	Óscar Berger	National Solidarity Party/Grand National Alliance	Right
	2008-2012	Álvaro Colom	National Unity of Hope	Left
	2012-2015	Otto Pérez Molina	Patriotic Party/Grand National Alliance	Right
	3/09/2015 - 16/01/2016	Alejandro Maldonado	Independent	Right
	2016-2015	Jimmy Morales	National Convergence Front	Right
Honduras	1994-1998	Carlos Roberto Reina	Liberal Party	Right
	1998-2002	Carlos Roberto Flores	Liberal Party	Right
	2002-2006	Ricardo Maduro Joest	Nacional Party	Right
	2006-2009	José Manuel Zelaya Rosales	Liberal Party	Right
	2009-2010	Roberto Micheletti Bain	Liberal Party	Right
	2010-2014	Porfirio Lobo Sosa	Nacional Party	Right
	2014-2015	Juan Orlando Hernández	Nacional Party	Right
Mexico	1994-2000	Ernesto Zedillo	Institutional Revolutionary Party	Centre
	2000-2006	Vicente Fox	National Action Party	Right
	2006-2012	Felipe Calderón	National Action Party	Right
	2012-2015	Enrique Peña Nieto	Institutional Revolutionary Party	Centre

Country	Period	President	Political Party	Political orientation
Nicaragua	1997-2002	Arnoldo Alemán	Constitutionalist Liberal Party	Right
	2002-2007	Enrique Bolaños	Constitutionalist Liberal Party	Right
	2007-2012, 2012-2015	Daniel Ortega	Sandinista National Liberation Front	Left
Panama	1994-1999	Ernesto Pérez Balladares	Democratic Revolutionary Party	Centre
	1999-2004	Mireya Moscoso	Panameñista Party	Right
	2004-2009	Martín Torrijos	Democratic Revolutionary Party	Centre
	2009-2014	Ricardo Martinelli	Democratic Change	Centre
	2014-2015	Juan Carlos Varela	Panameñista Party	Centre
Paraguay	1993-1998	Juan Carlos Wasmosy	National Republican Association - Colorado	Right
	1998-1999	Raúl Cubas	National Republican Association - Colorado	Right
	1999-2003	Luis Ángel González Macchi	National Republican Association - Colorado	Right
	2003-2008	Nicanor Duarte	National Republican Association - Colorado	Right
	2008-2012	Fernando Lugo	Patriotic Alliance for Change	Left
	2012-2013	Federico Franco	Authentic Radical Liberal	Left
	2013-2015	Horacio Cartes	National Republican Association - Colorado	Right
Peru	1995-2000	Alberto Fujimori	Change 90 - Yes Keep	Right
	28/07/2000 - 22/11/2000	Alberto Fujimori	Change 90 - Yes Keep	Right

	22-11-2000 / 28-07-2001	Valentín Paniagua - Interim	Popular Action	Centre
	2001-2006	Alejandro Toledo	Possible Peru	Centre
	2006-2011	Alan García Pérez	American Popular Revolutionary Alliance	Left
	2011-2016	Ollanta Humala	Peruvian Nationalist Party	Left
Uruguay	1995-2000	Julio María Sanguinetti	Colorado	Right
	2000-2005	Jorge Batlle	Colorado	Right
	2005-2010	Tabaré Vázquez	Broad Front	Left
	2010-2015	José Mujica	Broad Front	Left
	2015-2015	Tabaré Vázquez	Broad Front	Left
Venezuela	1994-1999	Rafael Caldera	National Convergence	Centre
	1999-2001	Hugo Chávez	Fifth Republic Movement	Left
	2001-2002	Hugo Chávez	Fifth Republic Movement	Left
	12/04/2002 - 13/04/2002	Pedro Carmona	Independent	De facto 47 hs - Right
	13/04/2002 - 14/04/2002	Diosdado Cabello	Independent	Interim - Right
	14/04/2002 - 05/03/2013	Hugo Chávez	United Socialist Party	Left
	19/04/2013-2015	Nicolás Maduro	United Socialist Party	Left

Main sources:

The Database of Political Institutions (2015, http://www.iadb.org).
Political Database of the Americas (2017, PDBA, http://pdba.georgetown.edu/).
Becker, M., 2011. Pachakutik: Indigenous Movements and Electoral Politics in Ecuador. Rowman & Littlefield.
Crabtree, J., & Thomas, J. J., 2014. El Perú de Fujimori: 1990-1998. Universidad del Pacífico, Centro de Investigación.
Flores-Macías, G.A., 2012. After Neoliberalism?: The Left and Economic Reforms in Latin America. Oxford University Press.
Freidenberg, F., Sáez, M. A., 2001. Partidos políticos de América Latina: Centroamérica, México y República Dominicana, 382-419.
Middlebrook, K. J., 2000. Conservative Parties, the right, and democracy in Latin America. JHU Press.

Stephen, G., 2009. Intellectuals and Left Politics in Uruguay, 1958-2006. Sussex Academic Press.
Sullivan, M.P., 2011. Panama: Political and Economic Conditions and U.S. Relations. Congressional Research Service.

Table 3.4.A: Election dates in each country (day/month), 2005-2014.

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Argentina	14/5	-	-	-	24/10	-	-	-	27/4	-
Bolivia	-	-	4/8	-	-	-	-	30/6	-	-
Brazil	-	-	-	4/10 25/10	-	-	-	6/10 27/10	-	-
Chile	-	-	-	-	12/12	16/01	-	-	-	-
Colombia	-	-	-	31/05 2/06	-	-	-	26/5	-	-
Costa Rica	-	-	-	1/02	-	-	-	3/02 7/04	-	-
Ecuador	-	-	-	31/0512/ 07	-	-	-	20/10	-	-
Dominican Rep.	-	-	-	-	-	16/05	-	-	-	16/05
El Salvador	-	-	-	-	7/03	-	-	-	-	21/03
Guatemala	12/11	-	-	-	7/11	-	-	-	9/11	-
Honduras	-	-	30/11	-	-	-	25/11	-	-	-
Mexico	21/08/94	-	-	-	-	2/07	-	-	-	-
Nicaragua	-	20/10	-	-	-	-	4/11	-	-	-
Panama	-	-	-	-	2/05	-	-	-	-	2/05
Paraguay	-	-	-	10/05	-	-	-	-	27/04	-
Peru	9/04	-	-	-	-	9/04 28/05	8/04 3/-6	-	-	-
Uruguay	-	-	-	-	31/10 29/11	-	-	-	-	31/10
Venezuela	-	-	-	6/12	-	30/07	-	-	-	-

Table 3. 4.A: Election dates in each country (day/month), 2005-2014. (Cont.)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Argentina	-	-	28/10	-	-	-	23/10	-	-	-	22/10 22/11
Bolivia	18/12	-	-	-	6/12	-	-	-	-	12/10	
Brazil	-	1/10 29/10	-	-	-	3/10 31/10	-	-	-	5/10 26/10	
Chile	11/12	15/01	-	-	-	17/01	-	-	15/12	-	
Colombia	-	28/05	-	-	-	30/05 20/06	-	-	-	25/05 15/06	
Costa Rica	-	5/02	-	-	-	7/02	-	-	-	2/02 7/04	
Dominican Rep.	-	-	-	16/05	-	-	-	20/05	-	-	15/05/16
Ecuador	-	15/10	-	-	26/04	-	-	-	17/02		
El Salvador	-	-	-	-	15/03	-	-	-	-	2/02 9/03	
Guatemala	-	-	9/09 4/11	-	-	-	1/09 6/11	-	-	-	6/09 25/10
Honduras	27/11	-	-	-	29/11	-	-	-	24/11	-	
Mexico	-	2/-7	-	-	-	-	-	1/07	-	-	
Nicaragua	-	5/11	-	-	-	-	6/11		-	-	6/11/16
Panama	-	-	-	-	3/05	-	-		-	4/05	
Paraguay	-	-	-	20/04	-	-	-		21/04		
Peru	-	9/04 4/-6	-	-	-	-	10/04 5/06		-	-	10/04/16
Uruguay	-	-	-	-	25/10 29/11	-	-		-	26/10 30/11	
Venezuela	-	3/12	-	-	-	-	-	7/10	14/04	-	

Table 3.5.A: Dates of change in government in each country (day/month), 1995-2004.

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Argentina	8/07	-	-	-	10/12	-	20/12[a] 22/12[b] 30/12[c]	02/01[c]	25/05	-
Bolivia	-	-	6/08	-	-	-	07/08[d]	6/08	17/10[e]	-
Brazil	1/01	-	-	-	1/01	-	-	-	1/01	-
Chile	-	-	-	-	-	11/03	-	-	-	-
Colombia	-	-	-	7/08	-	-	-	7/08	-	-
Costa Rica	-	-	-	8/05	-	-	-	8/05	-	-
Dominican Rep.	-	16/08	-	-	-	16/08	-	-	-	16/08
Ecuador	-	-	11/02[f]	10/08	-	22/01[g]	-	-	15/06	-
El Salvador	-	-	-	-	1 June	-	-	-	-	1/06
Guatemala	-	14/01	-	-	-	14/01	-	-	-	14/01
Honduras	-	-	-	27/01	-	-	-	27/01	-	-
Mexico	-	-	-	-	-	1/12/94	-	-	-	-
Nicaragua	-	-	10/01	-	-	-	-	10/01	-	-
Panama	1/09	-	-	-	1/09	-	-	-	-	1/09
Paraguay	-	-	-	15/08	28/03[h]	-	-	-	15/08	-
Peru	28/07	-	-	-	-	28/07 22/11[i]	28/07	-	-	-
Uruguay	1/03	-	-	-	-	1/03	-	-	-	-
Venezuela	-	-	-	-	2/02	-	10/01	12/04[j] 14/04[k]	-	-

Changes in government without elections, not considered in the analysis.

[a]: Fernando de la Rúa resigns and the president of the Congress, Ramón Puerta, takes the presidency for two days.

[b]: Ramón Puerta resigns and Adolfo Rodríguez Saá takes the presidency.

[c]: Adolfo Rodríguez Saá resigns (30/12) and Eduardo Duhalde takes the presidency (02/02) until the following elections in May, 2003.

[d]: Hugo Bazner dies and the vice-president, Jorge Quiroga, takes the presidency for one year until the elections in 2002.

[e]: Gonzalo Sánchez de Lozada resigns and Carlos Messa takes the presidency.
[f]: Several interim presidents in the same year without elections.
[g]: The president, Jamil Mahuad, is deposed and replaced by the vice-president, Gustavo Noboa.
[h]: The president, Raúl Cubas, is accused of having killed the vice president and the president of the Congress, Luis Ángel González Macchi, takes the presidency.
[i]: Valentin Paniagua takes the presidency after Fujimori is taken away from power.
[j]: Hugo Chavez is ousted from power for 47 hours in an attempt of a failed coup d'état.
[k]: Hugo Chavez comes back to power.

Table 3.5.A: Dates of change in government in each country (day/month), 1995-2004. (Cont.)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Argentina	-	-	10/12	-	-	-	10/12	-	-	-	10/12
Bolivia	9/06[k]	22/01	-	-	-	23/01	-	-	-	-	22/01
Brazil	-	-	1/01	-	-	-	1/01	-	-	-	1/01
Chile	-	11/03	-	-	-	11/03	-	-	-	11/03	
Colombia	-	7/08	-	-	-	7/08	-	-	-	7/08	
Costa Rica	-	8/05	-	-	-	8/05	-	-	-	8/05	
Dominican Rep.	-	-	-	16/08	-	-	-	16/08	-	-	
Ecuador	20/04[l]	-	15/01	-	10/08	-	-	-	24/05	-	
El Salvador	-	-	-	-	1/06	-	-	-	-	1/06	01/2016
Guatemala	-	-	-	14/01	-	-	-	14/01	-	-	
Honduras	-	27/01	-	-	28/06[m]	27/01	-	-	-	27/01	
Mexico	-	1/12	-	-	-	-	-	1/12	-	-	
Nicaragua	-	-	10/01	-	-	-	-	10/01	-	-	
Panama	-	-	-	-	1/07	-	-	-	-	1/07	
Paraguay	-	-	-	15/08	-	-	-	22/06[n]	5/08	-	
Peru	-	28/07	-	-	-	-	28/07		-	-	07/2016
Uruguay	1/03	-	-	-	-	1/03	-		-	-	1/03
Venezuela	-	-	10/01	-	-	-	-	-	12/02 5/03[o] 19/04	-	

Changes in government without elections, not considered in the analysis.
[k]: Carlos Messa resigns and Eduardo Rodríguez Veltzé takes the presidency.
[l]: Lucio Gutiérrez is forced by the Congress to abandon the presidency and the vice-president, Alfredo Palacio, takes the presidency.
[m]: Coup d'etat for six months until the elections of 29/11. 27/01/2010 a new government went into power as a result of democratic elections.
[n]: Fernando Lugo is impeached and removed from office. The vice-president, Federico Franco, takes the presidency.
[o]: After Hugo Chavez death, the vice-president, Diosdado Cabello, takes the presidency until the following elections.

Table 3.6.A: Ordered Logit Regressions with political orientation, electoral cycle indicators and individual controls. Odd ratio coefficients.

	Dependent variables:							
	Evaluation of country's economic situation		Evaluation of own economic situation		Satisfaction with democracy		Life Satisfaction	
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Government's political orientation (Ref: left)								
Centre	0.668***	0.673***	0.789***	0.789***	0.692***	0.696***	0.865***	0.861***
Right	0.688***	0.694***	0.807***	0.810***	0.73***4	0.743***	0.959	0.957
Respondent's political orientation (right = 10)	1.019***	1.019***	1.022***	1.022***	1.030***	1.031***	1.024***	1.024***
12 months before elections		0.994		1.062***		1.007		1.001
12 months after election, *no* change in government's political orientation		1.101***		1.036***		1.091***		0.972
12 months after election, *with* a change in government's political orientation		1.098***		1.085***		1.143***		0.987
Unemployment rate	0.960***	0.960***	0.973***	0.973***	0.967***	0.967***	1.011**	1.011**
Inflation rate	0.988***	0.988***	0.997***	0.997***	0.993***	0.994***	0.992***	0.992***
Log of GDP per capita	240.582***	246.409***	26.837***	26.518***	21.523***	24.410***	3.859***	3.879***
Male	1.149***	1.149***	1.000	1.001	1.043***	1.043***	1.018	1.018
Age	0.984***	0.984***	0.961***	0.961***	1.001	1.001	0.971***	0.971***
Age squared/100	1.011***	1.011***	1.031***	1.031***	1.001	1.000	1.027***	1.027***
Level of education (Ref: no education)								
Between 1 and 6 years	0.888***	0.886***	0.942***	0.937***	0.946**	0.945**	0.983	0.983
Between 7 and 12 years	0.854***	0.851***	0.967	0.963*	0.855***	0.85***4	1.025	1.026

High school/academies/ Incomplete technical training	0.861***	0.856***	1.019	1.016	0.801***	0.803***	1.097*	1.097*
High school/academies/ Complete technical training	0.855***	0.848***	1.093***	1.089**	0.791***	0.787***	1.121***	1.123***
Incomplete university	0.806***	0.802***	1.060*	1.053*	0.771***	0.770***	1.126***	1.126***
Complete university	0.855***	0.853***	1.263***	1.255***	0.760***	0.759***	1.245***	1.246***
Employment status (Ref: self-employed)								
Temporarily out of work	0.892***	0.893***	0.790***	0.789***	0.887***	0.887***	0.806***	0.806***
Don't work / responsible for shopping and house work	1.027*	1.027*	1.069***	1.071***	1.029*	1.029*	1.043**	1.043**
Salaried employee in a private company	1.056***	1.057***	1.109***	1.110***	0.998	0.998	1.055***	1.055***
Salaried employee in a public company	1.156***	1.157***	1.185***	1.186***	1.076***	1.075***	1.183***	1.183***
Student	1.035	1.035	1.056**	1.058**	0.954**	0.955*	1.088**	1.088**
Retired	1.102***	1.101***	1.130***	1.133***	1.043*	1.041*	1.067*	1.067*
Socioeconomic status	1.031***	1.032***	1.273***	1.273***	1.000	1.000	1.192***	1.192***
Financial ability to cover one's needs	1.503***	1.503***	2.176***	2.176***	1.298***	1.299***	1.426***	1.426***
Observations	239,542	239,542	224,187	224,187	233,464	233,464	133,163	133,163

Note: *p<0.05; **p<0.01; ***p<0.001. 18 Latin American countries were included from 1996 to 2015. 2007 is not included in Models 3 and 4 (Evaluation of own economic situation) as the question was not available in that survey year. Life satisfaction only includes 2004-2007, 2009-2015. All models include year and country fixed effects.

Chapter 4. Life satisfaction and confidence in national institutions in Latin America

Introduction

In the previous chapters, I discussed the association between macroeconomic and political indicators and subjective well-being in a time period of relevant macroeconomic and political changes. In this chapter, I explore an aspect that might have been affected by the macroeconomic and political changes explored in the previous chapters: people's confidence in national institutions. What happened to people's confidence in national institutions in Latin America between 2009 and 2016? Given Latin America's turbulent economic and political history it can be expected that confidence in institutions has been similarly volatile over time. However, does citizens' confidence in national institutions actually matter for a society? To investigate this question, I look at associations between confidence in six national institutions and subjective well-being in Latin 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 & 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 & Stutzer, 2000; Helliwell & Huang, 2008). The present study focuses on subjective well-being and its association with six self-reported measures that may serve as indicators of a government's ability to establish trust (i.e., sense of reliability; see Helliwell et al., 2014; Helliwell & Huang, 2008), namely people's confidence in six national institutions. The objectives of this study are twofold. First, I examine trajectories of confidence in six national institutions and subjective well-being in 18 Latin American countries over time, and second, I discuss associations between these measures. In particular, I 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 was assessed in the form of current and expected life satisfaction.

Using data from the Latinobarómetro, Lagos Cruz-Coke (2001) found that only a small percentage of the population trusts the judiciary, the police, the national congress, and political parties; a result which was in line with the level of institutional trust found in post-communist Europe (Rose & Haerpfer, 1999). The author suggested that these low levels of institutional trust were related to historical, social and institutional factors.

Governments and citizens' subjective 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, Kraay, & Mastruzzi, 2005), Helliwell and Huang (2008) found that the quality of a government strongly dominated per capita income when explaining international differences in life satisfaction. Indicators of the quality of governance that were 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 lived in countries with liberal governments, usually associated with policies that aim to improve people's quality of life, were more likely to report higher subjective well-being than citizens who lived in countries led by conservative governments (Bok, 2010; Pacek & Radcliff, 2008a; Radcliff,

2001). Similarly, institutions of direct democracy (e.g., referenda) and federalism (Frey & Stutzer, 2000), successful democratic traditions (Dorn et al., 2007; Inglehart et al., 2008) and individuals' pro-market and pro-democracy attitudes (Graham & Pettinato, 2001) have been found to be positively associated with subjective well-being. Some economic indicators that are typically affected by governmental policies and interventions, such as the unemployment and inflation rate displayed a negative relationship with subjective well-being in many studies (e.g., Clark & Oswald, 1994; DiTella et al., 2001).

Using data from the Eurobarometer survey across EU member countries, Hudson (2006) explored the relationship between institutional trust and life satisfaction. The author found that people who reported trust in the national government, the European Central Bank, the law, the United Nations and the European Union reported higher life satisfaction than people who said they did 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 trusted the following national institutions on an 11-point Likert-type scale: the government, local authorities, the judiciary, the police, and the media (e.g., newspaper, television). The study showed that in Serbia the role of institutional trust in predicting three indicators of subjective well-being (life satisfaction, positive and negative affect) was limited; a result that was not in accordance with previous studies.

Using data from the Gallup World Poll, Clausen, Kraay, & Nyiri (2011) found a significant negative association between confidence in the six national institutions employed in this study and corruption. Moreover, confidence in the police has been found to be significantly negatively associated with higher homicide rates and significantly positively associated with the level of democracy in a country (Jang, Joo, & Zhao, 2010).

To date, citizens' confidence in national institutions in Latin America has not received any attention in the literature on subjective well-being. In this study, I first examine patterns

in the average level of confidence in six national institutions and in current and expected life satisfaction between 2009 and 2016. Then, I analyse the relationship between confidence in national institutions and subjective well-being to establish to what extent declining or increasing institutional confidence may matter for societal well-being. As in the EU (Hudson, 2006), I expect to find a positive relationship. In this chapter, I explore the following hypothesis:

H1: Respondents who report confidence in financial institutions, the military, the judicial system, elections, the national government, and the police will report higher current and expected life satisfaction.

Methods

Data

I employed data from the Gallup World Poll which was collected in 18 Latin American countries - Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Honduras, Guatemala, Mexico, Nicaragua, Panama, 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, I chose to restrict the dataset to the shorter 2009-2016 time span because of the availability of a larger number of countries and variables in these years. The final sample of 102,245 observations covers 18 countries and eight survey years.

Dependent variables

I used the Cantril's Ladder of Life Scale (Cantril, 1965), both in relation to current and expected well-being, to evaluate the relationship between subjective well-being and

confidence in national institutions in Latin America. The first dependent variable, *Life satisfaction – Current*, was 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?"

