

# Prosperity in Spain and Latin America: Myths and Facts<sup>1</sup>

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DOI: 10.5281/zenodo.3958006

## Abstract

*This paper presents a comparative analysis of 18 Latin American countries and Spain, from 2007 to 2018, in terms of well-being, from a multidimensional perspective, using the Prosperity Index by Legatum. Results of the investigation show a positive convergence trend among most of the countries under analysis (not the case for Venezuela), even in differentiated ways, both in general terms and in specific areas.*

**Keywords:** Development, Index, Prosperity, Latin America, Spain.

## Introduction

Over five centuries of common history, Spain and Latin America have woven relations by multiple ties, and during the last decades, those connections increased in terms of investments, cooperation, economic exchange, and human mobility. This creates a complex exchange system, of goods, services, information and flows of people whose configuration involves economic, legal, historical and cultural elements (Domingo and Galeano, 2018:6).

Understanding wellbeing from new approaches is much more than technological advance or economic growth, but the multidimensional possibilities and opportunities given to people to achieve the decent standard of living they aspire. With that in mind, we advanced a comparative analysis among 18 Latin American countries and Spain for 12 years (2007-2018), using the Prosperity Index by the Legatum Foundation and its nine pillars. An exploratory and descriptive statistical analysis is made, combined with trends analysis over time, rates of variations, dispersions and averages, as well as projections and cluster analysis. A first hypothesis of the study is that Latin American countries and Spain -given their common elements in terms of culture, language, and history- show a convergence trend. A second hypothesis is that regional countries' trend is aimed at improving their conditions, both in general terms reflected in the index score, and in specific areas expressed by its nine pillars.

The paper is structured in the following sections: Section 2 presents the theoretical evolution of development and wellbeing, from a unidimensional to a multidimensional and complex concept and justifies the selection of the Prosperity Index for the analysis. Section 3 shows the index results, a comparative analysis for aggregate scores and its pillars, for the selected countries for 12 years, and a cluster analysis. Finally, conclusions are presented.

## Literature Review

### 2.1 Multidimensional Development

Over the past six decades, the concept and measurement of development and well-being have run alongside the evolution of capitalism and of its critics. It has gone from a mainly technological or economic approach, unidimensional and measured by objective quantifications; to a complex one with multiple dimensions: economic, social, political, environmental, among others. We are currently facing what is so called a Post-developmental moment, having as one of its most significant changes, the expansion and diversification of dimensions and the incorporation of subjective measures and perceptions, such as emotions.

Of all the antecedents, three are mandatory to be underlined. The first one is the conference entitled "Beyond GDP", held in 2007 with support from the European Commission, the European Parliament, the Club of Rome and the World Wildlife Fund (WWF). The importance of this conference was to highlight the most suitable indicators to measure progress and how they can be incorporated into the decision-making processes (Phélan and Levy-Carciente 2018). This conference became the seed for the current measurements of Quality of Life in Europe. The European Commission subsequently published a report called "GDP and beyond. Evaluation of Progress in a Changing World", with relevant contributions for measuring development from a wider approach. It also influenced the elaboration of the report "Measurement of progress, well-being and sustainable development" of

<sup>1</sup> Research project registered under CDCH/UCV PG-007/2016. Advanced results were presented at the XIII Spanish Congress of Sociology 2019 FES, Working Group 42, Comparative Sociology between Europe and Latin America.

the European Statistical System (Eurostat, 2011) which includes a series of recommendations that will serve to operationalize the Multidimensional Measurement of Quality of Life by Eurostat.

The second reference is the Commission on the Measurement of Economic Development and Social Progress (CMPEPS<sup>2</sup>) also known by the last names of those who initiated the coordination of the document: Commission Stiglitz-Sen-Fitoussi. The commission's mission was to 1) define GDP constraints to measure social progress and to review the problems related to its measurement; 2) identify additional data to measure social progress; 3) evaluate the feasibility of alternative measuring instruments and 4) discuss more appropriate ways to present statistical data (Stiglitz, Sen and Fitoussi 2008). The report of this Commission gives 12 recommendations focused on improving the measurement of economic performance and social progress on three fundamental issues: Product (From Production to Wellbeing); the multidimensionality of the Quality of Life (including objective and subjective approaches); and those regarding Sustainability and the Environment. The aforementioned report generated repercussions in the measurement of wellbeing, which are reflected in three indices: Better Life Index, The Social Progress Index, Sustainable Economic Development Assessment (SEDA) and an academic initiative such as Oxford Poverty and Human Development Initiative (OPHI). This last initiative has worked not only on the measurement of poverty with a multidimensional perspective but has tried to account for other variables - called "missing dimensions"- which include those of a psychological nature, linked to other aspects of the development of the individual and human rights (Alkire 2007 in Vargas 2017).

