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# Economic hardship, institutions and subjective well-being in Latin America

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## Abstract

We use the 2016-17 wave of the LAPOP AmericasBarometer survey to investigate the relationship between economic hardship and subjective well-being (SWB) for Latin America. In addition, we analyze whether the negative effect of economic hardship on SWB can be mitigated by immaterial resources rather than material resources. Analogous to Reeskens and Vandecasteele (2017) regarding Europe, we compare the impact of the institutions social trust, religiosity, and confidence in politics with the impact of welfare state expenditures in Latin America. Our results also show that economic hardship has a negative effect on subjective wellbeing. In contrast to the findings for Europe, the negative effect of economic hardship can be strengthened or attenuated depending on the degree of religiosity and trustworthiness of the community. The moderating effect of confidence in politics was not found. Concerning the moderating influence of welfare state expenditure, our findings are partly in line with the results for Europe. In Europe a larger social welfare state suppresses the informal institutions social contacts and confidence in politics whereas in Latin America a larger social welfare state overturns interpersonal trust (as a proxy for social contacts) and religiosity. Hence, we also find evidence for the crowding out hypothesis, namely that in more generous welfare states one is less dependent on their immaterial resources for finding happiness.

**Keywords:** Latin America, subjective well-being (SWB), economic hardship, moderating effects of institutions

**JEL classification:** I31, O12

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# **Economic hardship, institutions and subjective well-being in Latin America**

## **1 Introduction**

The 21<sup>st</sup> century has witnessed an increasing number of initiatives to measure and explain people's well-being beyond consumption possibilities. Some examples are the annual World Happiness Report published by the United Nations, the Better Life Index of the OECD and Kate Raworth's Doughnut Economics (2017). Also, the number of scientific articles on happiness or subjective well-being<sup>1</sup> has increased tremendously, both in long-standing (psychology and economics) journals and in more recently established specialized journals with 'quality of life' or 'happiness' in their title. A majority of these happiness studies pertain to OECD countries, while the developing regions in the world have been studied less often. According to Tov and Au (2013), only about 30% of all empirical research in this field concerns countries outside Europe and North America. However, since the last decade more research is being conducted on the determinants of subjective well-being (SWB) worldwide (e.g., Diego-Rosell et al. 2018) and on other continents separately, among which Latin America (e.g., Corral 2011; Valente and Berry 2016; Ortega Londoño et al. 2019).

At the same time, the effect of a considerable decrease in resources (economic hardship) on happiness has not yet received much attention anywhere. Gudmundsdottir (2013) and Reeskens and Vandecasteele (2017), both using European data, are among the notable exceptions here. Furthermore, in a newly published book edited by Rojas (2019), much research on happiness worldwide is bundled, also paying attention to unhappiness (ill-being) and to Latin America. A key aspect in this book is the well-known Easterlin paradox, which claims that an increase in income will not necessarily result into greater happiness because people adapt to the new situation and their aspirations rise over time.

In the present study we analyze the underexposed link between economic hardship and SWB in Latin America<sup>2</sup> and we investigate whether institutions mitigate the negative impact of economic hardship on well-being. While doing so, we test whether the findings of Reeskens and Vandecasteele (2017) for developed (OECD) countries in Europe also hold for Latin America, of which just a few countries are OECD member. Bearing in mind that these two regions differ widely in political history and economic development, according to these authors the negative effect of economic hardship on SWB cannot only be cushioned by

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<sup>1</sup> We use the terms happiness, subjective well-being (SWB) and life satisfaction interchangeably.

<sup>2</sup> Latin America consists of Spanish, French, and Portuguese speaking countries and territories in South and Central America. In this study we include 19 sovereign countries and exclude some territories and most of the Caribbean island-states, due to missing data. Section 2 provides an overview of the selected countries.

material resources stemming from welfare state efforts, but also by three 'immaterial protective buffers', namely social contacts, religiosity, and confidence in politics.

Despite high corruption levels, weak political institutions, high crime rates and disappointing economic prospects (The Economist 2017), a recent World Happiness Report shows that Latin Americans have relatively high levels of life satisfaction scores, ranking only behind Northern America and Western Europe (Helliwell et al. 2018). As Rojas (2018) argues, this is foremost caused by the abundance of positive social relationships in Latin America, which outweighs the comparatively lower incomes in the region. The availability of household data from the 2016-17 wave of the LAPOP AmericasBarometer survey on similar topics for the Americas permits us to replicate the model by Reeskens and Vandecasteele (2017). As Diego-Rosell et al. (2018) show in their extensive cross-country study, determinants of SWB are partly universal, but there are also some notable differences between regions worldwide.

We rely on two strands of literature: research that explains the relationship between economic hardship and SWB and research that explains the relationship between institutions and SWB. Several studies show the positive effect of institutional factors on well-being. If institutions work properly, people have confidence in these institutions, even if they are materially deprived; they have the belief that a well-functioning government and constructive social contacts will help them out of economic destitution. People having this faith might be happier than people who are in the same economic situation but who do not believe in proper workings of institutions.

The remainder of this paper is structured as follows. Section 2 starts with a brief overview of the socio-economic and political situation of Latin America around 2016-17, the period in which the survey was conducted. Thereupon, we provide a short literature survey which includes a more detailed description of the key concepts SWB, economic hardship, and institutions, and the links between these concepts. This also leads to the formulation of three hypotheses for the empirical part of our study. Next, we discuss the data and methodology, followed by Section 5 which analyzes the results of our empirical tests. The last part concludes and discusses some drawbacks and points for further research.

## **2 Some socio-economic and political indicators of Latin America around 2016-2017**

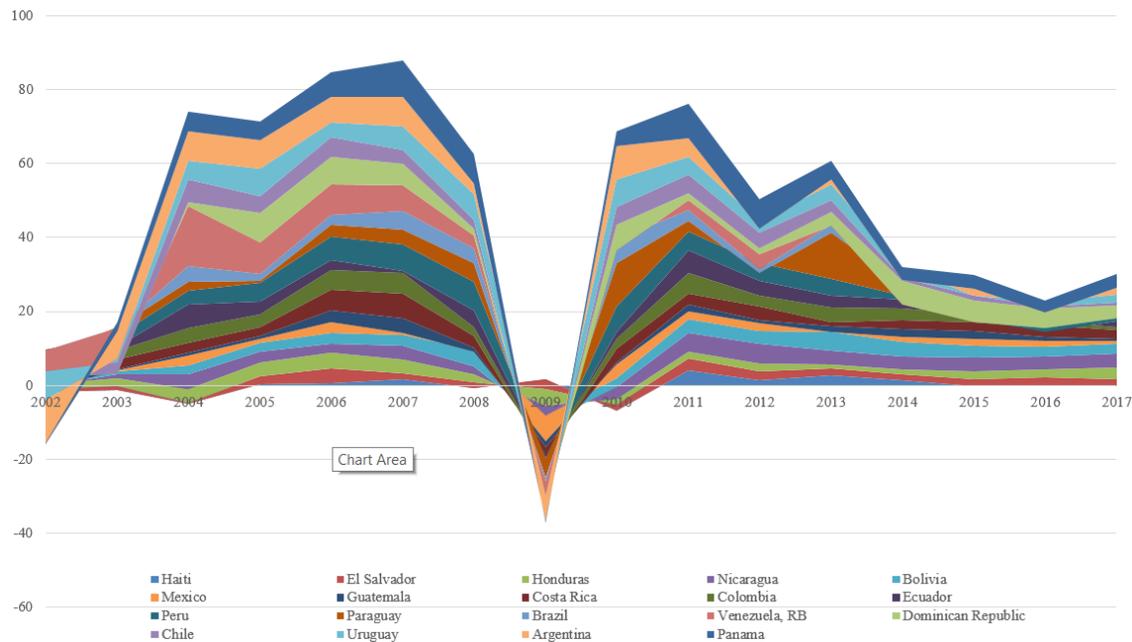
The state of the economy of Latin American countries can be assessed and compared with the rest of the world in several ways. The most common measure is related to national product or income, but it is often claimed that this is a rather narrow indicator of overall

welfare. Therefore, a few other indexes are used, such as the Human Development Index, the Global Competitive Index and the Worldwide Governance Indicators.