The second dependent variable was *Life satisfaction – Expected,* a measure that is based on a very similar question, but reflects people's expected life satisfaction by adding the following 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 ranged from 0 to 10 with higher values denoting a higher level of life satisfaction.

Main independent variables

Five of the six measures of confidence in national institutions were 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 represented a different independent variable with answer categories 'yes' and 'no'. I coded these as dummy variables with 1 denoting 'yes' and 0 denoting 'no'.

The variable *Confidence in the police* was 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

I considered 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 & 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 & Oswald, 2008; Frijters & Beatton, 2012; Graham & Pettinato, 2001); therefore, I modelled 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, Di Tella, & MacCulloch, 2004), I further included gender as a control variable in all models. Unemployment and divorce or marital separation are usually negatively associated with subjective well-being (e.g., Clark, 2003; Clark & Oswald, 1994) and I thus included in the models the respondent's employment and marital status. I also considered the respondent's highest level of education (e.g., Blanchflower & Oswald, 2004) and household income (e.g., Oswald, 1997) as these are usually positively associated with subjective well-being. The measure of income represented annual household income in international dollars adjusted for inflation, thus making the income measure comparable across time and between countries.

I also included 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 Development Indicators, 2017), the inflation rate (CPI, annual %, World Development Indicators, 2017)and the log of GDP per capita (% annual, World Development Indicators, 2017). Table 4.1 shows the summary statistics of the variables included in the analysis.

Table 4.1: Summary statistics.

Statistic	N	Mean	St. Dev.	Min	Max
Life satisfaction – Current	99,962	6.152	2.452	0	10
Life satisfaction – Expected	92,872	7.388	2.531	0	10
Confidence in financial institutions	99,962	0.505	0.500	0	1
Confidence in honesty of elections	99,962	0.390	0.488	0	1
Confidence in military forces	99,962	0.501	0.500	0	1
Confidence in judicial system	99,962	0.351	0.477	0	1
Confidence in national government	99,962	0.425	0.494	0	1
Confidence in the police	99,962	0.481	0.500	0	1
Male	99,962	0.443	0.497	0	1
Age	99,962	42.226	17.276	18	100
Level of education					
Elementary education (up to 8 years of basic education)	99,962	0.383	0.486	0	1
Four years of education beyond high school and/or a 4-year college degree	99,962	0.119	0.324	0	1
Three years of secondary education and some education beyond secondary education (9-15 years)	99,962	0.498	0.500	0	1
Marital Status					
Single	99,962	0.295	0.456	0	1
Partner	99,962	0.171	0.376	0	1
Married	99,962	0.381	0.486	0	1
Separated	99,962	0.060	0.237	0	1
Divorced	99,962	0.028	0.164	0	1
Widowed	99,962	0.065	0.247	0	1
Employment status					
Employed full-time for an employer	99,962	0.265	0.441	0	1
Employed full-time for self	99,962	0.144	0.351	0	1
Employed part-time, do not want full-time	99,962	0.065	0.247	0	1
Employed part-time, want full-time	99,962	0.083	0.276	0	1
Unemployed	99,962	0.074	0.262	0	1
Out of workforce	99,962	0.368	0.482	0	1
Household income (US dollars)	99,962	10,851	14,319	0	1,264,214
Log of GDP per capita	99,962	8.674	0.674	7.300	9.617
Unemployment rate	99,962	6.751	2.858	2.300	15.020
Inflation rate	99,962	6.084	6.602	-0.700	40.600

Analytical strategy

I first fitted 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 my final dataset. The trend curves were computed by regressing each of the eight variables on survey year. I 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 I, therefore, continued with the models that include time as linear. I started with this descriptive analysis to explore the trend of the main independent variables as well as of the dependent measures before testing the hypothesis of this study. The aim of the trend analyses was to obtain information to be able to determine the practical implications of the regression results.

In a second step, I examined the relationship between respondents' confidence in national institutions and subjective well-being using OLS regressions, as the two dependent variables – Cantril's ladder questions (Cantril, 1965) about current and expected well-being – can be interpreted as being continuous. The first set of regressions included only socio-demographic variables as control variables; I added macroeconomic indicators in a second set of regressions. Both model specifications included country and year fixed effects to account for similarities in cultural, political and economic circumstances within countries and in specific survey years and standard errors clustered at the country-year level (Moulton, 1990).

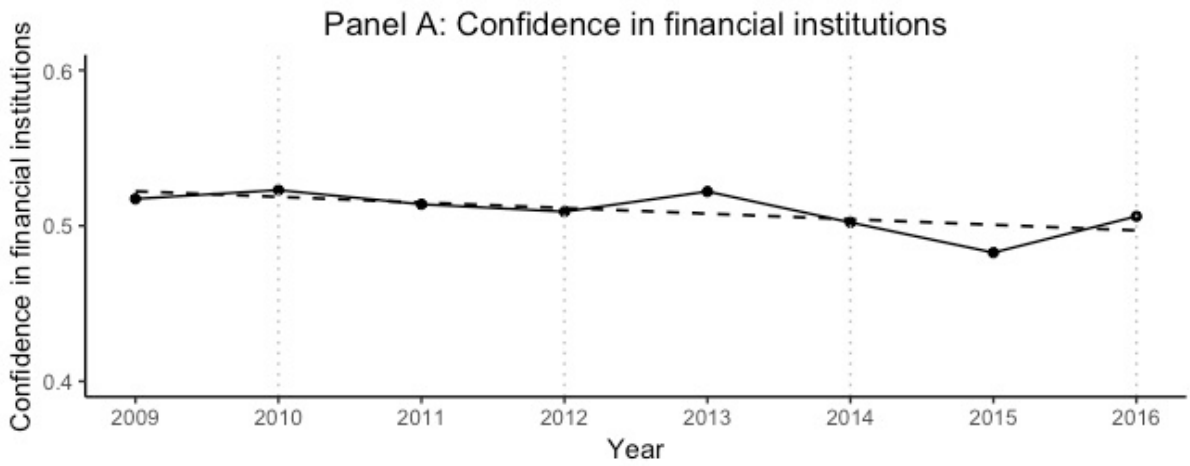
Results

Trends in confidence in national institutions and life satisfaction

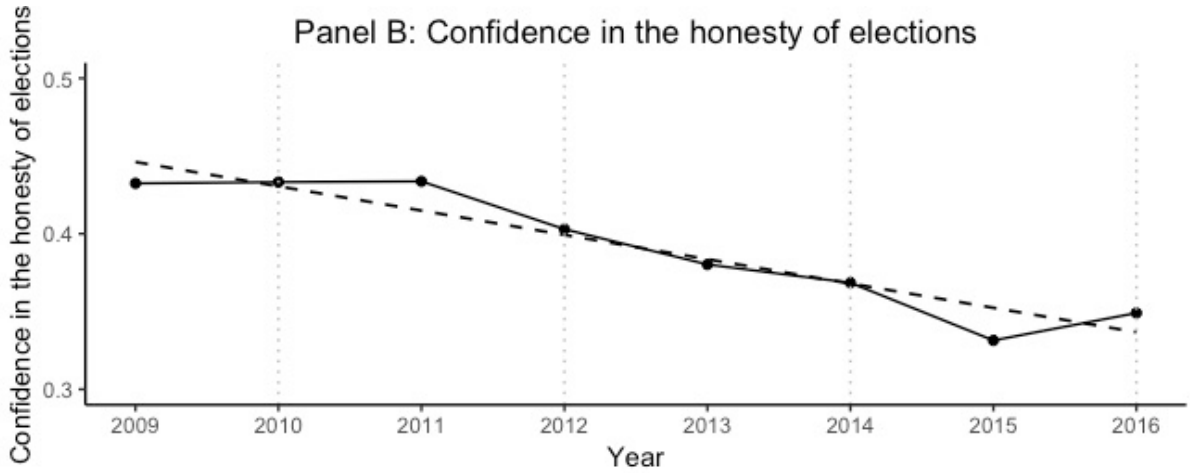
What can be said about trends in confidence in the six national institutions over the 2009-2016 time period? Confidence in financial institutions, the honesty of elections, the judicial system and the national government displayed a significant downward trend (Figure

4.1, panels A, B, D and E) whereas confidence in the police improved significantly over the same time period (Figure 4.1, panel F).

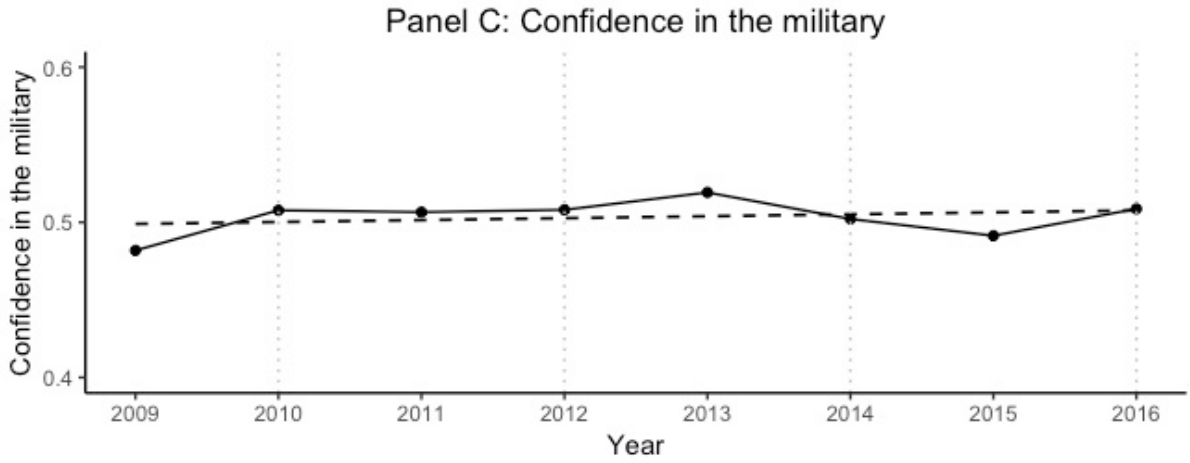
Figure 4.1: Confidence in national institutions, annually from 2009-2016 in 18 Latin American countries. Mean values (solid line) and fitted regression curve (dashed line)



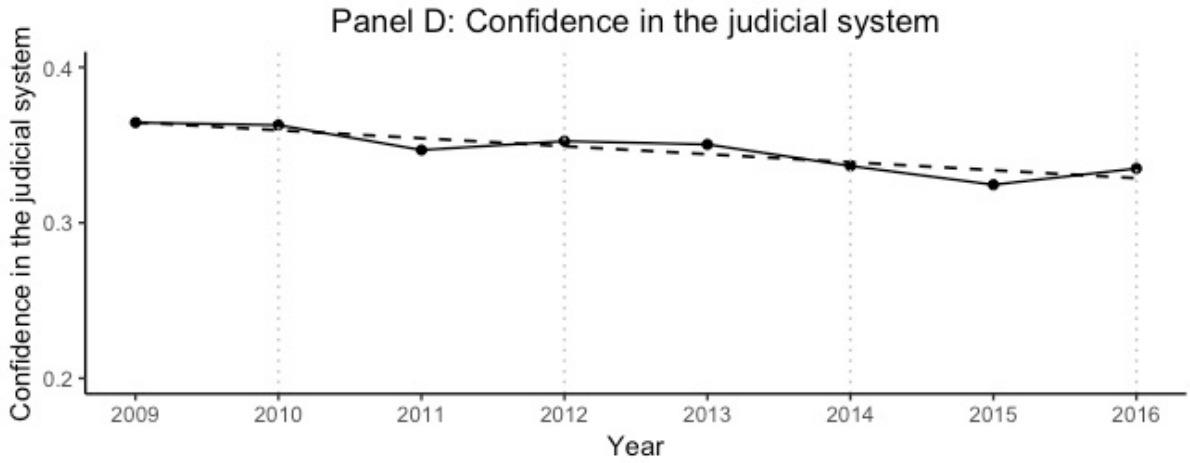
Note: The fitted regression is $y = 0.526 - 0.004x$ (where x = survey wave, range 1-8) t-stats: intercept = 168.96; slope = -5.85. Adj. $R^2 = 0.001$.



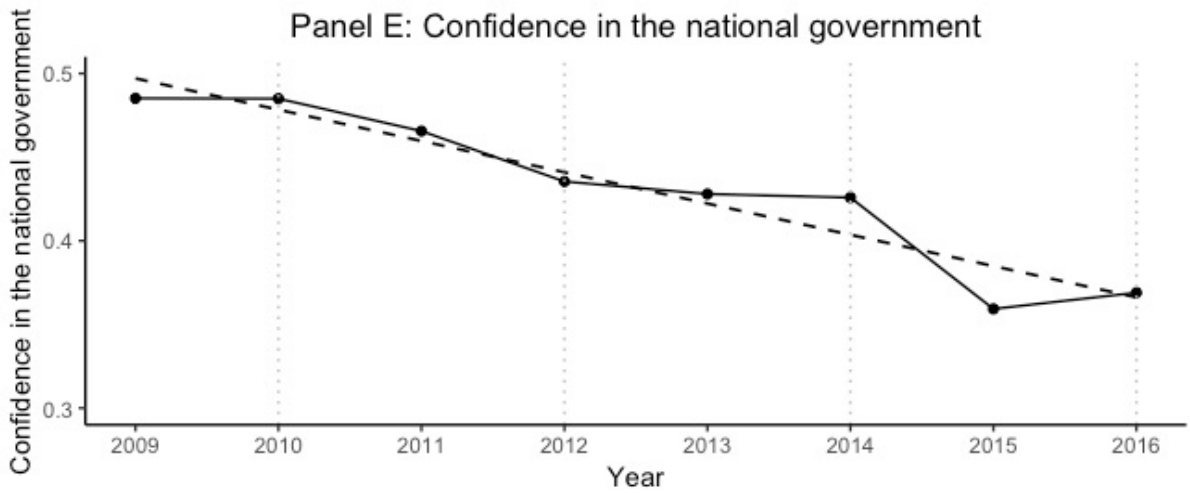
Note: The fitted regression is $y = 0.462 - 0.016x$ (where x = survey wave, range 1-8) t-stats: intercept = 153.15; slope = -26.26. Adj. $R^2 = 0.005$.



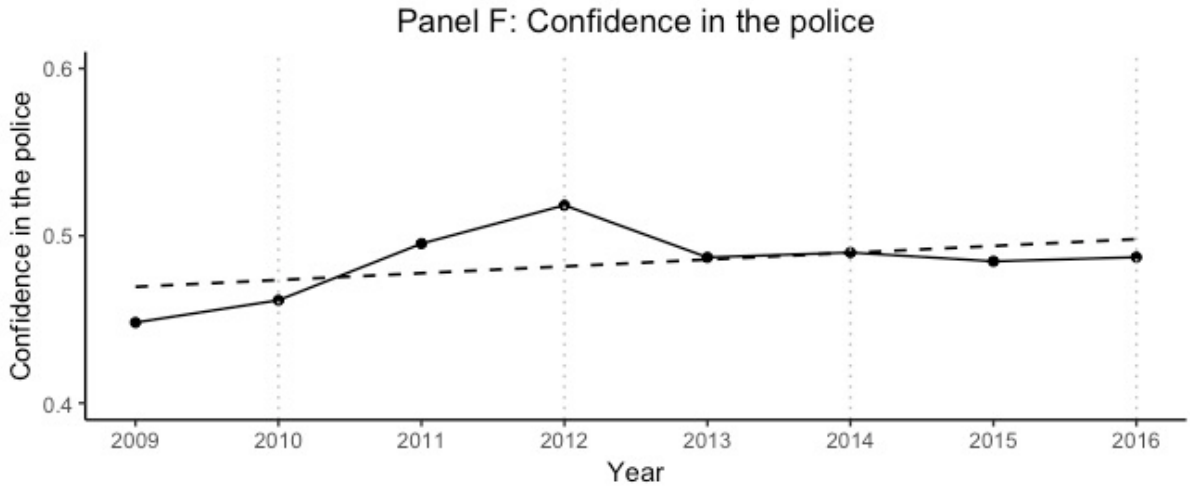
Note: The fitted regression is $y = 0.498 - 0.001x$ (where x = survey wave, range 1-8) t-stats: intercept = 160.01; slope = 2.02. Adj. $R^2 = 0.0001$.



Note: The fitted regression is $y = 0.369 - 0.005x$ (where x = survey wave, range 1-8) t-stats: intercept = 125.45; slope = -8.82. Adj. R^2=0.001.



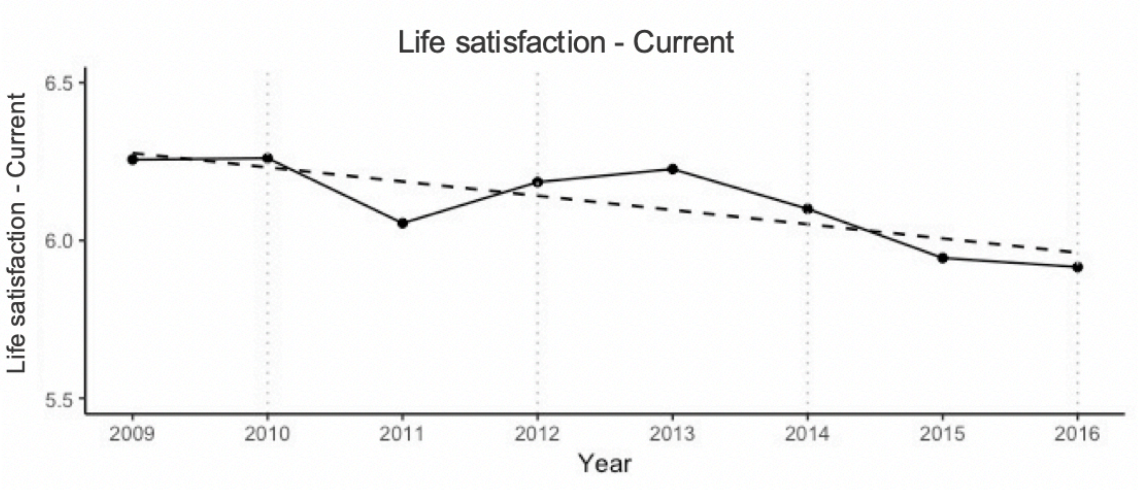
Note: The fitted regression is $y = 0.516 - 0.019x$ (where x = survey wave, range 1-8) t-stats: intercept = 169.42; slope = -31.07. Adj. $R^2 = 0.007$.



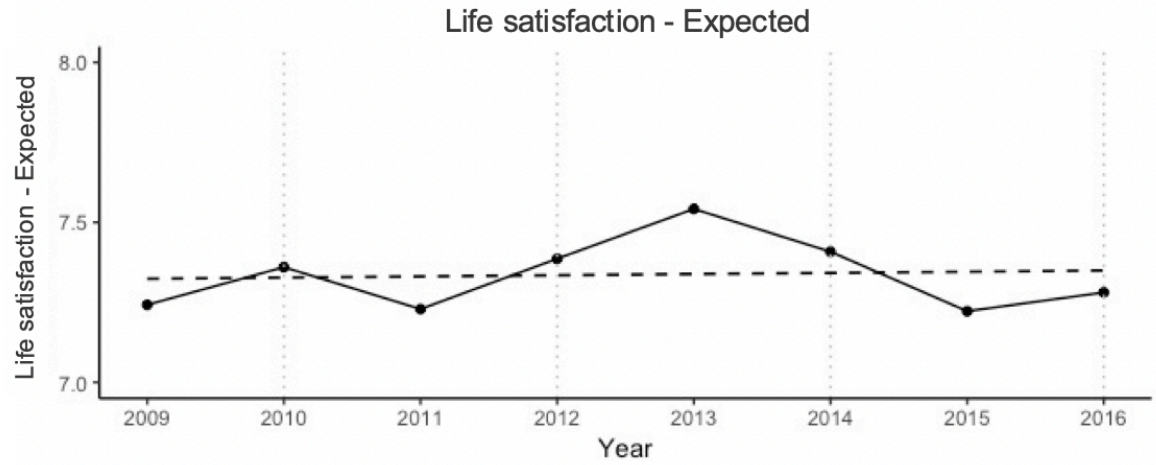
Note: The fitted regression is $y = 0.465 + 0.004x$ (where x = survey wave, range 1-8) t-stats: intercept = 151.99; slope = 6.74. Adj. $R^2 = 0.001$.

The pattern of current life satisfaction over the 2009-2016 time period was in line with the overall trend in confidence in national institutions: current life satisfaction showed a significant downward trend (Figure 4.2). However, the trend in expected life satisfaction was negative but not significant.

Figure 4.2: Current and expected life satisfaction, annually from 2009-2016 in 18 Latin American countries. Mean values (solid line) and fitted regression curve (dashed line



Note: The fitted regression is $y = 6.323 - 0.045x$ (where x = survey wave, range 1-8) t-stats: intercept = 425.13; slope = -15.29. Adj. $R^2 = 0.002$.



Note: The fitted regression is $y = 7.321 - 0.004x$ (where x = survey wave, range 1-8) t-stats: intercept = 452.12; slope = 1.14. Adj. $R^2 = 0.001$.

Regression analysis: Confidence in national institutions and subjective well-being.