A third necessary reference is the capabilities perspective provided by Martha Nussbaum (2018). The key element of her proposal is that development should focus on people; it must be sensitive and plural. The important thing is not economic growth, but the growth of the individual; growth through the strengthening and empowering of his/her capabilities. People do not fight for national income, but to achieve a meaningful life for themselves. In a normative way, it proposes a list of central human capabilities that are minimum requirements to achieve human dignity within a politically acceptable order.

From the South countries, in the 1980s, 28 countries in Africa, Asia, and Latin America formed the South Commission, chaired by J. Nyerere (Nyerere 1988). The commission made relevant contributions to an alternative approach to development and its measurement, some of which remain valid and others were adopted by the team that worked on the Human Development Index supported by the United Nation Development Program (UNDP) in 1990. In later decades, arose an initiative in Latin America, the 'Good Living' or *Sumak Kawsay* in Ecuador and *Suma Kamaña* in Bolivia, models that have their origin in the Andean indigenous ancestral life. As León points out, "Good Living in its basic formulation emphasizes the harmonic and integral relationship between human beings and nature" (León, 2010:35). 'Good Living' implies a new form of harmonious coexistence that overcomes human-nature dichotomy by proposing a reconsideration of constitutive aspects of the unsustainable life forms of today's society that calls for a deconstruction of what development means.

## 2.2. Review and Selection of Measurements

Following the revised discussions about multidimensional approaches to development, we decided to look for measurements that would respond to the recommendations of the commissions and studies, oriented towards a new way of focusing and measuring wellbeing or development as opportunities for people (Phélan 2018). From a set of international indexes -among unidimensional, multidimensional, univariable and multivariable-, we identified five development indices: The Social Progress Index, Sustainable Economic Development Assessment (SEDA), Legatum Prosperity Index, World Happiness Report and Sustainable Society Index.

We analyzed those five indices based on three elements: time series, geographic coverage, scope of dimensions, sub-dimensions and indicators. Next, a summary for each index.

- The Social Progress Index (SPI) based on the recommendations described in the CMPEPS report (Porter, Stern, & Green, 2014), contains three large dimensions: Basic Human Needs, Fundamentals of Welfare and Opportunities, with 12 sub-dimensions and 51 indicators. Recognizing that GDP alone is not enough guide for national development strategies, the SPI brings a new consistency to this effort, not by changing the way GDP is measured, but creating a complementary lens on the domestic performance. The SPI defines progress as the ability of a society to meet the basic human needs of its citizens, establishing the basic components that allow citizens and communities to improve and maintain the quality of their lives, as well as creating conditions so that all people reach their full potential. For the 2018 edition, 146 countries that cover 99% of the world's population are included. The analysis presents two restrictions: the available data series runs from 2014 to 2018 and there is no information for Venezuela.
- The Sustainable Economic Development Assessment (SEDA) is an index prepared by the Boston Consulting Group, BCG, as a diagnosis tool of the way countries transform their wealth into well-being. The index is supported by the CMPEPS report's recommendations (Beal & Rueda-Sabater, 2014). The SEDA, as a multidimensional index, measures four elements with 10 dimensions and 54 indicators. This index includes "long-term sustainability". It explores whether a country is equipped to keep generating improvements in future well-being, by evaluating what they call "key factors of sustainability". Additionally, it combines the evaluation of recent progress and the level of current well-being. For this analysis, SEDA studies all Latin American countries, except Cuba. The index has data from 2009 to 2018.

<sup>2</sup> CMPEPS: Commission sur la Mesure des Performances Économiques et du Progrès Social