With respect to the Gross National Income (GNI), the World Bank (2018a) classifies our selected 19 countries in the Western Hemisphere in the fiscal year 2017 as follows: 1) Haiti as a low income economy (GNI per capita<sup>3</sup> of less than \$996); 2) El Salvador, Honduras, Nicaragua, and Bolivia as lower-middle income economies (GNI per capita between \$996 and \$3,895); 3) Mexico, Guatemala, Costa Rica, Colombia, Ecuador, Peru, Paraguay, Brazil, Venezuela and Dominican Republic as upper-middle income economies (GNI per capita between \$3,896 and \$12,055); 4) Chile, Uruguay, Argentina and Panama as high income economies (GNI per capita of \$12,056 or more).

When we look at the economic growth rate (percentage change of GDP per capita) of the past two decades in Figure 1, we see that the economic crisis of 2008-2009 seriously affected all the countries in Latin America. However, the severity of its impact and the subsequent recovery differed a lot across the 19 countries under study.

**Fig. 1 Latin American GDP stacked growth rates**



Source: World Bank (2018b).

Note that data for Venezuela are missing after 2014.

<sup>3</sup> Atlas method, in current US\$

The geometric average GDP growth rate of the whole region decreased from 2.7% in 2002-2007 to 0.6% in 2008-2009 and recovered back to 2.4% in 2010-2017. Over the eight years of the post-crisis period, we find at the lower end of the tail not only Venezuela and Haiti but also Brazil, all with less than 0.5% average growth. At the upper end of the tail are Dominican Republic and Panama, with average growth rates just above 4 and 5% respectively (World Bank, 2018b).

According to the regional outlook report of the IMF (2017), in the most recent years economic performance in Latin America has been disappointing. In a majority of these countries domestic demand (consumption and investment), real GDP growth, the employment rate and the structural fiscal balance hit their lowest levels in 2015, with few prospects for long-term growth.

Welfare and happiness do not only depend on income or production growth. That is why the United Nations constructed the Human Development Index for 189 countries and territories, which is based on three indicators, namely Life expectancy, Literacy en Real GDP. In 2017, two Latin American countries are positioned in the 'very high human development' group, namely Chile at the 44<sup>th</sup> place while Argentina ranks at 47. The subsequent group with 'high human development' consists of the majority of our 19 countries, starting with Costa Rica at rank 63, down to Paraguay at rank 110. Next comes the 'medium developed' group in which we find Bolivia (rank 118), Nicaragua (124), Guatemala (127) and Honduras (133), while again Haiti at rank 168 stands apart in the 'low human development' group (UNDP 2018).

An even more encompassing typology of countries originates from the World Economic Forum that annually ranks 138 economies across the world according to their competitiveness, defined as "the set of institutions, policies, and factors that determine the level of productivity of an economy, which in turn sets the level of prosperity that the country can achieve" (World Economic Forum 2016, p. 4). The Global Competitive Index (GCI) is based on 114 indicators that in turn are divided into 12 pillars. The first pillar called Institutions concerns formal and informal rules and is considered to be a basic requirement for competitiveness. As the report mentions, "The legal and administrative framework within which individuals, firms, and governments interact determines the quality of the public institutions of a country and has a strong bearing on competitiveness and growth. It influences investment decisions and the organization of production and plays a key role in the ways in which societies distribute the benefits and bear the costs of development strategies and policies. Good private institutions are also important for the sound and sustainable development of an economy" (p. 35).

When it comes to ranking countries in Latin America (excluding Haiti) according to their overall GCI, there is a large difference between on the one hand Chile at the highest (33<sup>rd</sup>) and Panama at the second highest (42<sup>th</sup>) position, and on the other hand the two lowest states, Bolivia at position 121 and Venezuela at position 130. These large regional differences mainly occur within the pillar Macroeconomic environment but also in the pillar Institutions; within the latter, these variances are “driven by the ethics and corruption subpillars and recent scandals in the region” (World Economic Forum 2016, p. 20).

Furthermore, it is worth mentioning that all Latin American countries have experienced military coups, civil conflicts, and human rights abuse (Fukuyama, 2006). Around half of the countries under analysis have below median ranking regarding the six Worldwide Governance Indicators (WGI): political stability, voice accountability, rule of law, government effectiveness, control of corruption, and regulatory quality. Haiti, Venezuela are at the bottom 20% in all six categories. Uruguay and Chile are in the top 20% of the countries worldwide (World Bank 2018c).

Based on the above-mentioned developments in economic performance and the rankings on several political and socio-economic indicators, the Latin American area at large does not seem to perform particularly well. In addition, the World Happiness Report (Helliwell et al. 2018, p. 26-27) shows declining life evaluation scores for a considerable number of Latin American countries in 2015-2017 as compared to 2008-2010. Many questions in the LAPOP wave 2016-17 can help us investigate which are the most important determinants of SWB in this part of the world, and which institutional factors may mitigate the negative impact of endured economic hardship. This will be further explored in Section 4, after a short synopsis of already existing studies that touch upon this topic.

### **3 Literature**

#### **3.1 Subjective well-being**

In the field of happiness economics, asking people how satisfied they are with their life, is seen as a useful approximate for SWB, because it captures how an individual assesses the overall quality of life and this in turn is a measure for individual and societal welfare (Frey and Stutzer 2012; Diego-Rosell et al. 2018). Dolan et al. (2008) provide an overview of the several measures for the happiness variable in empirical research; the most often used proxy for SWB in regional and national household surveys is derived from the question ‘how satisfied are you in general with life’. The life satisfaction variable is found to be a consistent and reliable measure for SWB. For instance, Ferrer-i-Carbonell (2013) refers to the fact that there is a high correlation between reported happiness and the regional quality of life in the

USA. Both this author and Frey (2008) also report a high correlation with other indicators of well-being such as smiling during social interactions, telling whether one is happy, the inclination to commit suicide, and its correlation with health measures such as brain activity and heart rate.

Finding out what determines happiness can give us insight how to achieve welfare in a society or how to cushion the effects of negative economic outcomes on well-being. It goes beyond the scope of this paper to address all the separate explanatory factors of SWB as found in the literature. Here we would like to address the outcomes of a recent meta-analysis by Diego-Rosell et al. (2018). After a thorough study of the international literature, they establish a long list of relevant determinants of SWB found world-wide. These determinants are then grouped by major domains, namely demographic factors, material well-being, physical health, social support, occupational well-being, community context, governance and altruistic behavior. Each domain consists of a series of relevant variables. Next, they make use of the 2011-2013 waves of the Gallup World Poll and regress these determinants in explaining life evaluation (SWB) for 153 countries in 10 regions, among which Latin America. Their results show that aspects of material well-being are by far the most important factor explaining SWB globally, although in Latin America this effect is less substantial than in most other regions. For Latin American countries, the remainder of the explanation comes primarily from occupational well-being, while the other domains only play a modest role.

### **3.2 Economic hardship**

People find great joy in the early stages of earning income or accumulating wealth as it leads to the fulfilment of human needs and wants. The higher the income, the more needs can be fulfilled and thus the happier one is (Wolbring et al. 2013). Paradoxically, at a certain point, additional income will not necessarily bring more happiness as expectations are adapted upwards: "Income growth does not, however, cause well-being to rise, either for higher or lower income persons, because it generates equivalent growth in material aspirations, and the negative effect of the latter on SWB undercuts the positive effect of the former" (Easterlin 2001, p. 481).

An often-occurring problem in empirical research is the lack of data on (changes in) actual income, as respondents often leave this question open or make a wrong estimate. Diego-Rosell et al. (2018) also had this problem and decided instead to incorporate in their domain of material well-being a subjective question on household income. The four answer options with this question ranged from whether the respondent 'is living comfortably on the present income', to 'is finding it very difficult on present income'. Within the domain of

material well-being, this subjective element turns out to be one of the most important determinants of SWB.