Over the period of analysis, confidence in national institutions and life satisfaction, both current and expected, trended downwards. So, what can be said about the relationship between people's confidence in national institutions and subjective well-being in Latin America? During the 2009-2016 period, people who reported confidence in financial institutions, the honesty of elections, the military, the judicial system, the national

government and the police reported higher current (financial institutions*:* b= .176, p < .001; the honesty of elections*:* b= .163, p < .001; the military*:* b= .094, p < .001; the judicial system*:* b= .104, p < .001; the national government*:* b= .106, p < .001; the police*:* b= .202, p < .001; Table 4.2, column 1), and expected life satisfaction (financial institutions*:* b= .241, p < .001; the honesty of elections*:* b= .151, p < .001; the military*:* b= .078, p < .001; the judicial system*:* b= .048, p=.0222; the national government*:* b= .210, p < .001; the police*:* b= .130, p < .001; Table 4.2, column 2) than those who lacked this type of institutional confidence. These results were obtained after controlling for socio-demographic factors that have previously been found to be associated with subjective well-being.

Women reported higher current and expected life satisfaction than men. The negative coefficient of age and the positive coefficient of age squared indicated that the relationship between life satisfaction, both current and expected, and age is U-Shaped: life satisfaction declines until middle age, followed by an increase thereafter. People who were married, reported a higher level of education, were in paid employment and had a higher household income reported, on average, higher current and expected life satisfaction.

I added macroeconomic indicators in an additional set of regressions and found that people who reported confidence in five out of the six national institutions reported higher current (financial institutions*:* b= .175, p < .001; the honesty of elections*:* b= .150, p < .001; the military*:* b= .072, p < .001; the national government*:* b= .092, p < .001; the police*:* b= .190, p < .001; Table 4.2, column 3) and expected life satisfaction (financial institutions*:* b= .245, p < .001; the honesty of elections*:* b= .137, p < .001; the military*:* b= .056, p=.002; the national government*:* b= .199, p < .001; the police*:* b= .121, p < .001; Table 4.2, column 4). However, people who reported confidence in the judicial system only reported higher current life satisfaction (b= .089, p < .001; Table 4.2, column 3) whereas the coefficient between confidence in the judicial system and expected life satisfaction showed significance at

the10% level (*b*= .037, *p*= .073; Table 4.2, column 4). The log of GDP per capita was significantly positively associated with people's expected life satisfaction (*b*= .489, *p*=.043; Table 4.2, column 4). The unemployment rate and inflation rate were significantly negatively associated with current (Unemployment rate: *b*= -.092, $p < .001$; Inflation rate: *b* = -.012, $p < .001$, Table 4.2, column 3) and expected life satisfaction (Unemployment rate: *b*= -.069, $p < .001$; Inflation rate: *b*= -.024, $p < .001$, Table 4.2, column 4).

These results confirm the hypothesis of this study: people who showed confidence in the six national institutions involved in this study reported higher current and expected life satisfaction than those who did not show this type of confidence.

Table 4.2: Ordinary least squares for current and expected life satisfaction. Gallup World Poll, 18 Latin American countries, 2009-2016.

	Dependent variables:			
	Life satisfaction – Current (1)	Life satisfaction – Expected (2)	Life satisfaction – Current (3)	Life satisfaction – Expected (4)
Confidence in financial institutions	0.176***	0.241***	0.175***	0.245***
	(0.017)	(0.018)	(0.017)	(0.018)
Confidence in honesty of elections	0.163***	0.151***	0.150***	0.137***
	(0.018)	(0.020)	(0.018)	(0.019)
Confidence in military forces	0.094***	0.078***	0.072***	0.056**
	(0.018)	(0.019)	(0.018)	(0.019)
Confidence in judicial system	0.104***	0.048*	0.089***	0.037
	(0.020)	(0.021)	(0.020)	(0.021)
Confidence in national government	0.106***	0.210***	0.092***	0.199***
	(0.019)	(0.020)	(0.019)	(0.020)
Confidence in the police	0.202***	0.130***	0.190***	0.121***
	(0.016)	(0.017)	(0.016)	(0.017)
Male	-0.184***	-0.224***	-0.178***	-0.219***
	(0.016)	(0.016)	(0.016)	(0.016)
Age	-0.054***	-0.068***	-0.053***	-0.068***
	(0.002)	(0.003)	(0.002)	(0.003)
Age squared	0.0004***	0.0004***	0.0004***	0.0004***
	(0.00002)	(0.00003)	(0.00002)	(0.00003)
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	0.855***	0.870***	0.860***	0.872***
	(0.026)	(0.028)	(0.026)	(0.028)

Three years of secondary education and some education beyond secondary education (9-15 years)	0.504*** (0.018)	0.545*** (0.019)	0.495*** (0.018)	0.542*** (0.019)
Marital Status (Ref.: Married)				
Single/Never been married	-0.100*** (0.020)	-0.015 (0.021)	-0.108*** (0.020)	-0.023 (0.021)
Partner	-0.326*** (0.022)	-0.185*** (0.024)	-0.320*** (0.022)	-0.192*** (0.024)
Separated	-0.322*** (0.032)	-0.121*** (0.034)	-0.308*** (0.032)	-0.104** (0.034)
Divorced	-0.107* (0.045)	-0.008 (0.048)	-0.110* (0.046)	-0.018 (0.048)
Widowed	-0.221*** (0.033)	-0.114** (0.036)	-0.206*** (0.033)	-0.097** (0.036)
Employment status (Ref.: Employed full-time for an employer)				
Employed full-time for self	-0.256*** (0.024)	-0.207*** (0.026)	-0.258*** (0.024)	-0.201*** (0.026)
Employed part-time, want full-time	0.006 (0.032)	-0.087** (0.034)	-0.011 (0.032)	-0.095** (0.033)
Employed part-time, do not want full-time	-0.413*** (0.029)	-0.250*** (0.031)	-0.412*** (0.029)	-0.249*** (0.031)
Unemployed	-0.654*** (0.031)	-0.411*** (0.032)	-0.663*** (0.031)	-0.410*** (0.032)
Out of workforce	-0.144*** (0.020)	-0.260*** (0.022)	-0.140*** (0.020)	-0.258*** (0.021)
Household income (U$S dollars)	0.00002*** (0.00000)	0.00001*** (0.00000)	0.00002*** (0.00000)	0.00001*** (0.00000)
Log of GDP per capita	-	-	0.342 (0.229)	0.489* (0.242)

Unemployment rate	-	-	-0.092*** (0.010)	-0.069*** (0.010)
Inflation rate	-	-	-0.012*** (0.003)	-0.024*** (0.003)
Constant	7.428*** (0.072)	8.995*** (0.077)	5.272** (2.144)	5.549** (2.261)
Observations	102,245	94,898	99,962	92,872
R^2	0.130	0.154	0.135	0.162
Adjusted R^2	0.129	0.154	0.134	0.162
Residual Std. Error	2.298 (df = 102198)	2.353 (df = 94851)	2.282 (df = 99912)	2.320 (df = 92822)
F Statistic	331.636*** (df = 46; 102198)	376.377*** (df = 46; 94851)	317.033*** (df = 49; 99912)	366.560*** (df = 49; 92822)

Note: *p < .05, **p < .01, ***p < .001. Regression table shows unstandardised regression coefficients with standard errors in parentheses. All models include year and country fixed effects.

Discussion

The present study explored confidence in national institutions in Latin America in two steps. I first examined 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. Second, I discussed the relationship between these national institutions and two measures of subjective well-being (current and expected life satisfaction). I used data from the Gallup World Poll across 18 Latin American countries collected between 2009 and 2016.

Confidence in the police showed 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 displayed a significant overall downward trend. These results may be related to the emergence of liberal governments[10] between 2009 and 2016 as these types of governments are publicly (e.g., in the media) associated with corruption (Castañeda, 2017); a factor that has been found to be negatively associated with institutional trust (e.g., Jang et al., 2010). The time trend of current life satisfaction resembled the trend of confidence in national institutions as it showed a significant downward trend over the 2009-2016 time period. The macroeconomic and political changes that occurred in the late 1990s and early 2000s may have affected people's confidence in national institutions.

The results of this study also showed that confidence in the six national institutions was significantly positively associated with both types of life satisfaction, a relationship that

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

persisted after controlling for socio-demographic and macroeconomic factors. However, confidence in the judicial system was no longer significantly positively associated with expected life satisfaction once macroeconomic factors were included.

To further check the robustness of these results, I attempted to control for people's trust in others to know whether the positive association between confidence in national institutions and subjective well-being was influenced by individual differences with regard to trust. However, the Gallup World Poll provides a measure of trust in others in only two of the eight years included in this study. For these two survey years, I analysed the correlations between the measure of trust in others and the six measures of confidence in national institutions. I found these correlations to be positive but low, ranging from 0.07 to 0.16 (See Table 4.3.A in the Appendix of this chapter); a result that suggests that the positive association between confidence in national institutions and subjective well-being might not be solely influenced by individual feelings of trust in general.

The results of the trends in confidence in national institutions and the regression analyses that relate citizens' confidence in national institutions and subjective well-being have important practical implications. Prior research has shown that the quality of a government strongly dominates per capita income when explaining international differences in life satisfaction (Helliwell & Huang, 2008) and that the quality of economic-judicial and political institutions are positively associated with subjective well-being (Bjørnskov et al., 2010). Therefore, the results of this study in combination with previous research suggest that governments should aim to improve the quality of national institutions so that citizens can show greater confidence. This situation, according to the findings of this study, may increase societal well-being.

Limitations and directions for future work

The significant positive relationship between citizens' confidence in national institutions and subjective well-being highlights that the ability of governments to provide a trustworthy environment may be a key determinant of societal well-being. However, I 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 I do not observe in these analyses.

In addition, as the Gallup World Poll data are cross-sectional, I am 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. I thus cannot say with certainty that low confidence in institutions causes low subjective well-being; I can merely observe that there is an association between the two. Panel data that allow researchers to link past events with current perceptions could establish much better whether Latin America's turbulent economic and democratic past, which is reflected in present levels of trust and confidence in national institutions, still affects people's current as well as expected life satisfaction.

Chapter summary

In this chapter, I 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. In addition, the findings of this study show 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. These results suggest that the ability of governments to provide a trustworthy environment may contribute positively to subjective well-being in a society. However, the main limitation of this study is that the analyses are correlational and I thus cannot rule out reverse causality.

Chapter appendix

Table 4.3.A: Correlation coefficients between 'trust in others' and six measures of confidence in national institutions, 2009 and 2010.

	Trust in others
Confidence in financial institutions	0.08
Confidence in the honesty of elections	0.12
Confidence in the military	0.09
Confidence in the judicial system	0.10
Confidence in the national government	0.10
Confidence in the police	0.11

Note: All correlations are significant at $p<0.001$.

In the Gallup World Poll, the variable 'Trust in others' is available for Latin American countries only in the years 2009 and 2010. People answered the following question: "Generally speaking, would you say that most people can be trusted or that you have to be careful in dealing with people?" I coded the answers to this question 1 if the respondent answered 'Yes', and 0 otherwise.

Chapter 5. Buying happiness in an unequal world: Rank of income more strongly predicts well-being in more unequal countries

Introduction

In the prior chapters of this thesis I found that subjective well-being in Latin America is associated with macroeconomic factors and political events and with people's confidence in national institutions. In this chapter, I combine one of the most relevant socio-economic issues that Latin American countries are facing, income inequality, and one aspect that has been the focus of a large body of research on subjective well-being, individuals' income. Income inequality is one of the most relevant socioeconomic problems of the region: with historically high levels of income inequality, Latin America is considered one of the most unequal regions in the world (Gasparini, Cruces, & Tornarolli, 2011). Based on the nil association between absolute income and subjective well-being (e.g., Easterlin, 1974) and on the importance of being "richer" than other people to subjective well-being (e.g., Boyce et al., 2010; Ferrer-i-Carbonell, 2005; Luttmer, 2005), in this chapter, I investigate the association between individual's ordinal rank of income within a reference group (i.e., income rank; see definition and differences with relative income below) and subjective well-being. In addition, I explore whether the relationship between income rank and an individual's well-being is likely to be moderated by the level of income inequality in a society.

The relationship between income and subjective well-being

Perhaps the single most-researched question on the relationship between money and well-being in recent years is not *whether* but rather *how* money buys happiness. While studies have shown that greater happiness can be bought by spending more money on experiential goods (Nicolao, Irwin, & Goodman, 2009; Van Boven & Gilovich, 2003), on others (Dunn, Aknin, & Norton, 2008, 2014) and on time (Whillans, Wispinski, & Dunn, 2016), one of the most consistent findings in the literature has been that a large portion of the well-being gains from an increase in income can be attributed to its operational effectiveness in making

individuals “richer” than other people in their reference group (see e.g., Ball & Chernova, 2008; Clark & Oswald, 1996; Ferrer-i-Carbonell, 2005; Luttmer, 2005). That is, they tend to care more about an increase in relative rather than absolute income.

These empirical findings are in line with the *relative income* hypothesis (Duesenberry, 1949) which postulates that people evaluate their satisfaction based on how much their income is above or below that of the average income of other people in a comparison group. However, while many studies have found evidence of average comparison income entering well-being regressions in a negative and statistically significant manner (e.g., Clark & Oswald, 1996; Ferrer-i-Carbonell, 2005), recent research has shown that people care primarily about how their income is ranked within an income distribution, and very little about their absolute income and the difference between their income and the average income of a reference group (e.g., Brown, Gardner, Oswald, & Qian, 2008; Clark, Westergård-Nielsen, & Kristensen, 2009; Powdthavee, 2009a; Wood, Boyce, Moore, & Brown, 2012). To illustrate this case in point, Boyce, Brown, and Moore (2010) employed a sample of more than 80,000 observations to show that, when both measures were included in the same regression, it was an individual’s income rank, rather than the absolute or average income of the reference group, that predicted overall life satisfaction.

Several explanations have been put forward to explain the importance of ordinal income position for individual satisfaction. One proposed explanation is based on range-frequency theory (Parducci, 1965; Parducci & Perrett, 1971), which states that ratings assigned to a stimulus are determined both by its distance from the lowest to the highest value within the range and its ordinal position in the distribution of the stimuli. This concept of rank-dependent judgment of stimuli has been confirmed by empirical observations across different domains (e.g., Birnbaum, 1992; Hagerty, 2000; Mellers, Ordóñez, & Birnbaum,

1992) and should also apply to assessments of life satisfaction based on relevant stimuli, such as income.

Evidence that humans care deeply about their ordinal ranking within a reference group – for example, whether they are the 5th or 40th highest-paid person in their workplace – has been used to explain why in societies where income rank is of great importance, individual choices are not only socially wasteful but also potentially detrimental to the individual. According to Frank (1985), the pursuit of a limited number of upper ranks in a society not only results in a zero-sum game for all involved – in that for every winner, there is a loser – but also reduces individuals' consumption of *nonpositional* goods (i.e., goods whose value does not depend, or only weakly depends, on how they compare to goods owned by other people; such as vacation time) that tend to bring long-run benefits for well-being. Income rank has also been used to explain the Easterlin Paradox which I described in chapter 1 (Easterlin, 1974, 1995). Yet, despite the importance of the rank model in social sciences, previous studies often focused on the *average effect* of rank on well-being in a society. To date, very little is known about the extent to which individuals, groups or societies differ in their pursuit of rank and the well-being they derive from achieving certain income ranks.

In the present study, I propose that the relationship between income rank and an individual's well-being is likely to be moderated by the level of income inequality in a society. There are two possible reasons for why this might be the case; the first of which is based on social identity theory (see, e.g., Tajfel & Turner, 1979). This theory postulates that people have a strong incentive to adopt and internalise the same values and behaviours as others in their group or society in order to preserve their own identity, self-esteem, and reputation - all of which are important to one's sense of well-being. Essentially, it implies that people gain utility from following societal codes and norms and receive social sanctions whenever they fail to do so.

Here, I propose that income inequality is a good proxy for how much value a society places on the pursuit of rank and status as a desirable life goal (Schor, 1999). In line with this argument, a study by Walasek and Brown (2016) found a positive correlation between national levels of income inequality and the frequency of Google searches related to status-oriented goods, thus suggesting that the pursuit of rank is likely to be much more prevalent in more unequal societies. Accordingly, the effects on well-being of being ranked higher on the income ladder is hypothesized to be larger in unequal societies as more weight is being placed on positional pursuits.

The second reason for a potential moderating role of income inequality on the association between income rank and well-being is based on the fairness-legitimacy hypothesis (see, e.g., Rawls, 1971). According to this hypothesis, differences in income are perceived as acceptable if they result from responsible choices, not from factors that are arbitrary and outside people's control. Hence, in Latin America, where income inequality is perceived by many to be the result of merit rather than luck (for evidence, see Bucca, 2016), an increase in income rank should similarly be considered by most members of society to be an achievement to be proud of and thus positively contribute to the well-being of the individual moving up the income hierarchy. As the assumption of merit and effort is more prevalent in unequal societies (Alesina et al., 2004; Jiang, Lu, & Sato, 2012), the fairness-legitimacy hypothesis provides a good explanation of why the effect of income rank on well-being might be larger in more unequal societies.

However, to date, empirical evidence in this area is scarce. To the best of my knowledge, there has only been one study to date that investigated the moderating effect of income inequality in the association between income and subjective well-being. Using the Gini Index as a measure of income inequality, Cheung and Lucas (2016) showed in an analysis of six waves of U.S. Behavioral Risk Factor Surveillance System (BRFSS) data that

Americans' subjective well-being was more strongly influenced by an increase in the average income of other people in their neighbourhood when income inequality in a county was high. However, as county fixed effects had not been partialed out from their regression model, it is possible that this finding is confounded by unobserved county-specific effects that correlate with relative income, income inequality, and life satisfaction. For example, such unobserved effects could include differences in the underlying geo-political environment or cultural factors that hardly change over time and that may be correlated with both the population's well-being and income inequality.

Here, I plan to contribute to the currently sparse literature on well-being, relative income and income inequality in several ways. First, given its importance for individuals' well-being evaluations, income rank, rather than the average income of a reference group, will be my primary focus. Second, instead of looking at cross-regional comparisons taken from the same country, I use more than 110,000 observations from 18 Latin American countries. Third, my analyses account for both country and year fixed effects, thus allowing for unobserved, country-specific and time-specific confounders to be partialed out from the regressions. Fourth, multiple well-being outcomes, namely, life satisfaction and daily emotional experiences, are used in the analyses.

There is, however, little indication from existing theories which dimensions of well-being will be more affected by both income rank and its interaction with income inequality. According to Kahneman and Deaton (2010), life satisfaction – an evaluative dimension of well-being that relates closely to one's life goals – has been found to be sensitive to an individual's socio-economic circumstances such as income and employment. On the other hand, measures of daily emotional experiences, which represent the affective dimension of well-being that relates more to one's immediate conditions and experiences, have been found to be sensitive to circumstances that evoke emotional responses, such as time spent

commuting and caring for others. Hence, this chapter is the first piece of research that explores how income rank and its interaction with income inequality are correlated with affective well-being vis-à-vis evaluative well-being. In this chapter I explore the following hypotheses:

H1: Individuals whose income ranks higher than that of other people in their reference group will report higher life satisfaction.

H2: Income inequality moderates the association between income rank and life satisfaction.

H3: Individuals whose income ranks higher than that of other people in their reference group will be more likely to report having felt positive daily emotional experiences.

H4: Income inequality moderates the association between income rank and positive daily emotional experiences.

H5: Individuals whose income ranks higher than that of other people in their reference group will be less likely to report having felt negative daily emotional experiences.

H6: Income inequality moderates the association between income rank and negative daily emotional experiences.

Method

I extended a simple income rank model (Boyce et al., 2010) and investigated whether the association between well-being and the ordinal ranking of a person's income within a reference group (defined by, for example, country, year, region, gender, and age) is moderated by the level of income inequality in their country of residence. More specifically, I estimated the interaction effect between individuals' income rank and income inequality at the country-year level in a multiple regression analysis where individual well-being is the outcome variable. The idea was to see not only whether well-being is positively associated

with income rank, but also to what extent the association between income rank and well-being differs across countries with different levels of economic inequality.

Using self-reported household income data from the Gallup World Poll which were collected in 18 Latin American countries between 2009 and 2016, I followed Boyce et al. (2010) and defined income rank as the ratio between the number of people with a lower per capita income than that of the respondent and the total number of people in the individual's reference group, which in this study consists of the people in the individual's country of residence in a given survey year. The ratio, which was normalised between 0 and 1, was coded so that a higher value denotes a higher income rank within the country and year. It should be noted here that it makes little difference to the overall results how the reference group is defined, as I also tried other specification, e.g., by gender and age groups. In addition, I considered a measure of relative income i.e., the respondent's income relative to the mean income of the reference group.

To assess income inequality[11], I used the Gini Index at the country-year level provided by The Standardized World Income Inequality Database (Solt, 2019). The Gini Index is the most commonly used measure of income inequality which ranges between 0 and 1: scores closer to one indicate higher income inequality. Gini Indices fall usually between 0.2 and 0.65 and are rarely below 0.2 and above 0.65. There are pros and cons to using the Gini Index as a measure of income inequality in a well-being regression equation. Most importantly, the Gini Index is less sensitive to changes at the tails of the income distribution, which happens to be where most of the changes in inequality originate (Atkinson, Piketty, & Saez, 2011). However, the Gini Index has a clear advantage over other measures because the calculations are independent of both the size of the economy and the population of a country

[11] While I believe that wealth inequality is also important for my research question (both at the household level and as a measure of inequality), this measure was only available for 7 countries – China, France, India, Korea, Russia, UK, and USA – none of which belongs to Latin America.