- The Prosperity Index was developed by the Legatum Institute. Although not explicitly, the index seems to be based on the recommendations of the CMPEPS. It measures the prosperity of 149 countries (96% of the world's population) defining it as happiness, health and freedom. It is unique in the definition of prosperity as a combination of wealth and well-being. The index measures the concept of prosperity in a multidimensional way by measuring it from 9 pillars, with 104 indicators of which 28 are subjectively taken from the studies carried out by Gallup Inc. The Prosperity Index offers results for all Latin American countries except for Cuba. It shows data from 2007 to 2018.
- The World Happiness Report is an annual happiness ranking prepared and published by the United Nations Sustainable Development Solutions Network. The first report was released in April 2012 in support of a high-level UN meeting on "Well-being and happiness: defining a new economic paradigm"; and taking the recommendations and needs raised for the achievement of the Sustainable Development Goals (SDG). This report presents the available global data on national happiness and reviews the related evidence of the emerging science of happiness, which shows that the quality of life of people can be assessed in a consistent, reliable and valid way through a variety of measures of subjective well-being, referred to collectively. It is a report inspired by the measurement of Gross Domestic Happiness carried out by the Kingdom of Bhutan since 1979. The 2018 World Happiness Report does not offer results for Cuba, nor Paraguay. Statistics are available from 2006 to 2018.
- The Sustainable Society Index (SSI) is prepared by The Sustainable Society Foundation. The index is based on the Brundtland Report published in 1989, also known as 'Our Common Future'. The index broadens the perspective of that commission, highlighting the importance of the community in which we live and its quality of life, integrating it with sustainability in a single index: "Without quality of life, sustainability does not make sense, and without sustainability, the quality of life has no perspective" (Report 2006:15). Its first edition is of 2006 and since then it is published every two years. The objective of the index is to measure and monitor the level of sustainability of a total of 154 countries. For this analysis, the index presents information for all Latin American countries, but does not show grouped results of the three dimensions, it keeps the result of each one separately. It also has a 6-year data series from 2006 to 2016

The review of the five indices shows the important evolution for the measurement of development, well-being and progress from a multidimensional approach, but also constraints for a complete comparison of Latin American countries and Spain. The Legatum Prosperity Index shows the best features for the analysis because, although it has no information for Cuba, it has a longer time series and its dimensions offer a more complex perspective of the situation for each country.

As an additional exercise, we performed a Pearson Correlation with the results for Latin America in the last year of each of the five indices, evidencing that the Legatum Prosperity Index has a high correlation with the SPI (0.820) and the SEDA (0.822), medium correlation with the SSI (0.49) and with the World Happiness Report (0.56). So the analysis based on the Prosperity Index reflects the conditions of the two indices with which it is highly correlated.

### 2.3. Legatum Prosperity Index

The Legatum Foundation, with the support of Oxford Analytica, as well as a group of academics have defined prosperity as a combination of two major aspects, economic prosperity and social wellbeing. Economic prosperity is considered more than GDP *per capita*, including quantitative and qualitative aspects not captured by its money value. For social welfare, all aspects of life are taken, including subjective ones, such as happiness and satisfaction for life. The definition of prosperity is holistic, organized in three broad areas: Open Economies, Inclusive Societies, and People Empowerment (Legatum Institute, 2018b). Nine dimensions are distributed in each area. The dimensions, as engines of prosperity, may have different levels in each country at different times, but each country needs the combination of these dimensions to achieve prosperity.

Table 1. Pillars & Areas. Legatum Prosperity Index

	Pillars	Areas					
Open Economies	Economic Quality	Standard of Living	Economic Inclusiveness	Anti-Monopoly Policy	Labor Force Participation	Trade Competitiveness	Easy of Trade
	Business Environment	Entrepreneurial environment	Business infrastructure	Access to Credit	Investor Protections	Labor Market Flexibility	
Inclusive Societies	Governance	Rule of law	Government Integrity	Government Performance	Political Participation		
	Personal Freedom	Basic Legal Rights	Individual Freedoms	Social Tolerance			
	Social Capital	Personal & Social Relationships	Social Norms	Civic Participation			
	Safety & Security	National Security	Personal Safety	Security of Living Cond.			
Empowered People	Education	Access to Education	Quality of education	Human Capital of Workforce			
	Health	Health Outcomes	Health Systems Quality	Illness and Risk Factors			

	Natural Environment	Environmental Quality	Environmental Pressures	Preservation Efforts			
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A country will have prosperity if it has economic growth, high innovation, highly democratic institutions, good levels of health, strong community ties, individual and political freedoms, all so that citizens can choose the type of life they want to have. It is possible that in certain circumstances some pillars will be more important than others will. In summary, prosperity is more than the accumulation of material wealth, is to achieve the quality of life, respect for freedom, living in peace and with improvement's projections for the future.

The concept of prosperity is complex because it is multidimensional; also, its measurement. The Legatum Prosperity Index uses several methods from the selection of the variables, weighting, normalization, including statistical regression techniques, to produce results more adjusted to the real situation. The index has an individual and a collective approach, for which it combines objective and subjective indicators in each of the sub-indices. Objective indicators measure income and subjective indicators – basically, using perceptions- measure well-being. For example, in the Economy pillar, they adopt inflation as an income indicator and Satisfaction with the Standard of Living as an indicator of well-being. In the Health pillar, as a quantifiable indicator the Infant Mortality Rate is adopted, and as well-being, Satisfaction with Health (Legatum Institute, 2018b). The nine pillars have the same weight, if people value them equally. Table 1 shows the three main areas and the nine pillars of the Prosperity Index<sup>3</sup>.