Individuals evaluate their degree of happiness generally relative to their social environment (Easterlin 2001; Shields et al. 2009). In this line of reasoning, when people experience an income loss or other kind of financial setback, they feel deprived relative to others in their environment and/or relative to their previous standard of living position, amounting to feelings of dissatisfaction (Gudmundsdottir 2013). This is also confirmed by several studies on the negative impact of the 2008 financial crisis on SWB (Weckroth et al. 2017). Economic downturns may lead to unemployment, health problems, and undermine the ability to obtain goods and services. Based on earlier research, Reeskens and Vandecasteele (2017) therefore argue that the focus on income is too narrow and they broaden their analysis to the effect of economic hardship, which could be described as a situation where difficulties arise because of not having enough money or any other resources. When people feel deprived with respect to their social environment (because of status concern) or with respect to their own position in the past they may feel gloomy or unhappy and thus our first hypothesis is: *economic hardship is negatively related to subjective well-being (H1)*.

### **3.3 Institutions**

'Institutions' is an umbrella term for a wide range of informal and formal rules that influence people's behavior. It concerns implicit norms and beliefs as well as explicit laws and contractual agreements. Institutions therefore arise both gradually and spontaneously from the bottom up, as well as immediately and intentionally top down. Effective institutions, be it formal or informal, can produce a real incentive, either by constraining or enabling people's actions (Groenewegen et al. 2010). A very well-known phrase, ascribed to Douglas North (1994), is 'Institutions matter': societies that are equal in many respects but have quite a dissimilar institutional environment, can experience very different welfare levels. The underlying mechanism is that well-functioning institutions stimulate interpersonal trust, which in turn increases the reliability and thus the number of economic transactions.

In the literature on happiness studies, institutions play an important role too. Individuals feel more content with their lives if they believe that they are treated in a fair way by the society they live in (Frey and Stutzer 2012). Democratic rights, property rights, fair police, honest members of the parliaments increase life value and thus life satisfaction. According to Frey (2008) institutional quality enhances citizens' exertion of democratic rights which increases utility as people can take part in political decision making. Furthermore, better institutional quality increases rightfulness and honesty in a country, leading to more

trust, safety, reliability, freedom of speech, which in turn enhances quality of life and hence well-being. In times of economic distress, good governance can make a positive difference because countries with better institutional quality may have greater capacity to cope with adverse effects (Frey 2008; Reeskens and Vandecasteele 2017).

In their cross-country analyses to explain the distribution of happiness in 86 countries worldwide, Bjørnskov and Tsai (2015) distinguish formal and informal institutions. Democratic and legal institutions fall into the first grouping while social trust, religiosity, and voter turnout fall into the latter. The authors find that an increase in legal quality and social trust cause an improvement in SWB throughout, implying a smaller proportion of people in the lowest 'misery' category and a larger proportion of people in the highest 'happiness' category. However, democracy, religiosity and voter turnout are found to influence just parts of the sample. For example, a higher level of democracy only positively affects life satisfaction in the highest happiness category while religiosity increases feelings of happiness for all categories but only in poorer countries.

In a Canadian study, Vang et al. (2019) analyze the effect of religious discrimination and religiosity on life satisfaction. Religiosity is measured as a scale based on religious beliefs, participation in religious activities and religious activities on one's own. Whereas religious discrimination is found to have a negative impact on well-being, the influence of religiosity on well-being is significantly positive. In times of distress, religiosity may reinforce the belief that alleviation from difficulties is attainable, which might give rise to appeasement and satisfaction in life (Lim & Putnam 2010).

Reeskens and Vandecasteele (2017) find that the effect of economic hardship on SWB in Europe can be mitigated by social networks, confidence in politics and religiosity. They also find evidence that the impact of the first-mentioned two of these immaterial resources in turn is for a considerable part moderated by the impact of a material resource, namely welfare state expenditures. The unhappiness of deprived individuals with few social contacts and little trust in politics is cushioned in generous welfare states. In other words, there can be competition between immaterial (informal) institutions and material (formal) institutions.

This leads to our last two hypotheses: *Institutional quality mitigates economic hardship and has a net positive effect on subjective well-being (H2)* and *The mitigating effects of formal institutions crowd out those of informal institutions (H3)*.

### **3.4 Evidence from existing studies using LAPOP waves**

Since we are using data from the 2016-2017 wave of the AmericasBarometer survey of the Latin American Public Opinion Project (henceforth LAPOP), we mention a few other studies that analyze SWB on the basis of earlier waves of the same dataset.

Corral (2011) takes a wide-ranging approach to explain life satisfaction. The most important determinants she finds are not only in the economic sphere (such as one's own economic situation, and the economic development of the country), but also in the social (church attendance, interpersonal trust) and political sphere (ideology). Other studies rather focus on the impact of one particular topic on SWB. For instance, Cortés Aguilera et al. (2013) address the effect of employment status, Singer (2013) the effect of bribery and Ortega Londoño et al. (2019) the effect of crime victimization.

The impact of various institutions on SWB has also been studied in earlier waves. Love (2017) finds that satisfaction with local governmental services (in 21 Latin American countries) is by far the most important determinant of SWB. Ateca-Amestoy et al. (2014) establish a strong effect of social interactions (measured by active participation in political, labor, religious, or leisure organizations) on individual life satisfaction. Valente and Berry (2016) conclude that unlike the United States where rural residents are happier than city residents, in Latin America location does not matter. The key explanatory factor in determining happiness in the latter is familism (the importance of God, friends and family), a finding they ascribe to the collectivist values of Latins. Finally, Pecha and Ruprah (2015) study the impact of unemployment on SWB in Latin America and the Caribbean and find that religion has a significant cushioning effect.

## **4. Methods**

We employ data from the LAPOP AmericasBarometer<sup>4</sup>, a representative survey that is bi-annually held among the non-institutionalized voting age adults of the Americas. For our study we use the 2016-17 wave of 19 sovereign Latin American countries, containing in total 22,836 respondents. The respondents were interviewed face-to-face in the major language of the respective countries. The sample size per country ranges from 1515 to 2647. The respondents in the respective countries are weighted according to the information provided by LAPOP.

Analogous to Reeskens and Vandecasteele (2017), we analyze the effect of economic hardship on SWB, whether institutions provide resilience to the supposedly negative effect,

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<sup>4</sup> For the survey background see <https://www.vanderbilt.edu/lapop/survey-designs.php>

and whether there is a trade-off between the institutions. The moderating informal institutions are confidence in politics, interpersonal trust and religiosity, and the formal institution is welfare state expenditure.

Due to the cross-sectional nature of the data the direction of the causality cannot be tested. Dolan et al. (2008) discuss why we cannot infer causality on subjective well-being in this type of studies. We therefore assume that subjective well-being is the dependent variable and that institutional quality and economic hardship are the independent variables.

Table 3 in the Appendix describes all key variables while mentioning the similarities and differences between Reeskens and Vandecasteele (2017) and our study. Table 1 shows the descriptives of our variables, after which the most important ones will be briefly outlined.

**Table 1 Descriptives**

<b>Subjective well-being (SWB)</b>	
In general how satisfied are you with your life?	%
• Very or somewhat dissatisfied	14.47
• Somewhat Satisfied	37.41
• Very Satisfied	48.12
<b>Economic hardship</b>	
The salary that you receive and total household income:	%
• Is good enough for you and you can save from it	9.05
• Is just enough for you, so that you do not have major problems	37.20
• Is not enough for you and you are stretched	35.51
• Is not enough for you and you are having a hard time	18.24
<b>Institutions</b>	
<i>Religiosity</i> : Do you attend meetings of any religious organization?	%
• Never	44.05
• Once or twice a year	10.94
• Once or twice a month	16.41
• Once a week	28.60
<i>Interpersonal trust</i> : Would you say that people in your community are:	%
• Untrustworthy	11.49
• Not very trustworthy	30.44
• Somewhat trustworthy	33.64
• Very trustworthy	24.43

<i>Confidence in politics</i> (Cronbach's alpha 0.783):			Factor loading
• To what extent do you trust the parliament?			0.675
• To what extent do you trust the political parties?			0.709
• To what extent do you trust the President/Prime Minister?			0.634
• To what extent do you trust elections?			0.669
Other variables	Scale	Mean	SD
Social expenditure	43.26-3011.82	1061.75	825.76
Unemployment rate	2.83-14.00	6.27	2.80
Age	16-96	40.70	15.53
Women	0-1	0.49	
Years of education	0-18	10.12	4.23
Income (N=20394*)	0-25919.64	1508.96	3269.75
Work status (%)			
• Employed	0-1	49.2	
• Unemployed	0-1	13.8	
• Retired and/or disabled	0-1	7.4	
• Other	0-1	29.6	
N = 22,836			

\* A dummy was created with value 1 for the missing information on the self-reported income.