(Atkinson et al., 2011), a feature that makes the Gini Index attractive to explore cross-country comparisons. Further, the Gini Index correlates well with other measures of income inequality, such as the share of taxable income held by the top 1 per cent (Leigh, 2007), confirming the validity of the Gini Index. Finally, as I use an indicator of national income inequality in a given year, this measure may also proxy trends in other country-level factors that vary over time, such as changes in medical technology. Another popular measure of income inequality is the share of taxable income (excluding capital gains) held by the top 1 per cent of income earners. The most attractive feature of this measure is that it covers information about the top part of the income distribution rarely captured by other measures of income inequality, such as the Gini Index. However, this measure is available for only three of the 18 Latin American countries studied in this thesis. This shortcoming makes the measure unsuitable for the analyses presented in this work.

Measures of individual well-being as well as individual-level control variables and the household income data that underpin the income rank variable were obtained from the Gallup World Poll (GWP). In this chapter, I use the same life satisfaction measure I used in the previous chapter. This measure is based on Cantril's life ladder question (Cantril, 1965) with answer categories ranging from 0 (worst possible life) to 10 (best possible life). The GWP further includes a battery of questions concerning the respondent's affective well-being. Questions on real-time positive experiences include: "*Did you experience the following feelings during a lot of the day yesterday? How about enjoyment?*", "*Did you smile or laugh a lot yesterday?*", "*How about happiness?*", "*Did you feel well-rested yesterday?*" Questions on respondents' real-time negative experiences include, among others: "*Did you experience the following feelings during a lot of the day yesterday? "How about worry?*", "*How about stress?*", "*How about anger?*", "*How about sadness?*" Each item was recoded so that positive answers are coded as a "1" and "0" otherwise. Following advice by Stone and MacKie

(National Research Council, 2013), I treated each measure of positive and negative emotional experience separately instead of combining them to form one unified construct. My well-being measures assess distinct concepts: while life satisfaction reflects people's satisfaction with life as a whole, measures of daily emotional experiences capture respondents' mood, usually at a specific point in time.

The Gini Index was matched to the corresponding countries and years in the GWP to produce a sample of 111,566 respondents. This final sample employed the last eight waves of the GWP (2009-2016) and included the 18 Latin American countries that were also featured in the WID, namely, Argentina, Brazil, Bolivia, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay and Venezuela.

I accounted in all of my empirical analysis for the log of average household income per capita (in US dollars) at the country-year level as an additional measure of relative income, as well as a number of socio-demographic factors that have previously been found to be associated with well-being, namely, age, gender, household income per capita (at the individual level, in $US), level of education, marital status, the number of children under the age of 15 in the household and the personal health index[12] (see, e.g., Dolan et al., 2008). Additionally, I included three macroeconomic variables that are typically significantly associated with subjective well-being (e.g., DiTella et al., 2003), namely, the inflation rate, the unemployment rate and the log of GDP per capita – all of which were obtained from the World Bank Database (World Bank, 2017).

Standard errors were clustered at the country-year level (Moulton, 1990). The Gini Index was standardised to have a mean of zero and a standard deviation of 1. This way, I can

[12]The personal health index included several questions about the respondent's health, such as "Do you have any health problems that prevent you from doing any of the things people your age normally can do?" and was created by Gallup.

readily interpret the income rank coefficient as the well-being effect of a one-unit increase in income rank on individuals with an average level of income inequality – that is, whose standardised Gini Indices are equal to zero. The coefficient of the interaction between income rank and income inequality presents the well-being effect of a one-unit increase in income rank on individuals whose standardized Gini Indices are one standard deviation above the mean. This variable and other macroeconomic measures were lagged by one year to reduce the possibility of reverse causality.

Descriptive statistics of all the variables used in the analysis can be found in Table 5.1.

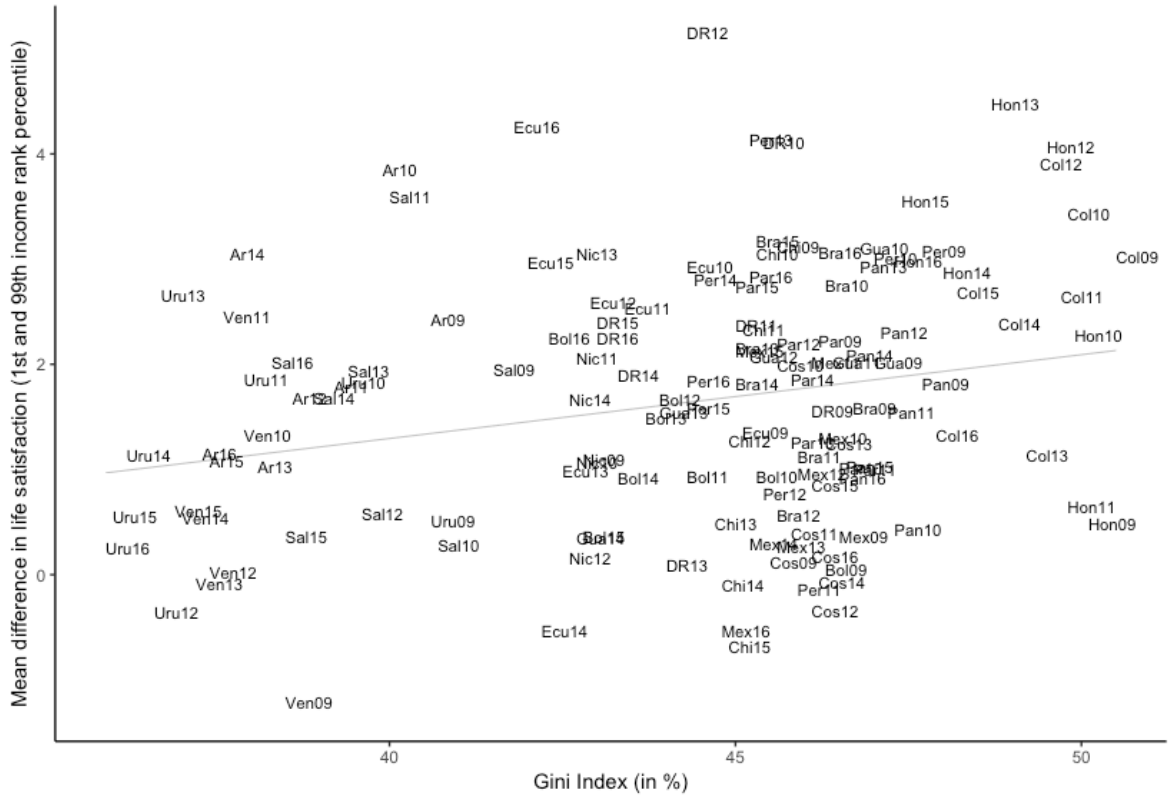
Table 5.1: Descriptive statistics for main models, Gallup World Poll, 18 Latin American countries, 2009-2016.

Variable	Obs.	Mean	Std. Dev.	Range
Life satisfaction	111,566	6.271	2.407	0 - 10
Enjoyment	111,681	0.797	0.402	0 - 1
Happiness	59,722	0.812	0.390	0 - 1
Smiled	111,831	0.844	0.362	0 - 1
Well-rested	112,076	0.738	0.439	0 - 1
Worry	112,244	0.435	0.495	0 - 1
Stress	111,768	0.338	0.473	0 - 1
Anger	112,047	0.163	0.369	0 - 1
Sadness	112,118	0.248	0.432	0 - 1
Log of household income per capita	112,811	7.561	1.558	0-12.991
Income rank				
Country-year	112,811	0.501	0.291	0 - 1
Country-year-region	112,810	0.499	0.296	0 - 1
Country-year-gender	112,811	0.501	0.291	0 - 1
Country-year-age	112,206	0.504	0.315	0 - 1
Relative income				
Country-year	112,811	0.671	0.160	0 - 1
Country-year-region	112,810	0.638	0.225	0 - 1
Country-year-gender	112,811	0.673	0.172	0 - 1
Country-year-age	112,206	0.577	0.301	0 - 1
Standardised Gini Index at t_{-1}	112,811	-0.183	0.978	-2.419 - 1.685
Mean of log of household income per capita by country-year	112,811	7.521	0.565	6.107 - 8.886
Male	112,811	0.431	0.495	0 - 1
Age	112,811	42.263	18.868	15 - 100
Level of education				
Elementary education or less	112,811	0.378	0.485	0 - 1
Completed secondary - tertiary School	112,811	0.113	0.316	0 - 1
Completed high school/college degree	112,811	0.507	0.499	0 - 1
Marital status				
Single/never married	112,811	0.389	0.487	0 - 1
Married	112,811	0.429	0.495	0 - 1
Separated	112,811	0.066	0.249	0 - 1
Divorced	112,811	0.032	0.176	0 - 1
Widowed	112,811	0.081	0.273	0 - 1
Children under 15 in the household	112,811	1.013	1.306	0 - 32
Personal health index	112,811	69.409	28.415	0 - 100
Inflation rate t-1	112,811	6.251	7.494	0.732 - 81.137
Unemployment rate t-1	112,811	5.887	2.209	2.01 - 12.07
Log of GDP per capita t-1	112,811	9.339	0.487	8.27 - 10.022

Results

Does one's ranking in the income hierarchy matter more for well-being in countries where income inequality is high? To make a first pass at this question, I calculated the average life satisfaction scores of the top and the bottom 1% in the income rank by country and year. Then, I plotted the difference between these two scores against the Gini Index by country and year. The plot, which is presented in Figure 5.1, reveals a noticeable positive correlation between this life satisfaction gap and the Gini Index – i.e., in countries with high income inequality, life satisfaction differs more markedly between those at the top and at the bottom of the income rank. In an OLS regression, the estimated coefficient of the Gini Index was 0.079 (p=.006). These aggregate numbers provide first suggestive evidence that being ranked higher in the income distribution may produce greater life satisfaction for individuals in countries where income inequality is high.

Figure 5.1: The life satisfaction gap between those at the top and bottom 1 per cent in the income rank and the Gini Index.



Note: Ar: Argentina, Bol: Bolivia, Bra: Brazil, Chi: Chile, Col: Colombia, Cos: Costa Rica, DR: Dominican Republic, Ecu: Ecuador, Sal: El Salvador, Gua: Guatemala, Hon: Honduras, Mexico: Mex, Nic: Nicaragua, Pan: Panama, Par: Paraguay, Per: Peru, Uru: Uruguay, Ven: Venezuela. Numbers behind the country code denote the year of data collection.

However, in order to be confident that the raw data pattern observed in Figure 5.1 is evidence that income rank matters more in more unequal countries, I accounted for relevant covariates such as log of household income per capita, mean of log of household income per capita by country-year, as well as other socio-demographic and macroeconomic variables. I included these models in Table 5.2. I found that life satisfaction was positively and statistically significantly associated with normalised income rank (b=1.242, p<.001; Table 5.2, model 1); i.e., being ranked higher in the income distribution was, on average, associated with higher life satisfaction. Consistent with Boyce et al. (2010), the inclusion of income rank removed the effect of absolute income, while the average income at the country-year level

was positive and statistically significantly different from zero in a model without country and year fixed effects. Also, consistent with cross-sectional evidence from the US (Cheung & Lucas, 2016), I was able to show that a one-unit increase in an individual's income rank was statistically significantly associated with a greater increase in life satisfaction in more unequal countries; the interaction coefficient was positive and statistically significant (b=0.153, p<.001; Table 5.2, model 1). This implies that while the marginal effect of income rank on life satisfaction was approximately 1.2 points (on a 0-10 scale) for an average person residing in an average country, this effect was roughly 10% higher (1.242 + 0.153 = 1.395) for an average person living in a country with one standard deviation higher Gini Index than the average.

A statistically significant and positive coefficient for this interaction was also observed in the model in which country-specific effects were differenced out by including country dummies in the regression (b= .156, p<.001; Table 5.2, model 2). Moreover, after replacing the continuous Gini Index with quintile dummies of the Gini Index, I continued to see that a higher income rank is positively associated with life satisfaction in more unequal countries (Table 5.2, model 3). For example, holding absolute income, among other things, constant, a one standard deviation increase in income rank for individuals residing in the top Gini Index quintile countries produced a life satisfaction score that was, on average, 0.75 (p<.001) higher than that obtained for individuals residing in countries that are placed at the bottom of the Gini Index quintiles[13].

These findings confirm hypotheses 1 and 2: Individuals whose income ranked higher than that of other people in their reference group reported higher life satisfaction. In addition, income inequality moderated the association between income rank and life satisfaction:

[13]Substantively similar results were obtained when I estimated these models using an ordered logit estimator and multi-level models (see tables below).

individuals whose income ranked higher than that of other people in their reference group and who lived in a more unequal country reported higher life satisfaction than those whose income ranked higher than that of other people in their reference group and who lived in a more equal country.

Table 5.2: OLS estimates for life satisfaction with controls and Gini Index at t-1, Gallup World Poll, 18 Latin American countries, 2009-2016.

	Dependent variable: Life satisfaction		
	Model 1	Model 2	Model 3
Standardised Gini Index at t_{-1}	-0.073	-0.351**	
	(0.057)	(0.128)	
Income rank	1.242***	1.271***	1.053***
	(0.071)	(0.072)	(0.078)
Standardised Gini Index at t_{-1} × Income rank	0.153***	0.156***	
	(0.038)	(0.037)	
Standardised Gini Index at t_{-1}– quintile *(Ref.:* Bottom quintile*)*			
2nd quintile			-0.388**
			(0.119)
3rd quintile			-0.350*
			(0.149)
4th quintile			-0.592**
			(0.184)
Top quintile			-0.930***
			(0.231)
Standardised Gini Index at t_{-1}– quintile *(Ref.:* Bottom quintile*)*			
2nd quintile × Income rank			0.192*
			(0.093)
3rd quintile × Income rank			0.079
			(0.084)
4th quintile × Income rank			0.274*
			(0.127)
Top quintile % × Income rank			0.749***
			(0.137)
Mean of log of household income per capita by country-year	-0.061	-0.034	-0.025
	(0.122)	(0.103)	(0.106)
Log of household income per capita	-0.036*	-0.037*	-0.037*
	(0.015)	(0.015)	(0.015)
Male	-0.225***	-0.235***	-0.236***
	(0.020)	(0.019)	(0.019)
Age	-0.054***	-0.056***	-0.055***
	(0.003)	(0.004)	(0.004)
Age squared	0.000***	0.000***	0.000***
	(0.000)	(0.000)	(0.000)
Level of education *(Ref.: elementary education or less)*			
Completed secondary - tertiary School	0.566***	0.564***	0.564***
	(0.042)	(0.033)	(0.033)
Completed high school/college degree	0.342***	0.272***	0.270***
	(0.037)	(0.024)	(0.024)
Marital status *(Ref.: Single/never married)*			

Married	0.221***	0.167***	0.163***
	(0.027)	(0.024)	(0.024)
Separated	-0.298***	-0.162***	-0.165***
	(0.065)	(0.037)	(0.037)
Divorced	0.057	0.021	0.020
	(0.050)	(0.041)	(0.041)
Widowed	-0.004	-0.025	-0.027
	(0.038)	(0.035)	(0.035)
Children under 15 in the household	0.029***	0.036***	0.038***
	(0.009)	(0.008)	(0.008)
Personal health index	0.016***	0.016***	0.016***
	(0.001)	(0.000)	(0.000)
Inflation rate t_{-1}	-0.003	-0.012	-0.009
	(0.005)	(0.007)	(0.008)
Unemployment rate t_{-1}	0.062**	-0.057	-0.057
	(0.019)	(0.041)	(0.039)
Log of GDP per capita t_{-1}	0.849***	0.429	0.579
	(0.126)	(0.913)	(0.968)
Constant	-1.914*	2.523	1.526
	(0.768)	(9.204)	(9.742)
Country fixed effects	No	Yes	Yes
Year fixed effects	Yes	Yes	Yes
N	111,566	111,566	111,566
R^2	0.135	0.160	0.161
adj. R^2	0.134	0.160	0.160

Note: $^{*}p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$. Regression table shows unstandardised regression coefficients with standard errors in parentheses. Income rank by country and year.

I then explored whether income rank and income inequality were also associated with measures of affective well-being (all results are presented in Table 5.3). I found that respondents whose income ranked higher than that of other people in their reference group (i.e., country and survey year) were overall more likely to have felt enjoyment (b^{*}= .329, p<.001, OR=1.278) and happiness (b^{*}= .304, p<.001, OR=1.356) although they were less likely to have felt well-rested (b^{*}= -.519, p<.001, OR=0.595) and less likely to have experienced worry the day before (b^{*}= -.101, p=.026, OR= 0.842). More importantly, I further found that, in more unequal countries, income rank was not likely to buy additional positive daily emotional experiences although income rank was likely to protect people against daily sadness (b^{*}= -.090, p=.012, OR= 0.914). I do not have a strong theory to explain why income rank predicts enjoyment and happiness better than negative affect and I

cannot explain either why income rank is associated with a lower likelihood of feeling well-rested. However, previous evidence suggests that higher income is associated with less daily sadness and anxiety but not with more daily happiness (Kushlev, Dunn, & Lucas, 2015). Hence, it is plausible to assume that higher income only contributes to increased daily happiness and enjoyment if it allows people to obtain a higher income rank within their reference group.

These findings allow me to partially confirm hypotheses 3: Individuals whose income ranked higher than that of other people in their reference group were more likely to report having felt positive daily emotional experiences, specifically, enjoyment and happiness. However, the results of the model that includes well-rested as the dependent variable reject this hypothesis.

These results do not provide evidence for hypothesis 4. These results do not allow me to confirm that income inequality moderated the association between income rank and positive daily emotional experiences. Individuals whose income ranked higher than that of other people in their reference group and who lived in a more unequal country were not more likely to report having felt positive daily emotional experiences than those whose income ranked higher than that of other people in their reference group and who lived in a more equal country.

Hypotheses 5 and 6 are related to daily negative experiences. My results support hypotheses 5 only with regard to worry: Individuals whose income ranked higher than that of other people in their reference group were less likely to report having felt worry, and hypotheses 6 with regard to sadness: Individuals whose income ranked higher than that of other people in their reference group and who lived in a more unequal country were less likely to report having felt sadness than those whose income ranked higher than that of other people in their reference group and who lived in a more equal country.

Table 5.3: Binomial logistic regression for positive and negative emotional experiences with Gini Index at t-1 and controls, Gallup World Poll, 18 Latin American countries, 2009-2016.