### Results and Discussion

The results of the Prosperity Index for 2018 (see Figure 1 and Table 2) show the cross-sectional and multidimensional situation of prosperity for Latin America countries and Spain. Although Latin America and the Caribbean are the third region with the highest ranking in prosperity (Legatum 2018:20) there are important internal disparities. Venezuela is among the countries that have the lowest levels of prosperity in the world and the only one in the region in the range of unfavorable results; Uruguay, Costa Rica and Chile show acceptable levels; while a third group with fourteen countries shows intermediate and low levels.

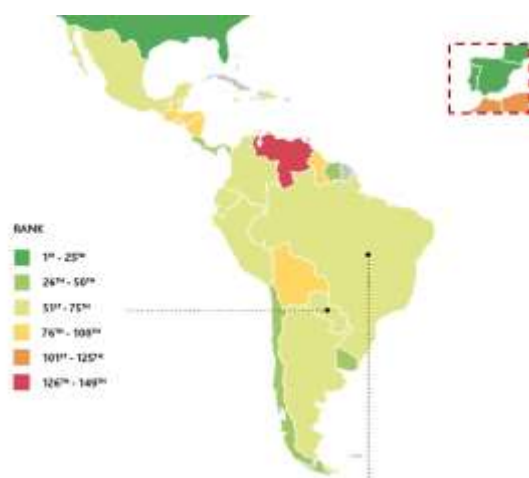


Figure 1. Prosperity Index scores. 2018

Table 2. Prosperity Index ranks. 2018

Country	Accr.	Rank	Global Rank
Uruguay	URY	1	30
Costa Rica	CRI	2	31
Chile	CHL	3	38
Panama	PAN	4	43
Argentina	ARG	5	53
Colombia	COL	6	57
Mexico	MEX	7	59
Peru	PER	8	60
Paraguay	PRY	9	61
Dominican Republic	DOM	10	63
Brazil	BRA	11	65
Ecuador	ECU	12	71
Nicaragua	NIC	13	77
Honduras	HND	14	79
Guatemala	GTM	15	85
Bolivia	BOL	16	87
El Salvador	SLV	17	92
Venezuela	VEN	18	126

It is important to highlight that in Western Europe, Spain ranks 17 immediately below Portugal and above Cyprus, Italy and Greece. Spain is among the first 25 countries in the world with the highest levels of prosperity.

Given the limitation of the cross-sectional analysis to show the evolution and variations of prosperity over time, an analysis of trends is presented below. The observation of prosperity over time allows us to have a perspective of the evolution of those countries under analysis. It shows which countries have better or worse results and which countries have the biggest changes, either positive or negative. We used exploratory and descriptive statistical analyses, combined with trend analysis, rates of variations, dispersions and averages. Dispersions and averages allow us to complement the analysis looking for the stability presented by countries (through the standard deviation in time) and combined with the resulting averages, behaviors emerge. Additionally, a cluster analysis is applied between the first year (2007) and the last year of the series (2018) of the series, to offset the changes between those periods and help to broaden the understanding of the phenomenon and its results.

#### 3.1. Time Series Analysis

<sup>3</sup> For a detailed information of pillars and indicators visit: <https://www.prosperity.com/data-explorer>.



Figure 2 shows a first comparative analysis of the 18 Latin American countries and Spain from 2007 to 2018. The following stands out from the figure: the top black line represents Spain. Very close come to a group of four countries: Uruguay, Costa Rica, Chile, and Panama, with an upward trend. In 2012 Argentina was getting close to this group. This group of four countries shows a good performance in prosperity, from the perspective of the index, and reducing the gap with Spain. Uruguay and Costa Rica show a growing trend in the last years. Figure 3 compares Spain and Costa Rica, showing very similar results in the performance of the nine pillars for 2018.

The remaining 14 countries maintain irregular trajectories, with a positive trend in prosperity, except for Venezuela. The latter country begins to decline in 2009, but it is in 2013 when we find a statistically significant break. Over the years, it has distanced itself from most of the countries in the region, and its position polarizes it against Spain. To have a more complete idea of these routes, we performed a cluster and trend analysis.