Source: LAPOP (AmericasBarometer Survey, 2017).

### **Subjective well-being**

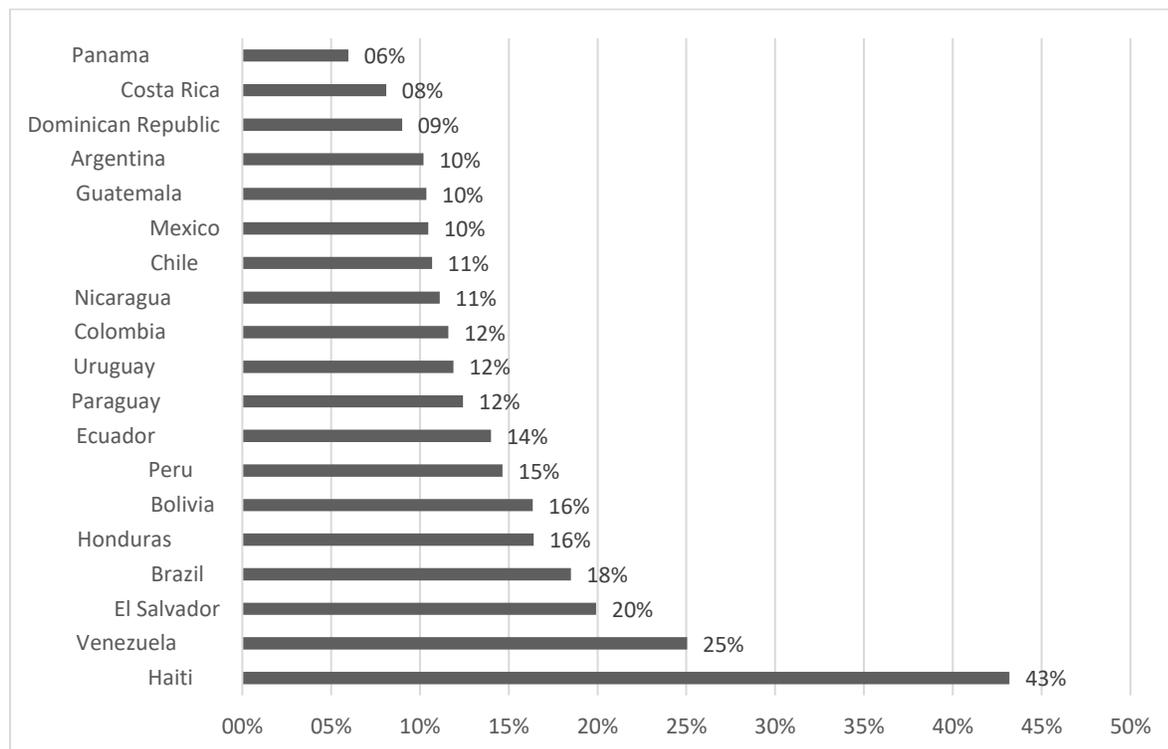
Subjective well-being is proxied by the survey question on life satisfaction. As the table shows, almost half of the respondents are very satisfied with their life while 14% are quite dissatisfied. Figure 2 illustrates the percentage of dissatisfied citizens per country in our sample. Percentage wise, Haiti has the most dissatisfied number of people, secondly comes Venezuela. The happiest people live in Dominican Republic, Argentina, Costa Rica and Panama. As discussed in Section 2, happiness scores in Latin America are relatively high compared to many other parts of the world but have been declining somewhat during 2015-2017, while economic growth and institutional quality in general are not so favorable.

This question is usually measured ordinally, ranging from a three-point scale in some surveys to a ten-point Likert scale in other surveys<sup>5</sup>. Some studies treat the response

<sup>5</sup> 10-point Likert scale (from completely dissatisfied to completely satisfied) in the European Social Survey and the World Values Survey, 7-point Likert scale in the United States General Social Survey and the British Household and

variable as a cardinal variable and consequentially use linear estimation models, while others treat it as an ordinal variable and consequentially use ordinal response models (logit or probit) to explain SWB. Ferrer-i-Carbonell (2013) finds that the results between these two techniques of regressions do not differ as the estimated coefficients appear to be consistent for both methods. Given our 3-point scale, a two-level ordered logit model will be estimated, with the second level to control for country.

**Fig. 2 Dissatisfaction in Latin America 2016-17**



Source: LAPOP (AmericasBarometer Survey, 2017).

### **Economic hardship**

The best proxy for economic hardship in LAPOP concerns the question whether the salary and total other household income is good enough. As Table 1 shows, more than half of the respondents indicates that their total income is not sufficient. An exploratory look into these data indicates that economic hardship is negatively associated with SWB (correlation=-0.204; a full correlation matrix is available upon request). The higher the percentage of

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Panel Survey, 4-point Likert scale in the General Social Survey, Euro-Barometer Survey and the AmericasBarometer, and a 3-point scale measure in the Latinobarómetro.

people experiencing economic deprivation the higher the percentage of dissatisfied people in a country.

## **Institutions**

Following the analysis of Reeskens and Vandecasteele (2017) the moderating informal institutions in the first phase of our analysis are: religiosity, interpersonal trust (as a proxy for social contacts<sup>6</sup>) and confidence in politics. Naylor (2018) concludes that trust and confidence in Latin American institutions appear to be declining over time since 2006. With respect to religion, 44% of the respondents never attend a religious meeting while 28.6% attends a meeting once a week. Interpersonal trust is measured on a 4-point scale by asking respondents whether people in their community are trustworthy. Overall, 42% finds that people in the community are not very trustworthy or even untrustworthy. Confidence in politics is measured by a latent scale comprised of trust in parliament, political parties, the political leader, and the elections; with all factor loadings above 0.65. The underlying data reveal that there is a lot of variance in whether people have confidence in politics. The distribution of both religiosity and interpersonal trust are the same for Europe and Latin America (the absolute z-scores are smaller than one).

For the second phase of our analysis we also test the effect of the welfare state. In our sample, on average 1062 US dollar per capita is spent on social expenditure. In the absence of one encompassing database we can only tentatively compare Eurostat figures with Cepal figures: in percentages of GDP, the level of social expenditure in the EU is much higher than in Latin America. The most generous welfare state in Latin America is Chile with social expenditures as percentage of GDP equal to 16.1% in 2016, while in that year the EU average is 25.9%.

We furthermore control for the usual determinants age, gender, years of schooling, and self-reported income. We will not treat these variables in depth, as our focus is on the expected negative effect of economic hardship on SWB, and the degree to which (possibly competing) institutions can cushion this effect.

## **5. Results**

Following Reeskens and Vandecasteele (2017), in our first model the informal institutions are added as main effects. In the second model the moderating effect of these

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<sup>6</sup> Both social contacts (networks) and various forms of trust are dimensions (proxies) of social capital. See Algan (2018).

institutions on the effect of economic hardship on SWB are taken into account. Subsequently, we present and discuss the effects of welfare state expenditure (as a competing institution), both for the whole sample and for the most deprived people. The full tables are presented in the Appendix.

All results regarding the relationship between the control variables and SWB confirm the results usually found in the literature. Being a woman, being employed, and having a higher (household) income are positively associated with subjective well-being. Until the age of 67 SWB declines and thereafter rises again.