	Dependent variables: Positive and negative emotional experiences							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Enjoyment	*Happiness*	*Smiled*	*Well-rested*	*Worry*	*Stress*	*Anger*	*Sadness*
Standardised Gini Index at t_{-1}	-0.163	-0.180	-0.168	-0.139	0.127	0.057	0.079	-0.019
	(0.117)	(0.168)	(0.112)	(0.116)	(0.104)	(0.097)	(0.084)	(0.095)
Income rank	0.329***	0.313**	0.106	-0.399***	-0.172*	0.088	-0.012	-0.096
	(0.062)	(0.116)	(0.058)	(0.067)	(0.078)	(0.055)	(0.076)	(0.066)
Standardised Gini Index at t_{-1} ×Income rank	0.031	0.036	-0.034	0.014	-0.036	-0.001	0.012	-0.090*
	(0.035)	(0.051)	(0.034)	(0.036)	(0.042)	(0.037)	(0.035)	(0.036)
Mean of log of household income per capita by country-year	0.152	0.200	0.081	-0.088	-0.022	0.060	-0.037	-0.102
	(0.103)	(0.128)	(0.075)	(0.080)	(0.062)	(0.060)	(0.051)	(0.074)
Log of household income per capita	0.007	0.008	0.030**	0.004	0.015	-0.000	-0.020	-0.022
	(0.011)	(0.020)	(0.011)	(0.012)	(0.012)	(0.009)	(0.016)	(0.011)
Male	-0.091***	-0.078**	-0.123***	-0.111***	0.083***	-0.139***	-0.107***	-0.240***
	(0.017)	(0.028)	(0.021)	(0.022)	(0.020)	(0.020)	(0.022)	(0.025)
Age	-0.013***	-0.021***	-0.018***	-0.006	0.031***	0.029***	-0.024***	-0.020***
	(0.003)	(0.004)	(0.003)	(0.005)	(0.005)	(0.005)	(0.004)	(0.003)
Age Squared	0.000***	0.000***	0.000***	0.000***	-0.000***	-0.000***	0.000	0.000*
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Level of education *(Ref.: elementary education or less)*								
Completed secondary - tertiary School	0.278***	0.134**	0.041	-0.487***	0.368***	0.392***	-0.046	-0.197***
	(0.038)	(0.050)	(0.040)	(0.039)	(0.042)	(0.035)	(0.039)	(0.044)

Completed high school/college degree	0.139***	0.049	0.036	-0.313***	0.205***	0.233***	0.020	-0.080**
	(0.024)	(0.037)	(0.026)	(0.027)	(0.031)	(0.020)	(0.026)	(0.028)
Marital status *(Ref.: Single/never married)*								
Married	0.112***	0.193***	0.064*	-0.168***	0.124***	0.073***	0.021	-0.183***
	(0.021)	(0.038)	(0.026)	(0.023)	(0.024)	(0.020)	(0.027)	(0.033)
Separated	-0.062	-0.177**	-0.094*	-0.115**	0.169***	0.145***	0.125***	0.109*
	(0.037)	(0.057)	(0.041)	(0.042)	(0.039)	(0.033)	(0.038)	(0.044)
Divorced	0.042	-0.073	0.051	-0.155**	0.060	0.074	0.055	0.054
	(0.048)	(0.064)	(0.056)	(0.049)	(0.061)	(0.049)	(0.055)	(0.060)
Widowed	-0.008	-0.053	-0.104*	0.044	-0.097*	-0.097*	-0.100*	0.183***
	(0.038)	(0.048)	(0.042)	(0.048)	(0.048)	(0.049)	(0.045)	(0.044)
Children under 15 in the household	0.009	0.016	-0.001	-0.045***	0.028***	0.028***	0.036***	0.001
	(0.007)	(0.012)	(0.010)	(0.009)	(0.008)	(0.008)	(0.008)	(0.008)
Personal health index	0.027***	0.028***	0.029***	0.056***	-0.089***	-0.040***	-0.032***	-0.077***
	(0.001)	(0.001)	(0.000)	(0.001)	(0.001)	(0.001)	(0.000)	(0.001)
Inflation rate t_{-1}	-0.006	0.019	-0.002	0.004	-0.001	0.006	0.014***	0.008
	(0.005)	(0.010)	(0.004)	(0.004)	(0.006)	(0.005)	(0.004)	(0.005)
Unemployment rate t_{-1}	0.013	0.051	0.036	0.018	-0.027	0.019	0.023	0.026
	(0.032)	(0.035)	(0.023)	(0.021)	(0.021)	(0.020)	(0.022)	(0.021)
Log of GDP per capita t_{-1}	0.439	-2.036	0.314	-1.734**	-1.756*	1.428**	0.809	-0.260
	(0.767)	(1.471)	(0.552)	(0.616)	(0.715)	(0.551)	(0.551)	(0.549)
Constant	-5.793	17.193	-4.077	14.932*	23.028**	-13.576*	-6.410	7.486
	(7.664)	(14.202)	(5.582)	(6.205)	(7.154)	(5.602)	(5.455)	(5.637)
N	111,681	59,722	111,831	112,076	112,244	111,768	112,047	112,118
Pseudo R^2	0.110	0.120	0.123	0.295	0.455	0.198	0.137	0.442

Note: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Regression table shows unstandardised regression coefficients with standard errors in parentheses. All models include country and year fixed effects. Income rank by country and year.

Finally, similar substantive results were obtained when I re-estimated the regression equations using ordered logit estimators or multi-level models with random intercepts (by country); the results can be found in Tables 5.4 and 5.5, respectively. In addition, I conducted several robustness checks to confirm my overall findings. This included running regressions with different specifications for the reference groups on which the income rank variable is based (e.g., by region, gender and age) (Table 5.6). I also employed a simple relative income variable, i.e., the respondent's income relative to the mean income of the reference group (Table 5.7). The results obtained from these additional tests still lead to the same conclusion: the effect of income rank on an individual's well-being is higher in more unequal countries in Latin America.

Table 5.4: Ordered logit estimates for life satisfaction with controls and Gini Index at t-1, Gallup World Poll, 18 Latin American countries, 2009-2016.

	Dependent variable: Life satisfaction		
	Model 1	Model 2	Model 3
Standardised Gini Index at t_{-1}	-0.061	-0.296**	
	(0.046)	(0.104)	
Income rank	0.983***	1.021***	0.848***
	(0.057)	(0.058)	(0.064)
Standardised Gini Index at t_{-1} × Income rank	0.117***	0.121***	
	(0.030)	(0.031)	
Standardised Gini Index at t_{-1}– quintile *(Ref.:* Bottom quintile*)*			
2nd quintile			-0.314**
			(0.097)
3rd quintile			-0.266*
			(0.120)
4th quintile			-0.456**
			(0.150)
Top quintile			-0.735***
			(0.185)
Standardised Gini Index at t_{-1}– quintile *(Ref.:* Bottom quintile*)*			
2nd quintile × Income rank			0.178*
			(0.079)
3rd quintile × Income rank			0.059
			(0.069)
4th quintile × Income rank			0.209
			(0.109)
Top quintile % × Income rank			0.594***
			(0.118)
Mean of log of household income per capita by country-year	-0.095	-0.043	-0.033
	(0.098)	(0.088)	(0.092)
Log of household income per capita	-0.032**	-0.033*	-0.032**
	(0.012)	(0.013)	(0.012)
Male	-0.185***	-0.197***	-0.198***
	(0.016)	(0.016)	(0.015)
Age	-0.043***	-0.045***	-0.045***
	(0.003)	(0.003)	(0.003)
Age Squared	0.000***	0.000***	0.000***
	(0.000)	(0.000)	(0.000)
Level of education *(Ref.: elementary education or less)*			
Completed secondary - tertiary School	0.429***	0.444***	0.444***

	(0.037)	(0.029)	(0.029)
Completed high school/college degree	0.250***	0.206***	0.205***
	(0.031)	(0.022)	(0.022)
Marital status *(Ref.: Single/never married)*			
Married	0.166***	0.125***	0.121***
	(0.021)	(0.019)	(0.019)
Separated	-0.226***	-0.139***	-0.141***
	(0.049)	(0.030)	(0.030)
Divorced	0.046	0.013	0.012
	(0.040)	(0.032)	(0.032)
Widowed	0.009	-0.015	-0.017
	(0.031)	(0.028)	(0.029)
Children under 15 in the household	0.022**	0.030***	0.032***
	(0.007)	(0.006)	(0.006)
Personal health index	0.012***	0.013***	0.013***
	(0.000)	(0.000)	(0.000)
Inflation rate t_{-1}	-0.002	-0.010	-0.008
	(0.005)	(0.006)	(0.007)
Unemployment rate t_{-1}	0.053***	-0.042	-0.042
	(0.015)	(0.032)	(0.031)
Log of GDP per capita t_{-1}	0.712***	0.552	0.666
	(0.103)	(0.724)	(0.777)
N	111,566	111,566	111,566
Pseudo R^2	0.033	0.041	0.041

Note: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Regression table shows unstandardised regression coefficients with standard errors in parentheses. Income rank by country and year.

Table 5.5: Multi-level models for life satisfaction with controls and Gini Index at t-1, Gallup World Poll, 18 Latin American countries, 2009-2016.

	Dependent variable: Life satisfaction	
	Model 1	Model 2
Standardised Gini Index at t_{-1}	-0.151***	
	(0.039)	
Income rank	1.271***	1.051***
	(0.041)	(0.057)
Standardised Gini Index at t_{-1} × Income rank	0.156***	
	(0.023)	
Standardised Gini Index at t_{-1} – quintile *(Ref.:* Bottom quintile*)*		
2nd quintile		-0.307***
		(0.089)
3rd quintile		-0.265**
		(0.091)
4th quintile		-0.434***
		(0.095)
Top quintile		-0.724***
		(0.109)
Standardised Gini Index at t_{-1} – quintile *(Ref.:* Bottom quintile*)*		
2nd quintile × Income rank		0.192**
		(0.069)
3rd quintile × Income rank		0.080
		(0.065)
4th quintile × Income rank		0.274***
		(0.072)
Top quintile % × Income rank		0.748***
		(0.084)
Mean of log of household income per capita by country-year	-0.028	-0.027
	(0.028)	(0.029)
Log of household income per capita	-0.037***	-0.037***
	(0.008)	(0.008)
Male	-0.235***	-0.235***
	(0.014)	(0.014)
Age	-0.056***	-0.056***
	(0.002)	(0.002)
Age Squared	0.000***	0.000***
	(0.000)	(0.000)
Level of education *(Ref.: elementary education or less)*		
Completed secondary - tertiary School	0.565***	0.565***
	(0.025)	(0.025)
Completed high school/college degree	0.269***	0.269***
	(0.017)	(0.017)

Marital status *(Ref.: Single/never married)*		
Married	0.173***	0.171***
	(0.018)	(0.018)
Separated	-0.155***	-0.157***
	(0.030)	(0.030)
Divorced	0.024	0.023
	(0.040)	(0.040)
Widowed	-0.021	-0.022
	(0.031)	(0.031)
Children under 15 in the household	0.036***	0.038***
	(0.006)	(0.006)
Personal health index	0.016***	0.016***
	(0.000)	(0.000)
Inflation rate t_{-1}	-0.017***	-0.016***
	(0.002)	(0.002)
Unemployment rate t_{-1}	-0.069***	-0.067***
	(0.009)	(0.009)
Log of GDP per capita t_{-1}	-0.800***	-0.756***
	(0.150)	(0.125)
Constant	14.274***	14.150***
	(1.455)	(1.244)
N	111,566	111,566
Log Likelihood	-246,829.75	-246,811.19

Note: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Regression table shows unstandardised regression coefficients with standard errors in parentheses. Income rank by country and year. Country modelled as random intercept.

Table 5.6: OLS estimates for life satisfaction with Gini Index at t-1and measures of income rank using different reference groups, Gallup World Poll, 18 Latin American countries, 2009-2016.

	Dependent variable: Life satisfaction		
Reference group:	Country, year, region	Country, year, gender	Country, year, age
Independent variables:	Model 1	Model 2	Model 3
Standardised Gini Index at t_{-1}	-0.331*	-0.347**	-0.343**
	(0.128)	(0.128)	(0.129)
Income rank	0.695***	1.260***	0.841***
	(0.066)	(0.072)	(0.057)
Standardised Gini Index at t_{-1} × Income rank	0.111**	0.150***	0.121***
	(0.034)	(0.038)	(0.036)
Mean of log of household income per capita by country-year	-0.122	-0.035	-0.094
	(0.105)	(0.103)	(0.102)
Log of household income per capita	0.048**	-0.036*	0.023
	(0.018)	(0.015)	(0.015)
Male	-0.226***	-0.157***	-0.226***
	(0.019)	(0.019)	(0.019)
Age	-0.054***	-0.056***	-0.054***
	(0.004)	(0.004)	(0.004)
Age Squared	0.000***	0.000***	0.000***
	(0.000)	(0.000)	(0.000)
Level of education *(Ref.: elementary education or less)*			
Completed secondary - tertiary School	0.665***	0.563***	0.635***
	(0.035)	(0.033)	(0.033)
Completed high school/college degree	0.325***	0.272***	0.303***
	(0.026)	(0.024)	(0.025)
Marital status *(Ref.: Single/never married)*			
Married	0.168***	0.167***	0.169***
	(0.024)	(0.024)	(0.024)
Separated	-0.156***	-0.163***	-0.159***
	(0.037)	(0.037)	(0.037)
Divorced	0.038	0.020	0.036
	(0.041)	(0.041)	(0.041)
Widowed	-0.009	-0.026	-0.010
	(0.035)	(0.035)	(0.036)
Children under 15 in the household	0.015	0.036***	0.020**
	(0.007)	(0.008)	(0.007)
Personal health index	0.016***	0.016***	0.016***
	(0.000)	(0.000)	(0.000)
Inflation rate t_{-1}	-0.012	-0.012	-0.012
	(0.007)	(0.007)	(0.007)
Unemployment rate t_{-1}	-0.058	-0.058	-0.058

	(0.041)	(0.041)	(0.041)
Log of GDP per capita t_{-1}	0.421	0.429	0.414
	(0.909)	(0.910)	(0.910)
Constant	3.349	2.946	3.294
	(9.026)	(9.035)	(9.026)
N	111,565	111,566	110,979
R^2	0.156	0.160	0.157
adj. R^2	0.155	0.160	0.157

Note: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Regression table shows unstandardised regression coefficients with standard errors in parentheses. All models include country and year fixed effects.

Table 5.7: OLS estimates for life satisfaction with Gini Index at t-1 and measures of relative income using different reference groups, Gallup World Poll, 18 Latin American countries, 2009-2016.

	Dependent variable: Life satisfaction			
Reference group:	Country, year	Country, year, region	Country, year, gender	Country, year, age
Independent variables:	Model 1	Model 2	Model 3	Model 4
Standardised Gini Index at t_{-1}	-0.381*	-0.384**	-0.353*	-0.342**
	(0.171)	(0.140)	(0.167)	(0.128)
Relative income	1.354***	0.514***	0.881***	0.554***
	(0.376)	(0.106)	(0.261)	(0.058)
Standardised Gini Index at t_{-1} × Relative income	0.084	0.119	0.076	0.094*
	(0.137)	(0.070)	(0.120)	(0.041)
Log of household income per capita	0.011	0.082***	0.052	0.064***
	(0.039)	(0.021)	(0.031)	(0.018)
Male	-0.207***	-0.210***	-0.168***	-0.214***
	(0.019)	(0.019)	(0.025)	(0.019)
Age	-0.053***	-0.053***	-0.053***	-0.053***
	(0.004)	(0.004)	(0.004)	(0.004)
Age Squared	0.000***	0.000***	0.000***	0.000***
	(0.000)	(0.000)	(0.000)	(0.000)
Level of education *(Ref.: elementary education or less)*				
Completed secondary - tertiary School	0.747***	0.739***	0.748***	0.709***
	(0.036)	(0.036)	(0.036)	(0.035)
Completed high school/college degree	0.358***	0.355***	0.358***	0.338***
	(0.026)	(0.026)	(0.026)	(0.025)
Marital status *(Ref.: Single/never married)*				
Married	0.172***	0.171***	0.172***	0.172***
	(0.024)	(0.024)	(0.024)	(0.024)
Separated	-0.147***	-0.150***	-0.149***	-0.155***
	(0.037)	(0.037)	(0.037)	(0.037)
Divorced	0.055	0.053	0.054	0.043

	(0.042)	(0.042)	(0.041)	(0.042)
Widowed	0.015	0.010	0.012	0.001
	(0.035)	(0.036)	(0.035)	(0.036)
Children under 15 in the household	-0.012	-0.009	-0.012	0.001
	(0.007)	(0.007)	(0.007)	(0.007)
Personal health index	0.017***	0.017***	0.017***	0.016***
	(0.000)	(0.000)	(0.000)	(0.000)
Inflation rate t_{-1}	-0.011	-0.011	-0.011	-0.012
	(0.007)	(0.007)	(0.007)	(0.007)
Unemployment rate t_{-1}	-0.050	-0.053	-0.052	-0.051
	(0.037)	(0.040)	(0.038)	(0.040)
Log of GDP per capita t_{-1}	0.824	0.598	0.557	0.435
	(0.851)	(0.874)	(0.846)	(0.886)
Constant	-2.088	0.180	0.543	1.993
	(8.453)	(8.708)	(8.429)	(8.830)
N	111566	111565	111566	110979
R^2	0.154	0.154	0.154	0.155
adj. R^2	0.154	0.153	0.153	0.154

Note: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Regression table shows unstandardised regression coefficients with standard errors in parentheses. All models include country and year fixed effects.

Discussion

My analysis of more than 110,000 observations from 18 Latin American countries showed that income rank, and not absolute income, strongly predicted life satisfaction and some dimensions of positive and negative affect. More importantly, I demonstrated that the marginal effect of income rank on well-being was higher in countries where income inequality was high. The estimated moderating effect of income inequality on the association between income rank and well-being was large; a one standard deviation difference in Gini Index produced a 10% gap in the effect of income rank on an average person's life satisfaction. This finding is consistent with social identity theory (e.g., Tajfel & Turner, 1979) which states that people internalise the values and preferences of other people in a society and, consequently, gain utility (or satisfaction) from achieving what their society values as important. In this study, it was the value that society placed on rank and status, which tend to be higher in places where income inequality is more pronounced (e.g., Paskov, Gërxhani, & van de Werfhorst, 2013). The finding that income rank matters more to the life satisfaction of citizens who live in a more unequal country is consistent with fairness-legitimacy theory as Latin American citizens tend to perceive inequality to result from effort and merit instead of from luck and social structures (Bucca, 2016). Consistent with fairness-legitimacy theory and previous evidence on the beliefs about income inequality in Latin America (Bucca, 2016), my results showed that the effects of income rank on life satisfaction were larger in countries where income inequality was higher. It could be the case that an increase in income rank was considered to be an achievement to be proud of, a situation that could positively contribute to the well-being of the individual moving up the income hierarchy. All results were robust to controlling for the average income at the country-year level and macroeconomic variables, as well as country and year fixed effects.

Although the literature on subjective well-being, relative income and income inequality is still sparse, these findings are consistent with past work on income inequality and other social outcomes, such as social cohesion or health, which have been found to be negatively associated with income inequality possibly due to increased personal mistrust and increased competition and anxiety about social status (for an overview, see Buttrick & Oishi, 2017). The 'status anxiety hypothesis', which describes the emotional stress response stemming from income inequality and related status competition (Layte & Whelan, 2014) has been put forward for previous findings suggesting that high levels of income inequality in a society are damaging for health and other social outcomes (e.g., Pickett & Wilkinson, 2015; Wilkinson & Pickett, 2017). Relatedly, income inequality has been found to moderate the relationship between subjective social status and subjective well-being (Schneider, 2019). However, contrary to my analysis, most of these previous studies focused on European or American data, highlighting the need to extend such investigations to other regions.

Strength, limitations and future directions

My results were based on nationally representative data obtained from 18 Latin American countries included in the Gallup World Poll, which allowed a comparison of income rank, well-being and income inequality across a number of societies. However, as I explain above, it might not be possible to extrapolate my findings to other societies and future studies should therefore aim to incorporate a larger set of countries. The limitations of my study were offset by the robustness of the findings across multiple model specifications, lending credence to my main findings.

A particular strength of this study can be found in its inclusion of affective measures of well-being in the form of daily positive and negative emotions. Most studies on relative income and subjective well-being focus on life satisfaction - which I also include in this study

- but do not consider other outcomes which are important elements of subjective well-being, such as affect or eudaimonia. To my knowledge, this study is the first to investigate the moderating effect of income inequality on the association between income rank and affective measures of well-being. Future studies should aim to incorporate all three elements of subjective well-being as described by the OECD (2013), namely evaluative well-being, affect and eudaimonia. However, to the best of my knowledge, currently available datasets do not contain adequate measures of eudaimonic well-being, which describes a sense of meaning and purpose in life, to allow such an analysis across a large number of countries.

Implications

My findings imply not only that individuals living in countries where income inequality is high may be able to gain more in terms of well-being from moving up income ranks, but also that the same individuals are likely to suffer more psychologically from moving down the income distribution. As well-being has been found to be generally more sensitive to losses than gains (Boyce, Wood, Banks, Clark, & Brown, 2013), my results could be viewed as a partial explanation for the negative association between income inequality and well-being often found in the literature (e.g., Delhey & Dragolov, 2014; Oishi et al., 2011; Powdthavee, Burkhauser, & De Neve, 2017).

My results could be of interest to policymakers who consider addressing increasing income inequalities through tax and welfare policies in order to improve societal well-being. Although my analysis did not assess whether changes in income inequality over time would cause changes in life satisfaction, there is evidence that redistributive policies which lower income inequality are beneficial for the life satisfaction of both tax payers and welfare recipients (Cheung, 2018). Decreased levels of social status anxiety and a corresponding lower emphasis on income rank could be a plausible explanation for this observation.

Chapter summary

In sum, my study suggests that income rank is of great importance for subjective well-being in societies with higher levels of income inequality. I described psychological theories and mechanisms that could explain this observation, including the relative income hypothesis, range-frequency theory, social identity theory, the fairness-legitimacy hypothesis, and the status anxiety hypothesis. These findings may have implications for the consideration of redistributive tax and welfare policies. More generally, I believe that my results, which pointed towards individuals having a greater incentive to pursue higher income ranks in more unequal countries, have shed new light on the long-standing issue of why income inequality is much more persistent in some societies than others.

Chapter 6. General discussion

Introduction

In this thesis, I have investigated the association between economic and political conditions and subjective well-being in Latin America. My work contributes to the growing literature on subjective well-being that aims to consider subjective well-being measures as indicators of social progress. In chapter 2, I showed that economic indicators are associated with subjective well-being both in the long and the short term. In chapter 3, I provided evidence that the subjective well-being political paradox previously found in Europe also exists in Latin America: individuals who live in a country with a left-leaning government in power report higher subjective well-being than those who live in a country with a right-leaning government in power. In contrast, Latin American citizens who lean more to the right politically report higher subjective well-being than those who lean more to the left. I also demonstrated that subjective well-being varies across the electoral cycle in Latin America. The fourth chapter of this thesis showed that people's confidence in national institutions in a particular region like Latin America is associated with people's current and expected life satisfaction. Chapter 5 showed that income inequality, one of the most relevant socio-economic problems of the region, moderates the association between income rank and life satisfaction.

In this chapter, I present a summary of the findings of this thesis by chapter and I discuss theoretical and practical implications as well as limitations of this thesis and possible directions for future research.

Study summaries by chapter

Chapter 2

In this chapter, I used the Latinobarómetro, a cross-sectional data set that covers 17 Latin American countries and the 1996-2015 time period. In the 1990s many Latin American countries released neoliberal policies that were suggested by international organisms under the Washington Consensus. The goal of these policies was to increase economic growth and reduce poverty rates. However, between 1999 and 2002 an external debt crisis put an end to the Washington Consensus policies and since 2003 many Latin American countries shifted from neoliberal to liberal or left-leaning governments. The policies implemented by these left-leaning governments had the explicit aim of increasing citizens' well-being. Therefore, a number of policies that provided citizens with access to quality health care and education and better social safety net in general, started to be a priority for the new governments in the region.

The policies implemented by Latin American governments before and after the Washington Consensus may have influenced movements in the macroeconomic indicators which have been found to be linked to individual subjective well-being. In this chapter, I explored whether macroeconomic indicators, such as the unemployment rate, the inflation rate and the log of GDP per capita were associated with subjective well-being during the 1996-2015 time period. In addition, I looked at governments' social protection spending and political orientation.

Using time trends analyses, I found that the trend growth rate of the unemployment rate was significantly negatively associated with the trend growth rate of subjective well-being whereas the average social protection spending in the period of analysis was significantly positively associated with the trend growth rate of subjective well-being. The study included in this chapter also showed that, in the short term, the unemployment and inflation rate and the log

of GDP per capita moved in lockstep with citizens' subjective well-being between 1996 and 2015. The results of the political orientation measure were inconclusive.

This chapter contributes to the literature on economic conditions and subjective well-being (e.g., Blanchflower & Oswald, 2004b; Clark & Oswald, 1994; DiTella et al., 2003), the debate on the relationship between GDP per capita and subjective well-being (e.g., Di Tella & MacCulloch, 2008; Easterlin, 1974; Easterlin, 1995; Stevenson & Wolfers, 2013) and the association between government's social protection spending and subjective well-being (e.g., Flavin et al., 2014; Switek, 2012; Veenhoven & Ouweneel, 1995).

It is worth noting that despite using the same data set, the Latinobarómetro, the analyses shown in chapter 2 included 17 Latin American countries whereas the analyses presented in chapter 3 involved 18 Latin American countries. The Dominican Republic was excluded from the analysis in chapter 2 due to the great number of missing values in the dependent variable.

Chapter 3

Past research showed that subjective well-being is linked to governments' and individuals' political orientation (e.g., Carney, Jost, Gosling, & Potter, 2008; Napier & Jost, 2008; Okulicz-Kozaryn et al., 2014). However, to my knowledge, no study to date has investigated the association between governments' and individuals' political orientation with subjective measures other than life satisfaction and happiness. In this chapter, I also used the Latinobarómetro data set and employed four subjective measures: people's evaluation of their country's and their own economic situation, satisfaction with democracy and life satisfaction. The goal of this chapter was to assess the relationship between governments' political

orientation, individuals' political orientation and the subjective measures mentioned earlier. In addition, I explored whether these associations varied across the electoral cycle.

I found that citizens who lived in a country with a left-leaning government rated the economic situation of their country and their own economic situation better and were more satisfied with democracy than those who lived in a country with a right-leaning government. With regard to life satisfaction, those who lived in a country with a left-leaning government were more satisfied with their lives than those who lived in a country with a centre government. The difference in life satisfaction between those who lived in a country with a left-leaning government and those who lived in a country with a right-leaning government was significant only at the 10% level. In contrast, this chapter demonstrated that citizens who leaned more to the right politically rated their country's and their own economic situation better and were more satisfied with democracy and with their lives than those who leaned more to the left. Put together, these findings suggest that the subjective well-being political paradox found in Europe (Okulicz-Kozaryn et al., 2014) also exists in Latin America.

In addition, the studies included in this chapter showed that during the 12 months preceding an election people rated their own economic situation better than in any other period. During the 12 months following an election (regardless of whether the elections led to a change in the political orientation of the governments) people rated their country's and their own economic situation better and were more satisfied with democracy than in any other period. Life satisfaction did not vary over the electoral cycle.

These results were obtained after controlling for other possible explanatory variables such as age, gender, level of education, employment status, macroeconomic indicators, such as

the unemployment and inflation rates and the log of GDP per capita and country and year fixed effects.

Chapter 4

The purpose of this chapter was to investigate the association between citizens' confidence in national institutions and subjective well-being. Prior research suggests that the functioning of the government affects people's subjective well-being (e.g., Frey & Stutzer, 2000; Helliwell & Huang, 2008). For instance, Helliwell and Huang (2008) showed that the quality of the government has a stronger effect on life satisfaction than per capita income and Bjørnskov et al (2010) demonstrated that the quality of economic-judicial and political institutions is positively associated with life satisfaction. However, to my knowledge, there is no study to date that investigates the association between people's confidence in national institutions and subjective well-being in Latin America. Due to the turbulent economic and political past of the region how citizens feel with regard to the national institutions may be relevant for subjective well-being.

In this chapter, I used the Gallup World Poll, a cross-sectional data set that includes data for more than 150 countries and around 10 survey years. In my studies, I included data for 18 Latin American countries and the 2009-2016 time period. I found that confidence in financial institutions, the honesty of elections, the military, the judicial system, the national government and current life satisfaction trended downwards in the period of analysis. In addition, the study showed that people who reported confidence in financial institutions, the honesty of elections, the military, the judicial system, the national government and the police reported higher current and expected life satisfaction than those who lacked this type of institutional confidence. These

results held after controlling for socio-demographic factors that have previously been found to be associated with subjective well-being. When I included macroeconomic indicators in the model the only relationship that turned out to be not significant was the association between confidence in the judicial system and expected life satisfaction. Overall, this chapter suggests that although confidence in most national institutions trended downwards over the period of analysis the significant positive association between confidence in national institutions and life satisfaction suggests that the ability of governments to provide a trustworthy environment may be key to increase societal well-being.

Chapter 5

Whether absolute income increases people's subjective well-being has been the most debated question in the literature on subjective well-being (e.g., Easterlin, 1974; Stevenson & Wolfers, 2013). Past research showed that relative income and income rank were more important for subjective well-being than absolute income (e.g., Brown et al., 2008; Clark & Oswald, 1996; Clark et al., 2009; Ferrer-i-Carbonell, 2005; Powdthavee, 2009a; Wood et al., 2012).

In this chapter, I also used the Gallup World Poll with 18 Latin American countries and the 2009-2016 time period. The goal of this chapter was to investigate whether income inequality moderated the association between income rank and life satisfaction. People's income rank was obtained by ordering the incomes of those in the same reference group (i.e., people of the same age, gender, country, region and survey year). I proposed that income inequality may moderate the association between income rank and life satisfaction because an unequal context, in which some people have a lot and some others have very little, provides a scenario in which income comparisons are more likely to exist.

I found that people whose income ranked higher and who lived in an unequal country reported higher life satisfaction than those who lived in a more equal context. In addition, this chapter demonstrated that people who lived in an unequal country and whose income ranked higher were more likely to have felt sadness the day before. However, income inequality did not seem to moderate the association between income rank and positive daily emotional experiences.

The fairness-legitimacy hypothesis (see, e.g., Rawls, 1971) and social identity theory (see, e.g., Tajfel & Turner, 1979) may explain these findings. In unequal countries where personal economic progress is seen as fair, legitimate and a sign of effort and merit, moving upwards in the income ladder may be considered an achievement to be proud of and, thus, bring higher well-being. Also, people tend to feel better when they follow the social codes and norms supported by their society. Thus, people who live in an unequal society that places high value on the pursuit of rank and status are more likely to enjoy higher well-being by moving up income ranks.

In many studies, income inequality has been found to be negatively associated with subjective well-being (e.g., Delhey & Dragolov, 2014; Oishi et al., 2011; Powdthavee et al., 2017; see the introduction of this thesis for a description of the mixed findings on this association). This chapter suggests that as long as societies place a high value on the pursuit of rank and status, income inequality may be more likely to persist.

Theoretical implications

Subjective well-being, macroeconomic conditions and political orientation

Both chapters 2 and 3 explored the association between macroeconomic indicators, political orientation, and subjective well-being. The results of these chapters corroborate

previous findings that suggest that subjective well-being is associated with macroeconomic indicators, such as GDP per capita, the unemployment rate and the inflation rate (e.g., Clark & Oswald, 1994; Di Tella et al., 2003, 2001; Easterlin, 1974; Easterlin, 1995; Sacks et al., 2010; Stevenson & Wolfers, 2013) and with governments' and individuals' political orientation (e.g., Jost, Nosek, & Gosling, 2008a; Napier & Jost, 2008; Okulicz-Kozaryn et al., 2014; Veenhoven & Ouweneel, 1995). It is true that in Latin America governments with a specific political orientation tend to advocate different types of policies and that this may generate expectations that may affect citizen's subjective well-being. However, the study of macroeconomic indicators and political orientation is not enough to establish causality between governments' policies and subjective well-being.

Income, income inequality and subjective well-being

Past research has shown that relative income and income rank matter more for subjective well-being than absolute income (e.g., Boyce et al., 2010; Ferrer-i-Carbonell, 2005; Luttmer, 2005). In societies that place high value on rank and status, income inequality generates a wide hierarchy in which people gain more well-being from moving up.

The analysis presented in Chapter 5 of this thesis demonstrates that income inequality moderates the association between income rank and subjective well-being. Although prior research shows that these findings can be seen in 24 countries worldwide (Macchia, Plagnol, & Powdthavee, 2019), future research could extend the work in this area by exploring whether income inequality moderates the association between income rank and subjective well-being in other regions not yet explored, such as African and Asian countries. Latin America is one of the

most unequal regions in the world (Gasparini & Cruces, 2013; Gasparini et al., 2011) and it may have special cultural characteristics that contribute to this finding (Henrich et al., 2010).

Chapter 5 also suggests that social identity theory (see, e.g., Tajfel & Turner, 1979), the fairness-legitimacy hypothesis (see, e.g., Rawls, 1971) and the 'status anxiety hypothesis' (Layte & Whelan, 2014) may explain why income inequality moderates the association between income rank and subjective well-being. According to social identity theory, people may experience higher subjective well-being when their behaviour is in line with social norms or values of the society. The fairness-legitimacy hypothesis suggests that people believe that an increase in income is an achievement to be proud of as it is connected to effort instead of luck. According to the 'status anxiety hypothesis' people may feel anxious and stressed when they live in a society that places high value on rank and status. In a society in which status and rank are highly important, income inequality may exacerbate these situations as it creates a wide hierarchy in which people experience higher subjective well-being when they move up. Future work could extend this research by exploring moderators and mechanisms, such as social norms, egalitarian preferences, and stress and anxiety, that could explain why income inequality moderates the association between income rank and subjective well-being. For instance, people who move up the income distribution of their reference group may experience higher well-being *because* they believe that hard work is the only factor that can help people move ahead. In addition, other dependent variables could be explored. For example, understanding whether the interaction between income rank and income inequality shapes people's behaviour, such as generosity, could be a good contribution to the literature.

Practical implications

Traditionally, the Gross Domestic Product (GDP) (i.e., the monetary value of all the goods produced in a country) has been considered a measure of societal progress and well-being. However, GDP fails to capture important aspects of a society which have been found to be significant predictors of citizens' well-being (e.g., Stiglitz, Sen, & Fitoussi, 2009), such as income inequality (Alesina et al., 2004), optimism (Karademas, 2006) and air pollution (Zhang, Zhang, & Chen, 2017). The many limitations of GDP as an indicator of citizens' well-being and the nil association between GDP and subjective well-being over time (Easterlin, 1974) encouraged scholars, governments and international associations to consider alternative measures to assess societal well-being (e.g., Dolan & White, 2007).

Fairly recently, several countries, international organizations and researchers have recognised the shortcomings of GDP as a measure of societal welfare and therefore proposed to measure societal well-being differently, for instance in the form of subjective well-being (Adler & Seligman, 2016; Diener, 2000; Dolan & White, 2007). In 2010, the British government launched the National Well-being Programme which aimed to promote the use of subjective well-being indicators to measure societal welfare and in 2013, the Organization of Economic Cooperation and Development (OECD) published guidelines to measure subjective well-being. The initiatives of several European governments to systematically collect data on and consider their citizens' subjective well-being are a step in the right direction that Latin American governments should mirror.

The main goal of this thesis was to provide evidence that macroeconomic and political circumstances other than GDP are related to individuals' subjective well-being in a region with particular features such as Latin America. This thesis also aimed to highlight that researchers and

policymakers should use subjective well-being indicators as measures of societal progress. In particular, Chapter 2 of this thesis suggests that macroeconomic movements are strongly associated with people's subjective well-being. Chapter 3 shows that governments' political orientation is associated with subjective well-being and evaluation of economic situations and that these measures vary over the electoral cycle regardless of individuals' political orientation. Chapter 4 demonstrates that citizens' confidence in national institutions is significantly positively associated with current and expected life satisfaction. Given that the goal of most governments is to increase citizens' well-being, these results should be informative for Latin American policymakers. The analysis presented in chapter 2 shows that the log of GDP per capita, the traditional measure of societal progress, is significantly positively associated with subjective well-being in the short term, in line with the Easterlin paradox (Easterlin, 1974), and that this association is nil in the long term. Latin American policymakers should continue considering other macroeconomic and political circumstances, including planned democratic elections, unemployment, inflation, and social protection spending when releasing policies that aim to increase citizens' well-being.

Chapter 5 of this thesis has additional practical implications. The results could inform policymakers who consider tax and welfare policies that may increase income equality and, thus, subjective well-being. Past research suggests that changes in income inequality over time have detrimental effects on life satisfaction (Cheung, 2018).

Overall, the studies presented in this thesis contribute to the body of research and government initiatives that support the use of subjective well-being as a measure of societal progress.

Limitations and future directions of work

The main limitation of this thesis is that the analyses are cross-sectional and correlational, therefore, I cannot provide evidence for the direction of causality. It is possible that citizens who enjoy higher subjective well-being vote for parties with specific political orientations that advocate policies that aim to increase people's well-being and thus, improve the macroeconomic situation of the country. Another limitation of this thesis is the lack of measures that directly reflect government policies in the region (e.g., government size, pro-growth and pro-redistribution policies, etc). For instance, it is not possible for me to confirm that people who live in a country with a left-leaning government report higher subjective well-being than those who live in a country with a right-leaning government *because* the policies implemented by the left-leaning government are better for citizens' well-being. It is difficult to assert that a government's political orientation is a perfect proxy for the policies it advocates. Governments' political orientation may be associated with specific policies and, thus, may generate expectations of the performance and potential policies the governments may advocate.

Future work should consider collecting panel data for individuals that could help researchers establish the direction of causality. To the best of my knowledge, publicly available longitudinal data sets with Latin American data do not exist. To corroborate the results of the studies included in this thesis, future work should seek longitudinal data that would allow researchers to establish whether changes in macroeconomic indicators, governments' political orientation, the electoral cycle, and income rank actually shape people's subjective well-being.

Additionally, future work should consider studying potential moderators and mechanisms of these relationships. For instance, why is the trend growth rate of the unemployment rate significantly negatively associated with the trend growth rate of subjective well-being? A high

unemployment rate may generate anxiety among citizens, a situation that may have negative consequences for subjective well-being. More research is needed to explore this possibility. Similarly, why do people who live in a country with a left-leaning government rate their country's and their own economic situation better than those who live in a country with a right-leaning government? Past research suggests that this finding could be explained by Livability Theory in that left-leaning governments are more likely to release policies that improve people's quality of life (Okulicz-Kozaryn et al., 2014; Veenhoven & Ouweneel, 1995). However, more research is needed to confirm that this is the case in Latin America as it is possible that the higher well-being present in countries with left-leaning governments could be merely driven by citizens' expectations.

Most studies on subjective well-being employ measures of life satisfaction (e.g., Di Tella & MacCulloch, 2008; Lucas & Schimmack, 2009; Okulicz-Kozaryn et al., 2014; Veenhoven & Ehrhardt, 1995). In chapter 2, I used evaluation of own economic situation as the measure of subjective well-being because the answer categories of the life satisfaction question provided by the Latinobarómetro changed in the years before 2004. In chapter 3, I solved this issue by eliminating the survey years in which the answer categories changed (e.g., using only data from 2004 onwards). However, eliminating survey years would have undermined the power of the time series analyses conducted in chapter 2 as the number of observations is equal to the number of survey years. The Gallup World Poll overcomes this limitation as it includes a continuous measure of life satisfaction (0-10) with answer categories that do not change over time. However, the data set covers the 2006-2016 time period and does not contain a measure of individuals' political orientation. These aspects make the data set unsuitable for chapters 2 and 3, respectively. Future work should consider including all the relevant measures in the same data

set and developing additional questions to measure other aspects of subjective well-being, such as eudaemonia.

The work presented in chapters 2 and 3 could also be extended by including measures that actually reflect governments' policies. To the best of my knowledge, good quality measures of this type do not exist for Latin American countries. For instance, the measure of social protection spending included in chapter 2 contains only four data points in the 1996-2015 time period. Latin American governments should pursue the systematic collection of this type of measure.

Finally, the findings of this thesis cannot be generalised. This thesis focuses on Latin America, a region with a turbulent economic and political past which witnessed profound economic and political reforms over the last 40 years. Researchers should replicate the studies included in this thesis in different countries to establish whether the relationships shown in this thesis can be found in regions with different cultural, economic and political contexts.

The work presented in this thesis demonstrates the importance of considering subjective well-being to promote social progress in Latin America, a region that experienced profound economic and political changes in the last decades.

References

Adler, A., & Seligman, M. E. P. (2016). Using wellbeing for public policy: Theory, measurement, and recommendations. *International Journal of Wellbeing*, *6*(1), 1–35. https://doi.org/10.5502/ijw.v6i1.429

Alesina, A., Di Tella, R., & MacCulloch, R. (2004). Inequality and happiness: Are Europeans and Americans different? *Journal of Public Economics*, *88*, 2009–2042. https://doi.org/10.1016/j.jpubeco.2003.07.006

Alesina, A., & Rodrik, D. (1994). Distributive politics and economic growth. *The Quarterly Journal of Economics*, *109*(2), 465–490.

Arnett, J. J. (2008). The neglected 95%: Why American Psychology needs to become less American. *American Psychologist*, *63*(7), 602–614. https://doi.org/10.1037/0003-066X.63.7.602

Atkinson, A. B., Piketty, T., & Saez, E. (2011). Top incomes in the long run of history. *Journal of Economic Literature*, *49*(1), 3–71. https://doi.org/10.1257/jel.49.1.3

Babb, S. (2013). The Washington Consensus as transnational policy paradigm: Its origins, trajectory and likely successor. *Review of International Political Economy*, *20*(2), 268–297. https://doi.org/10.1080/09692290.2011.640435

Ball, R., & Chernova, K. (2008). Absolute income, relative income, and happiness. *Social Indicators Research*, *88*(3), 497–529. https://doi.org/10.1007/s11205-007-9217-0

Banerjee, A. V., & Duflo, E. (2003). Inequality and growth: What can the data say? *Journal of Economic Growth*, *8*(3), 267–299. https://doi.org/10.1023/A:1026205114860

Barro, R. J. (2000). Inequality and growth in a panel of countries. *Journal of Economic Growth*, *5*(1), 5–32. https://doi.org/10.1023/A:1009850119329

Beck, T., Clarke, G., Groff, A., Keefer, P., & Walch, P. (2000). New tools and new tests in comparative political economy. In *Policy Research Working Paper 2283*. Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=629133

Berg, A., & Ostry, J. D. (2017). Inequality and unsustainable growth: Two sides of the same coin? *IMF Economic Review*, *65*(4), 792–815. https://doi.org/10.1057/s41308-017-0030-8

Berg, M., & Veenhoven, R. (2010). Income inequality and happiness in 119 nations. In B. Greve (Ed.), *Social policy and happiness in Europe* (pp. 174–194). Cheltenham, England: Edgar Elgar.

Birnbaum, M. H. (1992). Violations of monotonicity and contextual effects in choice-based certainty equivalents. *Psychological Science*, *3*(5), 310–314. https://doi.org/https://www.jstor.org/stable/40062862

Bjørnskov, C., Dreher, A., & Fischer, J. A. V. (2007). The bigger the better? Evidence of the effect of government size on life satisfaction around the world. *Public Choice*, *130*(3), 267–292. https://doi.org/10.1007/Sl

Bjørnskov, C., Dreher, A., & Fischer, J. A. V. (2008). Cross-country determinants of life satisfaction: Exploring different determinants across groups in society. *Social Choice and Welfare*, *30*(1), 119–173. https://doi.org/10.1007/s00355-007-0225-4

Bjørnskov, C., Dreher, A., & Fischer, J. A. V. (2010). Formal institutions and subjective well-being: Revisiting the cross-country evidence. *European Journal of Political Economy*, *26*(4), 419–430. https://doi.org/10.1016/j.ejpoleco.2010.03.001

Blanchflower, D. G., & Oswald, A. J. (2004a). Money, sex and happiness: An empirical study. *Scandinavian Journal of Economics*, *106*(3), 393–415. https://doi.org/10.1111/j.1467-9442.2004.00369.x

Blanchflower, D. G., & Oswald, A. J. (2004b). Well-being over time in Britain and the USA. *Journal of Public Economics*, *88*(7), 1359–1386. https://doi.org/10.1016/S0047-2727(02)00168-8

Blanchflower, D. G., & Oswald, A. J. (2008). Is well-being U-shaped over the life cycle? *Social Science & Medicine*, *66*(8), 1733–1749. https://doi.org/10.1016/j.socscimed.2008.01.030

Bok, D. (2010). *The politics of happiness: What governments can learn from the new research on well-being*. Princeton, NJ: Princeton University Press.