### **5.1 Economic hardship**

The results in the upper panel of Table 2 show that the first hypothesis is verified: individuals who experience economic hardship are less satisfied with life than individuals who do not suffer from economic hardship. Compared to the 48.2% probability of being very satisfied the impact of economic hardship can be large. The likelihood of being very satisfied decreases with 6.9 percent points (pp) to 17.4 pp, and to 23.4 pp as the situation changes from *having enough income and being able save from it* to consecutively *having enough income and having no major problems*, *not having enough income and being stretched*, and *not having enough income and having a hard time*. Similarly, the likelihood of being dissatisfied increases as economic hardship becomes more severe: from 2.4 pp to 7.5 pp, and 11.2 pp, respectively. As expected, this is in line with the results Reeskens & Vandecasteele (2017) find for Europe.

### **5.2 Institutions: religiosity, interpersonal trust and confidence in politics**

Religiosity is positively associated with subjective well-being, and so is the level of interpersonal trust. The second panel of Table 2 shows that the probability of being very satisfied increases with 4 pp as attendance at meetings of religious organizations increases from never to once a week. People who attend meetings of religious organizations are 2 pp less likely to be dissatisfied in life than people who never attend these type meetings. Apparently, religiosity shows a clear positive association with SWB. However, we do not see a smooth ascending effect when moving from never to once a week. Compared to the findings of Reeskens & Vandecasteele (2017) for Europe, the effect is similar for frequent attendance but not for infrequent attendance.

**Table 2 Average marginal effects: main effects\***

	Subjective well-being (percentage points)		
	Very or somewhat dissatisfied	Somewhat satisfied	Very satisfied
Mean probability	0.144	0.374	0.482
<b>Economic hardship:</b>			
• Is good enough for you and you can save from it	-	-	-
• Is just enough for you, so that you do not have major problems	0.024***	0.045***	-0.069***
• Is not enough for you and you are stretched	0.075***	0.099***	-0.174***
• Is not enough for you and you are having a hard time	0.112***	0.122***	-0.234***
<b>Religiosity:</b>			
• Never	-	-	-
• Once or twice a year	0.007	0.009**	-0.017**
• Once or twice a month	-0.003	-0.001	0.004
• Once a week	-0.020***	-0.021***	0.040***
<b>Interpersonal trust:</b>			
• Untrustworthy	-	-	-
• Not very trustworthy	0.008	0.007	-0.015
• Somewhat trustworthy	0.009**	0.008	-0.017*
• Very trustworthy	-0.045***	-0.053***	0.098***
<b>Confidence in politics</b>			
	-0.020**	-0.019**	0.040**

\* Based on Table 4 Column 1. The module *mchange* was used to calculate the marginal effects (Scott Long and Freese, 2014).

Source: LAPOP (AmericasBarometer Survey, 2017)

The third panel of Table 2 shows that interpersonal trust is positively associated with SWB when comparing individuals who regard people in the community as being very trustworthy with individuals who regard them as untrustworthy; in this case the probability of being very satisfied is almost 10 pp. higher. Similarly, people who regard others in the community as being very trustworthy are 4.5 pp less likely to be dissatisfied than people

who regard others as being untrustworthy. Otherwise the effect on SWB is negative. This result is remarkable. Compared to the results of Reeskens & Vandecasteele (2017) for Europe there seems to be a clear demarcation in the effect of trustworthiness on SWB in Latin America: you really have to trust the people around you to make you feel good, otherwise you are less satisfied.

Finally, people who have confidence in politics experience higher levels of SWB. The probability of being very satisfied increases with 4 pp for every point increase in confidence in politics.

### **5.3 Moderating role of informal institutions**

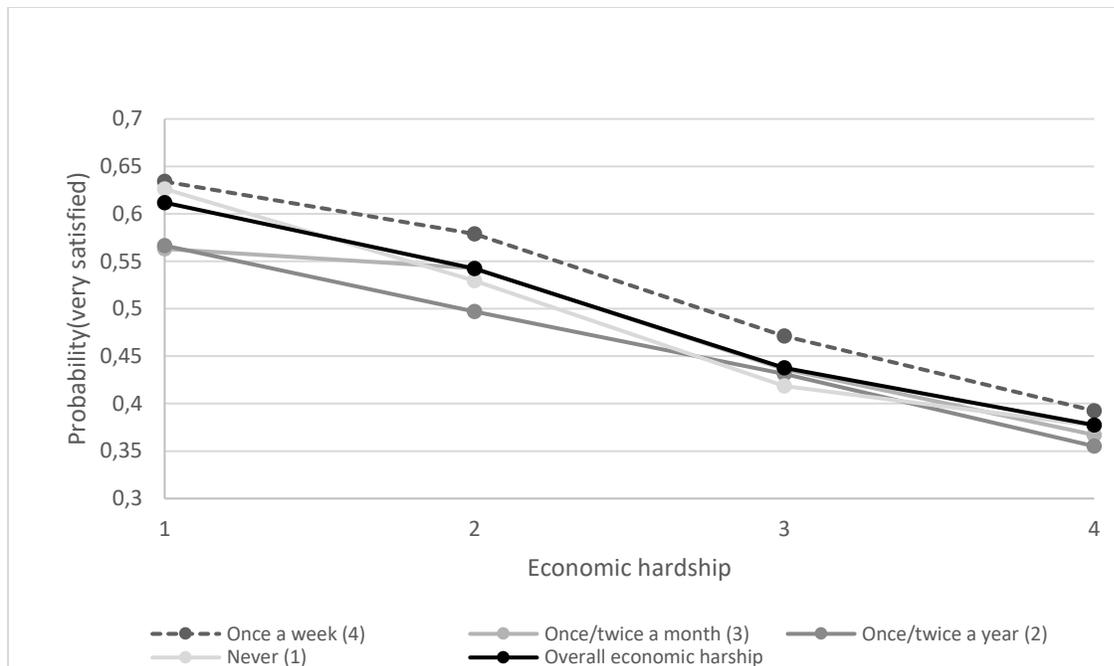
In this part of the analysis we relate the moderating effect of the informal institutions to the probability of being very satisfied. The solid line in Figure 3 shows the probability of being very satisfied by economic hardship without moderation: it decreases from 61% to respectively 54%, 44%, and 38% as having enough income becomes more difficult. Contrary to Reeskens and Vandecasteele (2017), our model allows for both positive and negative moderating effects by taking into account the categorical nature of the institutions measured on a 4-point scale.

#### *Religiosity*

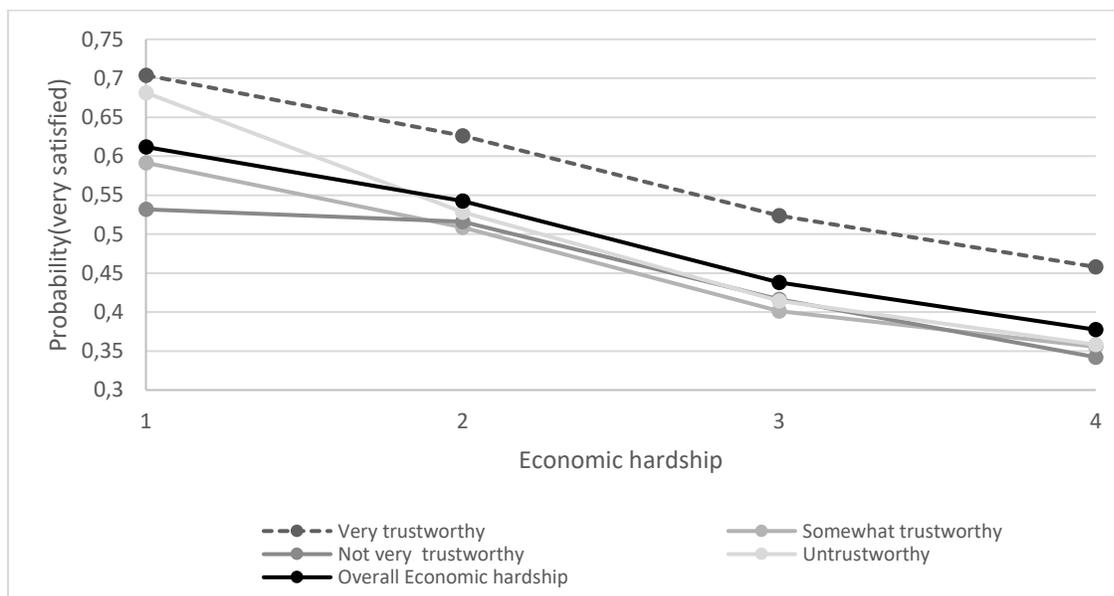
In panel a of Figure 3 we see that attending meetings of religious organizations moderates the negative effect of economic hardship on subjective well-being. Going once a week to a religious meeting has a significant positive moderating effect: the association between SWB and economic hardship becomes less negative. On the other hand, going never or only once or twice a year has a negative moderating effect: the impact of economic hardship on SWB becomes larger, especially when people still have enough income and face no major problems. This result deviates from the one found by Reeskens & Vandecasteele (2017). The significant positive coefficient they find for the continuous variable religiosity would imply that the more often one attends religious meetings, the lower the effect of economic hardship on SWB. So hardly ever going to a religious meeting would already have a positive moderating effect. In our case, we make a clear distinction between the categories of the religiosity variable and we see that only attending religious meetings weekly makes a difference. Similar to Pecha and Ruprah (2015), who find a mitigating impact of religion on the negative effect of unemployment on SWB in Latin America, we see that religiosity (albeit to a certain extent) cushions economic hardship.