Bonnet, C., Dubois, P., Martimort, D., & Straub, S. (2011). Empirical evidence on satisfaction with privatization in Latin America. *World Bank Economic Review*, *26*(1), 1–33. https://doi.org/10.1093/wber/lhr037

Booth, P. (2012). *...and the pursuit of happiness: Wellbeing and the role of government*. London, UK: The Institute of Economic Affairs.

Boyce, C. J., Brown, G. D. A., & Moore, S. C. (2010). Money and happiness: Rank of income, not income, affects life satisfaction. *Psychological Science*, *21*(4), 471–475. https://doi.org/10.1177/0956797610362671

Boyce, C. J., Wood, A. M., Banks, J., Clark, A. E., & Brown, G. D. A. (2013). Money, well-Being, and loss aversion: Does an income loss have a greater effect on well-being than an equivalent income gain? *Psychological Science*, *24*(12), 2557–2562. https://doi.org/10.1177/0956797613496436

Brady, D. (2005). The welfare state and relative poverty in rich Western democracies, 1967-1997. *Social Forces*, *83*(4), 1329–1364. https://doi.org/10.1353/sof.2005.0056

Brown, G. D. A., Gardner, J., Oswald, A. J., & Qian, J. (2008). Does wage rank affect employees' well-being? *Industrial Relations*, *47*(3), 355–389.

https://doi.org/10.1111/j.1468-232X.2008.00525.x

Bucca, M. (2016). Merit and blame in unequal societies: Explaining Latin Americans' beliefs about wealth and poverty. *Research in Social Stratification and Mobility*, *44*, 98–112. https://doi.org/10.1016/j.rssm.2016.02.005

Burns, J., Tomita, A., & Kapadia, A. (2014). Income inequality and schizophrenia: Increased schizophrenia incidence in countries with high levels of income inequality. *International Journal of Social Psychiatry*, *60*(2), 185–196. https://doi.org/10.1038/jid.2014.371

Buttrick, N. R., & Oishi, S. (2017). The psychological consequences of income inequality. *Social and Personality Psychology Compass*, *11*(3), e12304. https://doi.org/10.1111/spc3.12304

Buunk, A. P., & Gibbons, F. X. (2007). Social comparison: The end of a theory and the emergence of a field. *Organizational Behavior and Human Decision Processes*, *102*(1), 3–21. https://doi.org/10.1016/j.obhdp.2006.09.007

Cantril, H. (1965). *The pattern of human concerns*. NJ: Rutgers University Press.

Cardoso, E., Barros, R., & Urani, A. (1995). Inflation and unemployment as determinants of inequality in Brazil: The 1980s. In R. Dornbusch & S. Edwards (Eds.), *Reform, Recovery and Growth: America and Middle East* (pp. 37–64). Chicago: University Chicago Press.

Carney, D. R., Jost, J. T., Gosling, S. D., & Potter, J. (2008). The secret lives of Liberals and Conservatives: Personality profiles, interaction styles, and the things they leave behind. *Political Psychology*, *29*(6), 807–840.

Castañeda, J. (2017). The death of the Latin American left. Retrieved October 29, 2017, from The New York Times website: https://www.nytimes.com/2016/03/23/opinion/the-death-of-the-latin-american-left.html

Cecchini, S., Filgueira, F., & Robles, C. (2014). Social protection systems in Latin America and

the Caribbean: A comparative view. *Available at SSRN: Https://Ssrn.Com/Abstract=2532622 or Http://Dx.Doi.Org/10.2139/Ssrn.2532622*.

Cheung, F. (2018). Income redistribution predicts greater life satisfaction across individual, national, and cultural characteristics. *Journal of Personality and Social Psychology*, *115*(5), 867–882. https://doi.org/10.1037/pspp0000164

Cheung, F., & Lucas, R. E. (2016). Income inequality is associated with stronger social comparison effects: The effect of relative income on life satisfaction. *Journal of Personality and Social Psychology*, *110*(2), 332–341. https://doi.org/10.1037/pspp0000059

Clark, A. E. (2003). Unemployment as a social norm: Psychological evidence from panel data. *Journal of Labor Economics*, *21*(2), 323–351. https://doi.org/10.1086/345560

Clark, A. E., & Oswald, A. J. (1994). Unhappiness and unemployment. *The Economic Journal*, *104*(424), 648–659. https://doi.org/http://www.jstor.org/stable/2234639

Clark, A. E., & Oswald, A. J. (1996). Satisfaction and comparison income. *Journal of Public Economics*, *61*(3), 359–381. https://doi.org/10.1016/0047-2727(95)01564-7

Clark, A. E., Westergârd-Nielsen, N., & Kristensen, N. (2009). Economic satisfaction and Income rank in small neighbourhoods. *Journal of the European Economic Association*, *7*(2/3), 519–527. https://doi.org/https://doi.org/10.1162/JEEA.2009.7.2-3.519

Clausen, B., Kraay, A., & Nyiri, Z. (2011). Corruption and confidence in public institutions: Evidence from a global survey. *World Bank Economic Review*, *25*(2), 212–249. https://doi.org/10.1093/wber/lhr018

Cortés Aguilar, A., García Muñoz, T. M., & Moro-Egido, A. I. (2013). Heterogeneous self-employment and satisfaction in Latin America. *Journal of Economic Psychology*, *39*, 44–61. https://doi.org/10.1016/j.joep.2013.07.001

De Gregorio, J. (1992). Economic growth in Latin America. *Journal of Development Economics*, *39*(1), 59–84. https://doi.org/10.1016/0304-3878(92)90057-G

Deaton, A. (2008). Income, health, and well-being around the world: Evidence from the Gallup World Poll. *Journal of Economic Perspectives*, *22*(2), 53–72.

Deci, E. L., & Ryan, R. M. (2008). Hedonia, eudaimonia, and well-being: an introduction. *Journal of Happiness Studies*, *9*(1), 1–11. https://doi.org/10.1007/s10902-006-9018-1

Delhey, J., & Dragolov, G. (2014). Why inequality makes europeans less happy: The Role of Distrust, Status Anxiety, and perceived conflict. *European Sociological Review*, *30*(2), 151–165. https://doi.org/10.1093/esr/jct033

Di Tella, R., & MacCulloch, R. (2005). Partisan social happiness. *Review of Economic Studies*, *72*(2), 367–393. https://doi.org/10.1111/j.1467-937X.2005.00336.x

Di Tella, R., & MacCulloch, R. (2008). Gross national happiness as an answer to the Easterlin Paradox? *Journal of Development Economics*, *86*(1), 22–42. https://doi.org/10.1016/j.jdeveco.2007.06.008

Diener, E., Smith, H., & Fujita, F. (1995). The personality structure of affect. *Journal of Personality and Social Psychology*, *69*(1), 130–141. https://doi.org/10.1037//0022-3514.69.1.130

Diener, Ed. (2000). Subjective well-being: The science of happiness and a proposal for a national index. *American Psychologist*, *55*(1), 34–43. https://doi.org/10.1037//0003-066X.55.1.34

Diener, Ed, & Biswas-Diener, R. (2002). Will money increase subjective well-being? *Social Indicators Research*, *57*(September 2001), 119–169. https://doi.org/10.1023/A:1014411319119

Diener, Ed, Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The satisfaction with life scale.

American Journal of Preventive Medicine, *49*(1), 71–75. https://doi.org/10.1016/j.amepre.2007.09.001

Diener, Ed, Inglehart, R., & Tay, L. (2013). Theory and validity of life satisfaction scales. *Social Indicators Research*, *112*(3), 497–527. https://doi.org/10.1007/s11205-012-0076-y

Diener, Ed, Suh, E. M., Lucas, R. E., & Smith, H. L. (1999). Subjective well-being: Three decades of progress. *Psychological Bulletin*, Vol. 125, pp. 276–302. https://doi.org/10.1037/0033-2909.125.2.276

DiTella, R., MacCulloch, R. J., & Oswald, A. J. (2003). The macroeconomics of happiness. *The Review of Economic Studies*, *85*(4), 809–827. https://doi.org/10.1162/003465303772815745

DiTella, R., MacCulloch, R., & Oswald, A. (2001). Preferences over inflation and unemployment: Evidence from surveys of happiness. *The American Economic Review*, *91*(1), 335–341. https://doi.org/http://www.jstor.org/stable/2677914

Dolan, P. (2014). *Happiness by design: Finding pleasure and purpose in everyday life*. Penguin UK.

Dolan, P., Peasgood, T., & White, M. (2008). Do we really know what makes us happy? A review of the economic literature on the factors associated with subjective well-being. *Journal of Economic Psychology*, *29*, 94–122. https://doi.org/10.1016/j.joep.2007.09.001

Dolan, P., & White, M. (2006). Dynamic well-being: Connecting indicators of what people anticipate with indicators of what they experience. *Social Indicators Research*, *75*(2), 303–333. https://doi.org/10.1007/s11205-004-6298-x

Dolan, P., & White, M. P. (2007). How can measures of subjective well-being be used to inform public policy? *Perspectives on Psychological Science*, *2*(1), 71–85. https://doi.org/10.1111/j.1745-6916.2007.00030.x

Dorn, D., Fischer, J. A. ., Kirchgassner, G., & Sousa-Poza, A. (2007). Is it culture or democracy? The impact of democracy and culture on happiness. *Social Indicators Research*, *82*(3), 505–526. https://doi.org/10.1007/sl

Duesenberry, J. (1949). *Income, saving, and the theory of consumer behavior*. Cambridge, MA: Harvard University Press.

Dunn, E. W., Aknin, L. B., & Norton, M. I. (2008). Spending money on others promotes happiness. *Science*, *31*, 1687–1688. https://doi.org/10.1126/science.1150952

Dunn, E. W., Aknin, L. B., & Norton, M. I. (2014). Prosocial spending and happiness: Using money to benefit others pays off. *Current Directions in Psychological Science*, *23*(1), 41–47. https://doi.org/10.1177/0963721413512503

Easterlin, R. (2003). Explaining happiness. *Proceedings of the National Academy of Sciences*, *100*(19), 11176–11183. https://doi.org/111.pnas.org/cgi/doi/10.1073/pnas/1633144100

Easterlin, R. A. (1974). Does economic growth improve the human lot? Some empirical evidence. In P. A. David & M. W. Reder (Eds.), *Nations and households in economic growth: Essays in honour of Moses Abramovitz.* (pp. 89–125). New York: Academic Press.

Easterlin, R. A. (1995). Will raising the incomes of all increase the happiness of all? *Journal of Economic Behavior & Organization*, *27*(1), 35–47. https://doi.org/10.1016/0167-2681(95)00003-B

Easterlin, R. A., Angelescu McVey, L., Switek, M., Sawangfa, O., & Smith Zweig, J. (2010). The happiness-income paradox revisited. *Proceedings of the National Academy of Sciences of the United States of America*, *107*(52), 22463–22468. https://doi.org/10.1073/pnas.1015962107

Easterlin, R., & Sawangfa, O. (2007). *Happiness and domain satisfaction : Theory and evidence*.

(2584).

Fahey, T., & Smyth, E. (2004). Do subjective indicators measure welfare? Evidence from 33 European societies. *European Societies*, *6*(1), 5–27. https://doi.org/10.1080/1461669032000176297

Ferrer-i-Carbonell, A. (2005). Income and well-being: An empirical analysis of the comparison income effect. *Journal of Public Economics*, *89*(5–6), 997–1019. https://doi.org/10.1016/J.JPUBECO.2004.06.003

Ferrer-i-Carbonell, A., & Frijters, P. (2004). How important is methodology for the estimates of the determinants of happiness? *Economic Journal*, *114*(497), 641–659. https://doi.org/10.1111/j.1468-0297.2004.00235.x

Festinger, L. (1954). A theory of social comparison processes. *Human Relations*, *7*(2), 117–140. https://doi.org/10.1177/001872675400700202

Flavin, P., Pacek, A. C., & Radcliff, B. (2014). Assessing the impact of the size and scope of government on human well-being. *Social Forces*, *92*(4), 1241–1258. https://doi.org/10.1093/sf/sou010

Flores-Macías, G. A. (2012). *After Neoliberalism? The left and economic reforms in Latin America*. Oxford University Press.

Frank, B. R. H. (1985). The demand for unobservable and other nonpositional goods. *The American Economic Review*, *75*(1), 101–116. https://doi.org/https://www.jstor.org/stable/1812706

Frederick, S., & Loewenstein, G. (1999). Hedonic adaptation. In N. Kahneman, D., Diener, E., Schwarz (Ed.), *Well-being: The foundations of hedonic psychology* (pp. 302–329). New York, New York, USA: Russell Sage Foundation Press.

Freidenberg, F., & Sáez, M. (2001). *Partidos políticos de América Latina: Centroamérica, México y República Dominicana.* Universidad de Salamanca España.

Frey, B. S., & Stutzer, A. (2000). Happiness, economy and institutions. *The Economic Journal*, *110*, 918–938. https://doi.org/10.1111/1468-0297.00570

Frey, B. S., & Stutzer, A. (2002). *Happiness and economics: How the economy and institutions affect human well-being*. Princeton University Press.

Frijters, P., & Beatton, T. (2012). The mystery of the U-shaped relationship between happiness and age. *Journal of Economic Behavior and Organization*, *82*(2–3), 525–542. https://doi.org/10.1016/j.jebo.2012.03.008

Gasparini, L, & Cruces, G. (2013). Poverty and inequality in Latin America: a story of two decades. *Journal of International Affairs*, *66*(2), 51–64.

Gasparini, Leonardo, Cruces, G., & Tornarolli, L. (2011). Recent trends in income inequality in Latin America. *Brookings Institution Press*, *11*(2), 147–190.

Graham, C., Eggers, A., & Sukhtankar, S. (2004). Does happiness pay? An exploration based on panel data from Russia. *Journal of Economic Behavior and Organization*, *55*(3), 319–342. https://doi.org/10.1016/j.jebo.2003.09.002

Graham, C., & Felton, A. (2006). Inequality and happiness: Insights from Latin America. *Journal of Economic Inequality*, *4*(1), 107–122. https://doi.org/10.1007/s10888-005-9009-1

Graham, C., & Pettinato, S. (2001). Happiness, markets, and democracy: Latin America in comparative perspective. *Journal of Happiness Studies*, *2*(3), 237–268. https://doi.org/10.1023/A:1011860027447

Graham, C., & Sukhtankar, S. (2004). Does economic crisis reduce support for markets and democracy in Latin America? Some evidence from surveys of public opinion and well

being. *Journal of Latin American Studies*, *36*(2), 349–377. https://doi.org/10.1017/S0022216X0400745X

Green-Pedersen, C. (2004). The dependent variable problem within the study of welfare state retrenchment: Defining the problem and looking for solutions. *Journal of Comparative Policy Analysis: Research and Practice*, *6*(1), 3–14. https://doi.org/10.1080/1387698042000222763

Hagerty, M. R. (2000). Social comparisons of income in one's community: evidence from national surveys of income and happiness. *Journal of Personality and Social Psychology*, *78*(4), 764–771. https://doi.org/10.1037/0022-3514.78.4.764

Haller, M., & Hadler, M. (2006). How social relations and structures can produce happiness and unhappiness: An international comparative analysis. *Social Indicators Research*, *75*(2), 169–216. https://doi.org/10.1007/s11205-004-6297-y

Helliwell, J. F., Huang, H., Grover, S., & Wang, S. (2014). Empirical linkages between good government and national well-being. *NBER Working Paper Series No. 20686*.

Helliwell, J., Layard, R., & Sachs, J. (2018). *World Happiness Report 2018*. New York: Sustainable Development Solutions Network.

Helliwell, John F. (2003). How's life? Combining individual and national variables to explain subjective well-being. *Economic Modelling*, *20*, 331–360. https://doi.org/10.1177/001979391006300202

Helliwell, John F., & Huang, H. (2008). How's your government? International evidence linking good government and well-being. *British Journal of Political Science*, *38*(04), 595–619. https://doi.org/10.1017/S0007123408000306

Henderson, L. W., & Knight, T. (2012). Integrating the hedonic and eudaimonic perspectives to

more comprehensively understand wellbeing and pathways to wellbeing. *International Journal of Wellbeing*, *2*, 196–221. https://doi.org/doi:10.5502/ijw.v2i3.3

Henrich, J., Heine, S. J., & Norenzayan, A. (2010). Most people are not WEIRD. *Nature*, *466*, 29. https://doi.org/10.1017/S0140525X0999152X

Hsieh, C.-C., & Pugh, M. D. (1993). Poverty, income inequality, and violent crime: a meta-analysis of recent aggregate data studies. *Criminal Justice Review*, *28*(2), 182–202.

Hudson, J. (2006). Institutional Trust and SubjectiveWell-Being across the EU. *Kyklos*, *59*(1), 43–62.

Huppert, F. A., Marks, N., Clark, A., Siegrist, J., Stutzer, A., Vittersø, J., & Wahrendorf, M. (2009). Measuring well-Being across Europe: Description of the ESS well-being module and preliminary findings. *Social Indicators Research*, *91*(3), 301–315. https://doi.org/10.1007/sl

Huppert, F. A., & So, T. T. C. (2013). Flourishing across Europe: Application of a new conceptual framework for defining well-being. *Social Indicators Research*, *110*(3), 837–861. https://doi.org/10.1007/s11205-011-9966-7

Inglehart, R., Foa, R., Peterson, C., & Welzel, C. (2008). Development, freedom and rising happiness: A global perspective (1981-2007). *Perspectives on Psychological Science*, *3*(4), 264–285. https://doi.org/10.1111/j.1745-6924.2008.00078.x

International Labour Organization, . (2017). ILOSTAT: Statistics and databases. Retrieved from www.ilo.org

Jang, H., Joo, H. J., & Zhao, J. (Solomon). (2010). Determinants of public confidence in police: An international perspective. *Journal of Criminal Justice*, *38*(1), 57–68. https://doi.org/10.1016/j.jcrimjus.2009.11.008

Jiang, S., Lu, M., & Sato, H. (2012). Identity, inequality, and happiness: Evidence from Urban China. *World Development*, *40*(6), 1190–1200. https://doi.org/10.1016/j.worlddev.2011.11.002

Jost, J. T., & Banaji, M. R. (1994). The role of stereotyping in system-justification and the production of false consciousness. *British Journal of Social Psychology*, *33*, 1–27. https://doi.org/https://doi.org/10.1111/j.2044-8309.1994.tb01008.x

Jost, J. T., Glaser, J., Kruglanski, A. W., & Sulloway, F. J. (2003). Political conservatism as motivated social cognition. *Psychological Bulletin*, *129*(3), 339–375. https://doi.org/10.1037/0033-2909.129.3.339

Jost, J. T., & Hunyady, O. (2003). The psychology of system justification and the palliative function of ideology. *European Review of Social Psychology*, *13*(1), 111–153. https://doi.org/10.1080/10463280240000046

Jost, J. T., Nosek, B. A., & Gosling, S. D. (2008a). Ideology: Its resurgence in social, personality, and political psychology. *Perspectives on Psychological Science*, *3*(2), 126–136. https://doi.org/https://doi.org/10.1111/j.1745-6916.2008.00070.x

Jost, J. T., Nosek, B. A., & Gosling, S. D. (2008b). Its resurgence in social, personality, and political psychology. *Perspectives on Politics*, *3*(2), 126–136. https://doi.org/https://www.jstor.org/stable/40212238

Jovanović, V. (2016). Trust and subjective well-being: The case of Serbia. *Personality and Individual Differences*, *98*(May), 284–288. https://doi.org/10.1016/j.paid.2016.04.061

Justino, P., & Martorano, B. (2018). Welfare spending and political conflict in Latin America, 1970–2010. *World Development*, *107*, 98–110. https://doi.org/10.1016/J.WORLDDEV.2018.03.005

Kahneman, D., & Deaton, A. (2010). High income improves evaluation of life but not emotional well-being. *Proceedings of the National Academy of Sciences of the United States of America*, *107*(38), 16489–16493. https://doi.org/10.1073/pnas.1011492107

Kahneman, D., & Krueger, A. B. (2006). Developments in the measurement of subjective well-being. *Journal of Economic Perspectives*, *20*(1), 3–24. https://doi.org/10.1257/089533006776526030

Kahneman, Daniel. (1999). Objective Happiness. In N. Kahneman, D., Diener, E., Schwarz (Ed.), *Well-being: Foundations of hedonic psychology* (pp. 3–25). New York, New York, USA: Russell Sage Foundation Press.