**Fig. 3 Moderating effect of the informal institutions on the effect of economic hardship on SWB: being very satisfied.**

Panel a: Religiosity



Panel b: Interpersonal trust



Based on Table 4 Column 2.

Source: LAPOP (AmericasBarometer Survey, 2017).

### *Interpersonal trust*

The moderating effect of interpersonal trust on the effect of economic hardship on SWB is summarized in panel b of Figure 3. The degree of interpersonal trust has a significant and rather large cushioning effect on the negative impact of economic hardship. If people in Latin America find their fellow citizens very trustworthy the negative effect of economic hardship on SWB is attenuated: the probability of being very satisfied increases significantly, no matter the (degree of) hardship people are suffering. On the other hand, trusting people around you somewhat or not at all has a negative moderating effect: all curves lie below the solid line which is the overall curve of economic hardship. This result also deviates from the results found for Europe, where the more social contacts one has, the more positive the moderating impact on the effect of economic hardship on SWB is.

### *Confidence in politics*

The moderating effect of confidence in politics on economic hardship is small (see Table 4 in the Appendix): although jointly significant, all interaction effects are small compared to the main effects. Compared to the results for Europe, confidence in politics does not have a cushioning effect in Latin America.

Overall, the results show that our second hypothesis is only confirmed for attending religious meetings once a week and for regarding people in the community as being very trustworthy.

## **5.4 The moderating role of a formal institution: social expenditure**

It could be argued that a larger welfare state (measured as social expenditure in US dollars per capita) could outweigh the moderating effects of the immaterial resources on the effect of economic hardship on SWB. Column 1 and 2 of Table 5 show the main effect of social expenditure and the moderating effect thereof on the informal institutions. The unemployment rate at country level is added as a second variable per country. Without considering the possibility of such a trade-off or a strengthening effect of social expenditure, the effect of economic hardship on SWB does not change, nor does the effect of the informal institutions on SWB. Social expenditure has a direct positive effect on SWB. When we allow for moderation of the formal institution on the three informal institutions, the main effects on SWB of religiosity quadruple and of interpersonal trust double. Moreover, a larger welfare state can be a trade-off for religiosity and interpersonal trust.

Looking at the effects among the most deprived group, consisting of individuals who reported that their income is not enough and that they are having a hard time, which equals 18.4% of the sample, we see similar main results for interpersonal trust and having

confidence in politics as for the whole sample (see column 3 and 4 of Table 5). The moderating effects of social spending are even larger: both the main effects of regarding others as very trustworthy and having confidence in politics are larger as is the moderating effect of higher social spending. Compared to the whole sample, for the most deprived people the trade-off between a larger welfare state and informal institutions seems to shift from religiosity and trustworthiness of the community to confidence in politics and trustworthiness of the community.

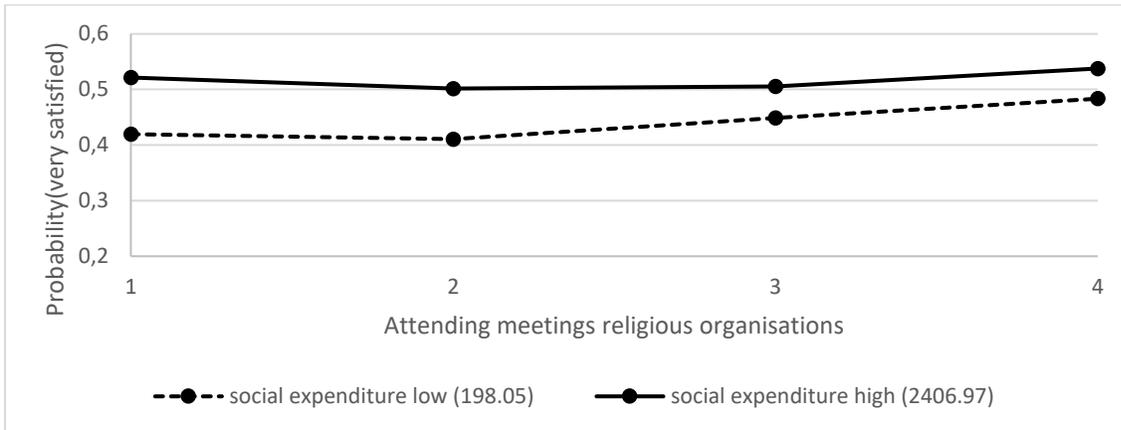
The graphs in Figure 4 combine the estimates for both the whole sample and for the most deprived ones (see Table 5 in the Appendix, column 2 and 4) and show the extent to which social spending moderates the effect of immaterial resources on well-being. Controlling for individual level control variables and the unemployment rate, we see that overall the likelihood of being happy is higher in countries that spend more on welfare.

For the whole sample, the positive moderating impact of social expenditure on the effect of religiosity stands out especially for smaller welfare states. For interpersonal trust the positive moderating impact in a larger welfare state is visible if people in the community are considered very trustworthy. An approximately 10 times larger yearly social expenditure per capita, which is more or less the difference between the lowest 10% decile (198 US dollars, Nicaragua) and highest 90% decile (2400 US dollars, Uruguay), outweighs both the positive moderating effect on economic hardship of weekly going to a religious meeting and finding the people in your community very trustworthy. There is no trade-off between confidence in politics and a larger welfare state.

For the most deprived people, the difference in the probability of being very satisfied between considering others to be untrustworthy versus very trustworthy increases with 14 pp in the lowest social spending country and with 6 pp in the highest social spending country. The effect of confidence in politics on SWB is however slightly reduced by social spending. The difference in the probability of being very satisfied is about 17 pp in low social spending countries (e.g. Nicaragua) between having versus not having confidence in politics, while this difference is 8 pp in high social spending countries (e.g. Uruguay).