Karademas, E. C. (2006). Self-efficacy, social support and well-being. *Personality and Individual Differences*, *40*(6), 1281–1290. https://doi.org/10.1016/j.paid.2005.10.019

Katic, I., & Ingram, P. (2018). Income inequality and subjective well-being: Toward an understanding of the relationship and its mechanisms. *Business and Society*, *57*(6), 1010–1044. https://doi.org/10.1177/0007650317701226

Kaufmann, D., Kraay, A., & Mastruzzi, M. (2005). *Governance Matters IV: Governance Indicators for 1996–2004*. Washington, D.C.: World Bank.

Kenworthy, L. (1999). Do social-welfare policies reduce poverty? A cross-national assessment. *Social Forces*, *77*(3), 1119–1139. https://doi.org/https://www.jstor.org/stable/3005973

Kenworthy, L., & Pontusson, J. (2005). Rising inequality and the politics of redistribution. *Perspectives on Politics*, *3*(3), 449–471. https://doi.org/https://doi.org/10.1017/S1537592705050292

Kushlev, K., Dunn, E. W., & Lucas, R. E. (2015). Higher income is associated with less daily sadness but not more daily happiness. *Social Psychological and Personality Science*, *6*(5),

483–489. https://doi.org/10.1177/1948550614568161

Lagos Cruz-Coke, M. (2001). Between stability and crisis in Latin America. *Journal of Democracy*, *12*(1), 137–145. https://doi.org/10.1353/jod.2001.0009

Latinobarómetro. (2016). Retrieved March 21, 2016, from www.latinobarometro.org

Layard, R. (2005). *Happiness: lessons from a new science*. New York: The Penguin Press.

Layte, R., & Whelan, C. T. (2014). Who feels inferior? A test of the status anxiety hypothesis of social inequalities in health. *European Sociological Review*, *30*(4), 525–535. https://doi.org/10.1093/esr/jcu057

Leigh, A. (2007). How closely do top income shares track other measures of inequality? *Economic Journal*, *117*(524), 619–633. https://doi.org/10.1111/j.1468-0297.2007.02099.x

Lerner, M. (1980). *The belief in a just world: A fundamental delusion*. New York: Plenum Press.

Liberini, F., Redoano, M., & Porto, E. (2017). Happy voters. *Journal of Public Economics*, *146*, 41–57. https://doi.org/10.1016/j.jpubeco.2016.11.013

Lucas, R.E. (2007). Adaptation and the set-point model of subjective well-being. *Current Directions in Psychological Science*, *16*(2), 75–79. https://doi.org/10.1111/j.1467-8721.2007.00479.x

Lucas, Richard E., & Schimmack, U. (2009). Income and well-being: How big is the gap between the rich and the poor? *Journal of Research in Personality*, *43*(1), 75–78. https://doi.org/10.1016/j.jrp.2008.09.004

Luttmer, E. F. P. (2005). Neighbors as negatives: Relative earnings and well-being. *The Quarterly Journal of Economics*, *120*(3), 963–1001. https://doi.org/10.1093/qje/120.3.963

Macchia, L., Plagnol, A. C., & Powdthavee, N. (2019). Buying happiness in an unequal world: Rank of income more strongly predicts well-being in more unequal countries. *Personality*

and Social Psychology Bulletin. https://doi.org/10.1177/0146167219877413

Major, B. (1994). From social inequality to personal entitlement: The role of social comparisons, legitimacy appraisals, and group membership. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 26, pp. 193–355). San Diego, CA: Academic Press.

Marangos, J. (2009). What happened to the Washington Consensus? The evolution of international development policy. *The Journal of Socio-Economics*, *38*(1), 197–208. https://doi.org/https://doi.org/10.1016/j.socec.2008.07.007

Martín-Mayoral, F., & Sastre, J. F. (2017). Determinants of social spending in Latin America during and after the Washington consensus: A dynamic panel error-correction model analysis. *Latin American Economic Review*, *26*(1), 10. https://doi.org/10.1007/s40503-017-0053-6

Martinez Bravo, I. (2016). The usefulness of subjective well-being to predict electoral results in Latin America. In M. Rojas (Ed.), *Handbook of Happiness Research in Latin America* (pp. 613–632). New York, NY: Springer Press.

McBride, M. (2001). Relative-income effects on subjective well-being in the cross-section. *Journal of Economic Behavior and Organization*, *45*(3), 251–278. https://doi.org/10.1016/S0167-2681(01)00145-7

Mellers, B. A., Ordóñez, L. D., & Birnbaum, M. H. (1992). A change-of-process theory for contextual effects and preference reversals in risky decision making. *Organizational Behavior and Human Decision Processes*, *52*(3), 331–369. https://doi.org/10.1016/0749-5978(92)90025-3

Messias, E., Eaton, W. W., & Grooms, A. N. (2011). Income inequality and depression prevalence across the United States: An ecological study. *Psychiatric Services*, *62*(7), 710–

712. https://doi.org/10.1176/appi.ps.62.7.710

Middlebrook, K. J. (2000). *Conservative parties, the right, and democracy in Latin America*. Baltimore and London: The Johns Hopkins University Press.

Moulton, B. R. (1990). An illustration of a pitfall in estimating the effects of aggregate variables on micro units. *The Review of Economics and Statistics*, *72*(2), 334–338. https://doi.org/https://www.jstor.org/stable/2109724

Napier, J. L., & Jost, J. T. (2008). Why are conservatives happier than liberals? *Psychological Science*, *19*(6), 565–573. https://doi.org/http://www.jstor.org/stable/40064955

National Research Council. (2013). *Subjective Well-Being: Measuring happiness, suffering, and other dimensions of experience*. Retrieved from https://www.nap.edu/resource/18548/dbasse_086038.pdf

Nicolao, L., Irwin, J. R., & Goodman, J. K. (2009). Happiness for sale: Do experiential purchases make consumers happier than material purchases? *Journal of Consumer Research*, *36*(2), 188–198. https://doi.org/10.1086/597049

Nielsen, M., Haun, D., Kärtner, J., & Legare, C. H. (2017). The persistent sampling bias in developmental psychology: A call to action. *Journal of Experimental Child Psychology*, *162*, 31–38. https://doi.org/10.1016/j.jecp.2017.04.017

Nussbaum, M. C. (2004). Mill between Aristole & Bentham. *Daedalus*, *133*(2), 60–68. https://doi.org/http://www.jstor.org/stable/20027914

O'Donnell, G., & Oswald, A. J. (2015). National well-being policy and a weighted approach to human feelings. *Ecological Economics*, *120*(October), 59–70. https://doi.org/10.1016/j.ecolecon.2015.09.021

Oishi, S., Diener, E., & Lucas, R. (2007). The optimum level of well-being: Can people be too

happy? *Perspectives on Psychological Science*, *2*(4), 346–360. https://doi.org/10.1111/j.1745-6916.2007.00048.x

Oishi, S., & Kesebir, S. (2015). Income inequality explains why economic growth does not always translate to an increase in happiness. *Psychological Science*, *26*(10), 1630–1638. https://doi.org/10.1177/0956797615596713

Oishi, S., Kesebir, S., & Diener, E. (2011). Income inequality and happiness. *Psychological Science*, *22*(9), 1095–1100. https://doi.org/10.1177/0956797611417262

Okulicz-Kozaryn, A., Holmes, O., & Avery, D. R. (2014). The subjective well-being political paradox: Happy welfare states and unhappy liberals. *Journal of Applied Psychology*, *99*(6), 1300–1308. https://doi.org/2014-35064-001 [pii] 10.1037/a0037654

Oshio, T., & Kobayashi, M. (2010). Income inequality, perceived happiness, and self-rated health: Evidence from nationwide surveys in Japan. *Social Science and Medicine*, *70*(9), 1358–1366. https://doi.org/10.1016/j.socscimed.2010.01.010

Oswald, A. J. (1997). Happiness and economic performance. *The Economic Journal*, *107*(November), 1815–1831. https://doi.org/https://doi.org/10.1111/j.1468-0297.1997.tb00085

Ott, J. . (2011). Government and happiness in 130 nations: Good governance fosters higher level and more equality of happiness. *Social Indicators Research*, *102*(1), 3–22. https://doi.org/10.1007/sl

Owen, A. L., Videras, J., & Willemsen, C. (2008). Democracy, participation and life satisfaction. *Social Science Quarterly*, *89*(4), 987–1005. https://doi.org/https://doi.org/10.1111/j.1540-6237.2008.00595.x

Pacek, A., & Radcliff, B. (2008a). Assessing the welfare state: The politics of happines.

Perspectives on Politics, *6*(02), 267–277. https://doi.org/10.1017/S1537592708080602

Pacek, A., & Radcliff, B. (2008b). Welfare policy and subjective well-being across nations: An individual-level assessment. *Social Indicators Research*, *89*(1), 179–191. https://doi.org/10.1007/sl

Parducci, A. (1965). Category judgment: a Range-Frequency Model. *Psychological Review*, *72*(6). https://doi.org/http://dx.doi.org/10.1037/h0022602

Parducci, A., & Perrett, L. F. (1971). Category rating scales: Effects of relative spacing and frequency of stimulus values. *Journal of Experimental Psychology*, *89*(2), 427–452. https://doi.org/10.1037/h0031258

Paskov, M., Gërxhani, K., & van de Werfhorst, H. G. (2013). *Income inequality and status anxiety*. Retrieved from http://www.gini-research.org/system/uploads/546/original/90.pdf

Pickett, K. E., Kelly, S., Brunner, E., Lobstein, T., & Wilkinson, R. G. (2005). Wider income gaps, wider waistbands? An ecological study of obesity and income inequality. *Journal of Epidemiology and Community Health*, *59*(8), 670–674. https://doi.org/10.1136/jech.2004.028795

Pickett, K. E., & Wilkinson, R. G. (2015). Income inequality and health: A causal review. *Social Science and Medicine*, *128*, 316–326. https://doi.org/10.1016/j.socscimed.2014.12.031

Plagnol, A. C., & Scott, J. (2011). What matters for well-being: Individual perceptions of quality of life before and after important life events. *Applied Research in Quality of Life*, *6*(2), 115–137. https://doi.org/10.1007/s11482-010-9119-1

Political Database of the Americas. (2015). Retrieved March 21, 2016, from http://pdba.georgetown.edu/

Powdthavee, N. (2009). How important is rank to individual perception of economic standing? A

within-community analysis. *Journal Economic Inequality*, *7*, 225–248. https://doi.org/https://doi.org/10.1007/s10888-008-9076-1

Powdthavee, N., Burkhauser, R. V., & De Neve, J. E. (2017). Top incomes and human well-being: Evidence from the Gallup World Poll. *Journal of Economic Psychology*, *62*, 246–257. https://doi.org/10.1016/j.joep.2017.07.006

Powdthavee, N., Plagnol, A. C., Frijters, P., & Clark, A. E. (2019). Who got the Brexit blues? Using a quasi-experiment to show the effect of Brexit on Subjective Wellbeing in the UK. *Economica*, *86*(343), 471–494.

Putnam, R. D. (2001). Social capital: Measurement and consequences. *Canadian Journal of Policy Research*, *2*(1), 41–51.

Radcliff, B. (2001). Politics, markets and life satisfaction: The political economy of human happiness. *American Political Science Review*, *95*(4), 939–952. https://doi.org/https://doi.org/10.1017/S0003055400400110

Rasmussen, D. C. (2006). Does "bettering our condition" really make us better off ? Adam Smith on progress and happiness. *American Political Science Review*, *100*(3), 309–318. https://doi.org/10.1017/S0003055406062204

Rawls, J. (1971). *A theory of justice*. Cambridge, MA: Harvard University Press.

Rojas, M. (2011). Poverty and psychological distress in Latin America. *Journal of Economic Psychology*, *32*(2), 206–217. https://doi.org/10.1016/j.joep.2010.01.014

Rose, R., & Haerpfer, C. (1999). *New Democracies Barometer V: A 12-Nation Survey*. Studies in Public Policy 306. Glasgow: University of Strathclyde.

Rözer, J., & Kraaykamp, G. (2013). Income inequality and subjective well-being: A cross-national study on the conditional effects of individual and national characteristics. *Social*

Indicators Research, *113*(3), 1009–1023. https://doi.org/10.1007/S

Sacks, D. W., Stevenson, B., & Wolfers, J. (2010). Subjective well-being, income, economic development and growth. *NBER Working Paper No. 16441*.

Schneider, S. M. (2019). Why income inequality is dissatisfying -Perceptions of social status and the inequality-satisfaction link in Europe. *European Sociological Review*, *35*(3), 409–430. https://doi.org/10.1093/esr/jcz003

Schor, J. (1999). The new politics of consumption. *Boston Review*, *Summer*. https://doi.org/10.2501/JAR-2017-019

Schwarze, J., & Härpfer, M. (2007). Are people inequality averse, and do they prefer redistribution by the state? Evidence from German longitudinal data on life satisfaction. *Journal of Socio-Economics*, *36*(2), 233–249. https://doi.org/10.1016/j.socec.2005.11.047

Schyns, P. (2001). Income and satisfaction in Russia. *Journal of Happiness Studies*, 173–204.

Scruggs, L., & Allan, J. (2006). Welfare-state decommodification in 18 OECD countries: a replication and revision. *Journal of European Social Policy*, *16*(1), 55–72. https://doi.org/10.1177/0958928706059833

Seligman, M. (2011). *Flourish* (1st ed). New York, New York, USA: Free Press.

Seligman, M. E. P., Parks, A. C., & Steen, T. (2004). A balanced psychology and a full life. *Philosophical Transactions of the Royal Society B: Biological Sciences*, *359*(1449), 1379–1381. https://doi.org/10.1098/rstb.2004.1513

Senik, C. (2003). When information dominates comparison: Learning from Russian subjective panel data. *Journal of Public Economics*, *88*(9–10), 2099–2123. https://doi.org/10.1016/s0047-2727(03)00066-5

Serrano, F. V. (2010). Estado, golpes de estado y militarización en América Latina: Una

reflexión histórico política. *Argumentos*, *23*(64), 175–193. https://doi.org/https://www.redalyc.org/articulo.oa?id=59518491008

Shields, M. a, & Price, S. W. (2005). Exploring the economic and social determinants of psychological well-being and perceived social support in England. *Journal of the Royal Statistical Society Series A*, *168*(3), 513–537. https://doi.org/10.1111/j.1467-985X.2005.00361.x

Solt, F. (2019). Measuring income inequality across countries and over time: The Standardized World Income Inequality Database. *SWIID Version 8.1*.

Stevenson, B., & Wolfers, J. (2008). Economic growth and subjective well-being: Reassessing the Easterlin Paradox. *IZA Discussion Paper*, *87*(3654), 1–87. https://doi.org/10.1353/eca.0.0001

Stevenson, B., & Wolfers, J. (2013). Subjective well-being and Income: Is there any evidence of satiation? *The American Economic Review*, *103*(3), 598–604.

Stiglitz, J. E., Sen, A., & Fitoussi, J.-P. (2009). *Report by the Commission on the Measurement of Economic Performance and Social Progress*. Retrieved from https://ec.europa.eu/eurostat/documents/118025/118123/Fitoussi+Commission+report

Stutzer, A. (2004). The role of income aspirations in individual happiness. *Journal of Economic Behavior and Organization*, *54*(1), 89–109. https://doi.org/10.1016/j.jebo.2003.04.003

Switek, M. (2012). Life satisfaction in Latin America: a size-of-place analysis. *Journal of Development Studies*, *48*(7), 983–999. https://doi.org/10.1080/00220388.2012.658374

Tajfel, H., & Turner, J. C. (1979). An integrative theory of intergroup conflict. In W. G. Austin & S. Worchel (Eds.), *The Social Psychology of Intergroup Relations* (pp. 33–47). Monterey: Brooks- Cole.

The Database of Political Institutions. (2015). Retrieved March 21, 2016, from https://publications.iadb.org/en/publication/12390/database-political-institutions-2015-dpi2015

The Organisation for Economic Co-operation and Development. (2013). *OECD guidelines on measuring subjective well-being*. Retrieved from OECD Publishing website: https://www.oecd.org/statistics/oecd-guidelines-on-measuring-subjective-well-being-9789264191655-en.htm

Van Boven, L., & Gilovich, T. (2003). To do or to have? That is the question. *Journal of Personality and Social Psychology*, *85*(6), 1193–1202. https://doi.org/10.1037/0022-3514.85.6.1193

Veenhoven, R. (2000). Well-being in the welfare state: Level not higher, distribution not more equitable. *Journal of Comparative Policy Analysis: Research and Practice*, *2*(1), 91–125. https://doi.org/10.1080/13876980008412637

Veenhoven, R. (2008). Sociological theories of subjective well-being. In M. Eid & R. Larsen (Eds.), *The Science of Subjective Well-being: A tribute to Ed Diener* (pp. 44–61). Guilford Publications, New York.

Veenhoven, R., & Ehrhardt, J. (1995). The cross-national pattern of happiness: Test of predictions implied in three theories of happiness. *Social Indicators Research*, *34*(1), 33–68. https://doi.org/http://www.jstor.org/stable/27522788

Veenhoven, R., & Ouweneel, P. (1995). Livability of the Welfare-State : Appreciation-of-Life and Length-of-Life in Nations. *Social Indicators Research*, *36*(1), 1–48.

Wakslak, C. J., Jost, J. T., Tyler, T. R., & Chen, E. S. (2007). Moral outrage mediates the dampening effect of system justification on support for redistributive social policies.

Psychological Science, *18*(3), 267–274. https://doi.org/https://doi.org/10.1111/j.1467-9280.2007.01887.x

Walasek, L., & Brown, G. D. A. (2016). Income inequality, income, and internet searches for status goods: A cross-national study of the association between Inequality and well-being. *Social Indicators Research*, *129*(3), 1001–1014. https://doi.org/10.1007/s11205-015-1158-4

Ward, G. (2015). Is Happiness a Predictor of Election Results? *CEP Discussion Paper Series, CEPDP1343.*

Waterman, A. S. (2008). Reconsidering happiness: A eudaimonist's perspective. *The Journal of Positive Psychology*, *3*(4), 234–252. https://doi.org/10.1080/17439760802303002

Waterman, A. S., Schwartz, S. J., Zamboanga, B. L., Ravert, R. D., Williams, M. K., Bede Agocha, V., … Brent Donnellan, M. (2010). The questionnaire for eudaimonic well-being: Psychometric properties, demographic comparisons, and evidence of validity. *Journal of Positive Psychology*, *5*(1), 41–61. https://doi.org/10.1080/17439760903435208

Watson, D. (1988). The vicissitudes of mood measurement: Effects of varying descriptors, time frames, and response formats on measures of positive and negative affect. *Journal of Personality and Social Psychology*, *55*(1), 128–141. https://doi.org/10.1037/0022-3514.55.1.128

Weinzierl, M. (2005). *Estimating a relative utility function*. Harvard University.

Weitz-Shapiro, R., & Winters, M. S. (2011). The link between voting and life satisfaction in Latin America. *Latin American Politics and Society*, *53*(4), 101–126. https://doi.org/10.1111/j.1548-2456.2011.00135.x

Whillans, A. V., Dunn, E. W., Smeets, P., Bekkers, R., & Norton, M. I. (2017). Buying time promotes happiness. *Proceedings of the National Academy of Sciences*, *114*(32), 8523–

8527. https://doi.org/10.1073/pnas.1706541114

Whillans, A. V, Wispinski, N. J., & Dunn, E. W. (2016). Seeing wealth as a responsibility improves attitudes towards taxation. *Journal of Economic Behavior and Organization*, *127*, 146–154. https://doi.org/10.1016/j.jebo.2016.04.009

White, J. B., Langer, E. J., Yariv, L., & Welch, J. C. (2006). Frequent social comparisons and destructive emotions and behaviors: The dark side of social comparisons. *Journal of Adult Development*, *13*(1), 36–44. https://doi.org/10.1007/s10804-006-9005-0

Wilkinson, R. G., & Pickett, K. E. (2017). The enemy between us: The psychological and social costs of inequality. *European Journal of Social Psychology*, *47*(1), 11–24. https://doi.org/10.1002/ejsp.2275

Williamson, J. (1990). What Washington means by policy reform. In *Latin American adjustment: How much has happened?* (pp. 1–9).

Williamson, J. (1993). Democracy and the "Washington Consensus." *World Development*, *21*(8), 1329–1336. https://doi.org/10.1016/0305-750X(93)90046-C

Wolfers, J. (2003). Is business cycle volatility costly? Evidence from surveys of subjective well-being. *International Finance*, *6*(1), 1–26. https://doi.org/10.1111/1468-2362.00112

Wood, A. M., Boyce, C. J., Moore, S. C., & Brown, G. D. A. (2012). An evolutionary based social rank explanation of why low income predicts mental distress: A 17 year cohort study of 30,000 people. *Journal of Affective Disorders*, *136*(3), 882–888. https://doi.org/10.1016/j.jad.2011.09.014

Wood, J. (1996). What is social comparison and how should we study it? *Personality and Social Psychology Bulletin*, *22*(5), 520–537. https://doi.org/https://doi.org/10.1016/j.adolescence.2016.05.008

World Bank. (2017). World Development Indicators. Retrieved February 7, 2019, from http://data.worldbank.org

Zhang, X., Zhang, X., & Chen, X. (2017). Happiness in the air: how does a dirty sky affect mental health and subjective well-being? *Journal of Environmental Economics and Management*, *85*, 81–94. https://doi.org/10.1109/EMBC.2016.7590696.Upper