**Fig. 4. Moderating effect of welfare state expenditure on:**

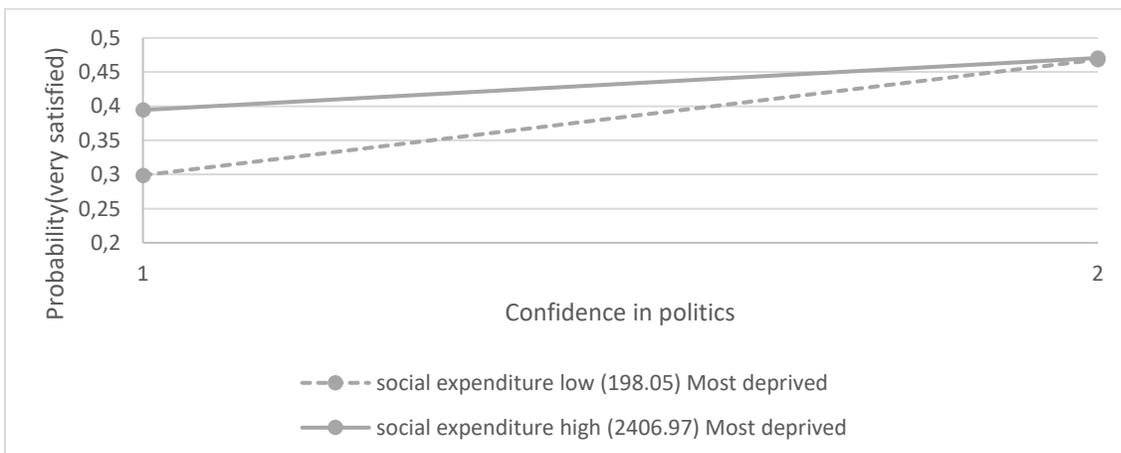
Panel a: Religiosity (not significant for most deprived)



Panel b: Interpersonal trust



Panel c: Confidence in politics (not significant for the whole sample)



Based on Table 5 Column 2 and 4.

Source: LAPOP (AmericasBarometer Survey, 2017).

The findings for the moderating role of social expenditure are partly in line with the results for Europe. In Europe the informal institutions social contacts and confidence in politics can be replaced by a larger social welfare state whereas in Latin America the influence of religiosity and interpersonal trust replace a strong welfare state. Remarkably, for the most deprived people, religiosity does not influence SWB and cannot be replaced by a strong welfare state: nor in Europe, nor in Latin America. Similar to Reeskens & Vandecasteele (2017) we find evidence for the crowding out hypothesis, namely that in more generous welfare states one is less dependent on their immaterial resources for finding happiness.

## 6 Conclusion

Using the AmericasBarometer Survey of 2017, we investigated the influence of economic hardship on subjective well-being and the moderating role of three informal institutions and the welfare state as a formal institution for 19 Latin American countries.

Economic hardship lowers life satisfaction. All three selected immaterial institutions have a significant *direct* effect on SWB, which is both in line with the outcomes of Reeskens and Vandecasteele (2017) for Europe and with outcomes of studies that used prior LAPOP waves.

Regarding Latin America, the *moderating* effects were not studied before and we observe some similarities with Europe. But there are also some differences. Due to the categorical nature of religiosity and interpersonal trust, both show a negative and a positive moderating effect: the effect of economic hardship on SWB is cushioned by going to religious meetings once a week and by finding the people in your community very trustworthy. These results of interpersonal trust are similar to Europe. However, going less than once a week to a religious meeting and don't finding your fellow citizens very trustworthy strengthens the negative effect of economic hardship on SWB. Here, Latin American countries differ from Europe, which overall only shows a positive moderating effect. Our findings regarding the effect of familism are in line with Valente and Berry's (2016) stress of the importance of social ties and religiosity in Latin America. Contrary to Europe, there is no moderating effect stemming from confidence in politics. Perhaps this can be ascribed to the overall low rankings of Latin American countries in the Global Competitive Index and in the Worldwide Governance Indicators.

The welfare state can replace the role of informal institutions. The larger social expenditure, the less important both religiosity and social ties seem to be in decreasing the effect of economic hardship on SWB. In Latin America there is no trade-off between the welfare state and confidence in politics. However, for the most deprived who find the people in their community very trustworthy or have confidence in politics, there is no difference between countries with a small or large yearly social expenditure per capita. Apparently, culture and tradition can form a buffer against a weaker government.

### *Limitations*

Diener & Suh (1997) discuss the strengths and weaknesses of the SWB measure and contend that although subjective indicators are valid measures of what people perceive to be important to their happiness and well-being, one of the weaknesses is that SWB “varies across individuals and nations. Societies and individuals differ in the degree to which they believe subjective well-being is a key attribute of good life” (p. 206). In addition, Constanza et al. (2007, p. 269) argue that “subjective reports may not be as trustworthy in reflecting their true welfare because of internalization of cultural norms, mental illness, lack of information or other reasons”.

Interpersonal comparison of well-being is impossible according to standard microeconomic theory. Although the argument is that every individual gives his or her own meaning to SWB, empirical studies show that there is a universal shared understanding of the concept, for example because individuals tend to be good at predicting other people’s happiness by assessing facial expressions. Also, individuals belonging to the same community give the same interpretation of SWB (Ferrer-i-Carbonell, 2013).

Is SWB influenced by institutions or does SWB influence institutions? The direction of the causality remains a problem in cross-sectional studies. Rode (2013) has found some evidence that SWB was influenced by social capital, although in the long run it may run the other way around.

### *Points for further research*

In this article the findings of Reeskens and Vandecasteele (2017) for Europa were tested for Latin America. Therefore, we proxied their immaterial protective buffers as closely as possible. However, analogous e.g. to Corral (2011) who analyzed SWB for Latin America and Diego-Rosell et al (2018) who investigated more institutions, the LAPOP dataset allows for a more in-depth analysis of subjective well-being.

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## APPENDIX

**Table 3** Replication of Reeskens and Vandecasteele (2017): **Similarities and differences**

	<b>Reeskens &amp; Vandecasteele</b>	<b>This study</b>
Data set	European Social Survey, wave 2010	LAPOP AmericasBarometer, wave 2016-17
Dependent variable	<b>Well-being</b> is proxied by the question "Taking all things together, how happy would you say you are?" on a 0-10 scale ranging from extremely unhappy (= 0) to extremely happy (= 10).	Well-being ( <b>SWB</b> ) is proxied by the question "In general how satisfied are you with your life?" on a 1-4 scale, which was reversed and recoded to a 3-point scale, where 1 = very satisfied, 2 = somewhat satisfied, and 3 = somewhat or very dissatisfied.
Independent variable	<b>Economic hardship</b> is composed of three items, namely the extent to which during the last three years one had to i) manage on lower household income, ii) use savings or get a loan to pay for normal living expenses, and iii) cut back on holidays or new household equipment. The items with measured on a 7-point scale, where 0 is 'not at all' and 6 is 'a great deal'.	<b>Economic hardship</b> is measured by the question whether the salary and household income is good enough, on a 4-point scale, where 1 = is good enough for you and you can save from it, 2 = is just enough for you, so that you do not have major problems, 3 = is not enough for you and you are stretched, 4 = is not enough for you and you are having a hard time.
Moderator variables	<p>Informal social ties are captured by the variable <b>Social contacts</b>, which is proxied by the question "How often do you meet socially with friends, relatives or work colleagues?" on a 7-point scale, from 0 = never to 6 = every day.</p> <p><b>Religiosity</b> is proxied by the question about the frequency of religious services attended, measured on a 7-point scale, from 0 = never to 6 = every day.</p> <p><b>Confidence in politics</b> is measured by a factor variable comprised of how much personal trust one has in the country's parliament, politicians, and political</p>	<p>Informal social ties could not be captured by the same variable, and hence is approximated by <b>Interpersonal Trust</b>, derived from the question how one would characterize the people from their community, on a 4-point scale, where 1 = untrustworthy and 4 = very trustworthy.</p> <p><b>Religiosity</b> is also measured by the frequency of religious services attended, but on a 4-point scale, where 1 = never and 4 = once a week.</p> <p><b>Confidence in politics</b> is measured by a factor variable that includes the extent to which one - in his own country - trusts i) the</p>

	<p>parties. These three items were measured on an 11-point scale ranging from 0 = no trust at all to 10 = complete trust.</p> <p>At country level, data on the <b>social expenditure</b> per capita (in 1000s euro) were used from Eurostat.</p>	<p>parliament, ii) political parties, iii) the political leader, and iv) the elections. These items are measured on a 7-point scale, where 1=not at all and 7=a lot.</p> <p>At country level CEPAL provides data on <b>Social expenditure</b> per capita (in 1000s dollar). Social expenditure in percentage of GDP was collected from CEPAL.</p>
Control variables	<p><b>Age</b> (and age squared), <b>women, levels of education, work status</b> (employed (= ref), unemployed, retired and other), and (self-reported) <b>income</b> (plus an imputation dummy for missings).</p>	<p><b>Age</b> (and age squared), <b>women, years of education, work status</b> (employed (= ref), unemployed, retired and other), and (self-reported) <b>income*</b> (plus a dummy for missings).</p> <p>Yearly household income was measured on a 16-point scale. The middle value of each scale was considered as the household income and was divided by the number of household members. This value was converted into PPP dollars (the conversion factor was GDP per capita in PPP dollars divided by GDP per capita in local currency; World Bank data of 2016<sup>7</sup>).</p>

<sup>7</sup> For Venezuela 2014 GDP figures were used and the conversion factor was multiplied by 0.10, due to lack of recent data. The income categories in the 2014 LAPOP survey were approximately 10% of the income categories of the 2016 survey, indicating a 10-fold inflation in 2016 compared to 2014.

**Table 4 Results explaining SWB on a three-point scale.**

	Multilevel ordered logit coefficients ( <i>t</i> -statistic)	
	Main effects	Moderation
<b>Economic hardship</b>		
The salary that you receive and total household income:		
• Is good enough for you and you can save from it	-	-
• Is just enough for you, so that you do not have major problems	-0.325*** (-5.956)	-0.807*** (-4.080)
• Is not enough for you and you are stretched	-0.769*** (-9.897)	-1.321*** (-6.782)
• Is not enough for you and you are having a hard time	-1.048*** (-11.46)	-1.489*** (-6.428)
<b>Institutions</b>		
<i>Religiosity</i> : Do you attend meetings of any religious organization?		
• Never	-	-
• Once or twice a year	-0.0705 (-1.643)	-0.268** (-2.082)
• Once or twice a month	0.0228 (0.421)	-0.283* (-1.841)
• Once a week	0.175*** (4.862)	0.0360 (0.251)
Moderation:		
• Just enough x Once or twice a year		0.129 (1.036)
• Just enough x Once or twice a month		0.340** (2.229)
• Just enough x Once a week		0.177 (1.376)
• Not enough and stretched x Once or twice a year		0.325** (2.228)
• Not enough and stretched x Once or twice a month		0.361** (2.241)
• Not enough and stretched x Once a week		0.192 (1.265)
• Not enough and hard time x Once or twice a year		0.168 (1.025)
• Not enough and hard time x Once or twice a month		0.239 (1.407)
• Not enough and hard time x Once a week		0.0343 (0.221)
<i>Interpersonal trust</i> : Would you say that people in your community are:		
• Very untrustworthy	-	-
• Somewhat untrustworthy	-0.0675 (-1.505)	-0.671*** (-3.097)
• Somewhat trustworthy	-0.0771* (-1.710)	-0.413** (-2.229)
• Very trustworthy	0.431*** (7.895)	0.111 (0.444)
Moderation:		

• Just enough x Somewhat untrustworthy		0.621***
		(3.132)
• Just enough x Somewhat trustworthy		0.331*
		(1.702)
• Just enough x Very trustworthy		0.316
		(1.186)
• Not enough and stretched x Somewhat untrustworthy		0.679***
		(3.000)
• Not enough and stretched x Somewhat trustworthy		0.355*
		(1.884)
• Not enough and stretched x Very trustworthy		0.356
		(1.400)
• Not enough and hard time x Somewhat untrustworthy		0.597***
		(2.657)
• Not enough and hard time x Somewhat trustworthy		0.400*
		(1.918)
• Not enough and hard time x Very trustworthy		0.326
		(1.090)
<i>Confidence in politics</i>	0.178***	0.201***
	(12.39)	(3.290)
Moderation:		
• Just enough x Confidence in politics		-0.0256
		(-0.412)
• Not enough and stretched x Confidence in politics		-0.0203
		(-0.251)
• Not enough and hard time x Confidence in politics		-0.0249
		(-0.325)
<b>Other variables</b>		
Age	-0.0259***	-0.0259***
	(-5.412)	(-5.402)
Age (squared)	0.000194***	0.000193***
	(3.769)	(3.791)
Women	0.0675*	0.0673*
	(1.713)	(1.685)
Years of education	0.00341	0.00331
	(0.632)	(0.614)
Income (log)	0.0803***	0.0808***
	(3.828)	(3.859)
Imputed dummy for Income	0.519***	0.520***
	(3.420)	(3.445)
Work status:		
• Employed	-	-
• Unemployed	-0.343***	-0.342***
	(-9.647)	(-9.664)
• Retired and/or disabled	0.140	0.143
	(1.570)	(1.606)
• Other	-0.0858***	-0.0865***
	(-2.605)	(-2.590)
Constant (SWB=1)	-	-
Constant (SWB=2)	-2.560***	-3.031***
	(-14.99)	(-11.98)
Constant (SWB=3)	-0.548***	-1.019***
	(-2.918)	(-3.896)
Variance constant level 2	0.184***	0.185***

Observations	(2.795)	(2.801)
Number of countries	22,836	22,836
	19	19

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\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Source: LAPOP (AmericasBarometer Survey, 2017)

**Table 5 Results explaining SWB on a three-point scale: the cushioning impact of social spending on the effect of informal institutions**

	Multilevel ordered logit coefficients ( <i>t</i> -statistic)			
	Whole sample		Most deprived	
	Main effects	Moderation	Main effects	Moderation
<b>Economic hardship</b>				
The salary that you receive and total household income:				
• Is good enough for you and you can save from it	-	-		
• Is just enough for you, so that you do not have major problems	-0.325*** (-5.982)	-0.325*** (-5.957)		
• Is not enough for you and you are stretched	-0.769*** (-9.920)	-0.768*** (-9.891)		
• Is not enough for you and you are having a hard time	-1.048*** (-11.50)	-1.050*** (-11.46)		
<b>Institutions</b>				
Social expenditure	0.146* (1.705)	0.195* (1.762)	0.122** (1.966)	0.153 (1.533)
Unemployment rate	-0.0406 (-1.253)	-0.0392 (-1.234)	-0.0476* (-1.938)	-0.0444* (-1.936)
<i>Religiosity</i> : Do you attend meetings of any religious organization?				
• Never	-	-	-	-
• Once or twice a year	-0.0701 (-1.633)	0.0576 (0.178)	-0.0997 (-1.190)	-0.353 (-0.455)
• Once or twice a month	0.0236 (0.435)	0.557 (1.464)	-0.0290 (-0.417)	-0.226 (-0.506)
• Once a week	0.177*** (4.894)	0.737*** (6.001)	0.0955 (1.140)	0.338 (0.720)
<b>Moderation</b>				
• Social expenditure x Once or twice a year		-0.0185 (-0.392)		0.0380 (0.341)
• Social expenditure x Once or twice a month		-0.0805 (-1.372)		0.0313 (0.499)
• Social expenditure x Once a week		-		-0.0369
		0.0855*** (-4.370)		(-0.532)
<i>Interpersonal trust</i> : Would you say that people in your community are:				
• Very untrustworthy	-	-	-	-
• Somewhat untrustworthy	-0.0681 (-1.517)	-0.0124 (-0.0633)	-0.0680 (-0.773)	0.185 (0.544)
• Somewhat trustworthy	-0.0781* (-1.747)	-0.236 (-0.729)	0.0203 (0.192)	-0.274 (-0.365)
• Very trustworthy	0.431*** (7.889)	0.954*** (3.539)	0.434*** (3.826)	1.394*** (3.794)
<b>Moderation</b>				

• Social expenditure x Somewhat untrustworthy		-0.00870		-0.0390
		(-0.248)		(-0.687)
• Social expenditure x Somewhat trustworthy		0.0227		0.0421
		(0.465)		(0.371)
• Social expenditure x Very untrustworthy		-0.0794*		-0.147**
		(-1.722)		(-2.427)
<i>Confidence in politics</i>	0.178***	0.196*	0.157***	0.496***
	(12.28)	(1.806)	(4.133)	(2.851)
Moderation				
• Social expenditure x Confidence		-0.00255		-0.0516*
		(-0.163)		(-1.921)

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Control variables	included	included	included	included
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\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Source: LAPOP (AmericasBarometer Survey, 2017)