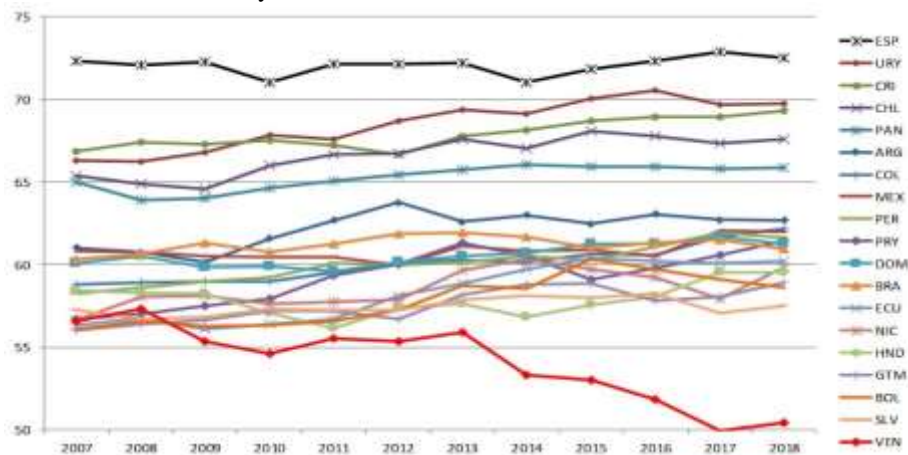


Figure 2. Legatum Prosperity Index. Scores. Latin America and Spain. 2007-2018

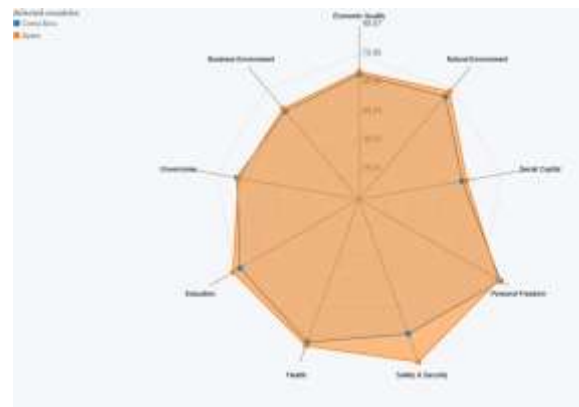


Figure 3. Legatum Prosperity Index. Spain and Costa Rica

### 3.2. Cluster Analysis

Considering the 9 pillars of the Prosperity Index, we performed a cluster analysis for the first and the last year of the time series (2007 and 2018) to illustrate the change. The cluster analysis aims to group similar entities or countries into conglomerates, as homogeneous as possible according to the observed variables. To take advantage of the variability in the analysis, given the large differences observed among the countries of the region, we adopted the Ward Method with Euclidean squared distance, which groups the countries with minimum loss of inertia. As a previous step to the cluster analysis, we carried out a Principal Components Analysis (PCA) to reduce the dimensions by factors, given the high correlation among them.

Cluster 2007 Option 1	Cluster 2007 Option 2	Cluster 2018 Only Option
1 ARG; BOL; ECU; SLV; GTM; HND; MEX; NIC; PRY; PER.	1 ARG; BOL; ECU; SLV; GTM; HND; MEX; NIC; PRY; PER.	1 ARG; BOL; ECU; SLV; GTM; HND; MEX; NIC; PRY; PER; BRA; COL; DOM.
2 BRA; COL; DOM; VEN.	2 BRA; COL; DOM; VEN.	2 VEN.
3 CHL; CRI; PAN; URY; ESP.	3 CHL; CRI; PAN; URY.	3 CHL; CRI; PAN; URY; ESP.
	4 ESP.	

Figure 4. Cluster analysis results. 2007 and 2018.

The first hypothesis that support our research is that there is a convergence trend among the countries under analysis. Given the results, the distance between Spain, first ranked in the sample, and some countries is closing, as already observed in Figure 2. When conducting a cluster analysis of the countries for the first year of the series, 2007, compared to the last year, 2018, interesting changes are evident.

The PCA results for 2007 express that the first 8 dimensions define a first factor that includes 54.76% of the inertia; followed by a second factor composed by the ninth dimension, Environment, which absorbs 12.90% of the inertia. The results of the PCA for 2018 are like the previous one, the first and second factors constitute 58.41% and 13% of the inertia, respectively. Besides, in both years the first 2 factors gather 2/3 of the total inertia. Then, the mobile center algorithm is used to show inertia within groups and between groups, to decide the optimal number of classes or groups in the respective years (see Appendix 1).

Figure 4 shows that Spain in 2007, statistically, offered two options: a) it could be part of a cluster with the first 4 countries of Latin America, or b) it could be a separate cluster in itself. In 2018 the situation is different because statistically, Spain has no chance of being separated from the first four Latin-American countries. The fourteen remaining countries, in 2007 are grouped in two different clusters, while in 2018 they consolidated into one. Venezuela is statistically significantly isolated being a separate cluster in itself.

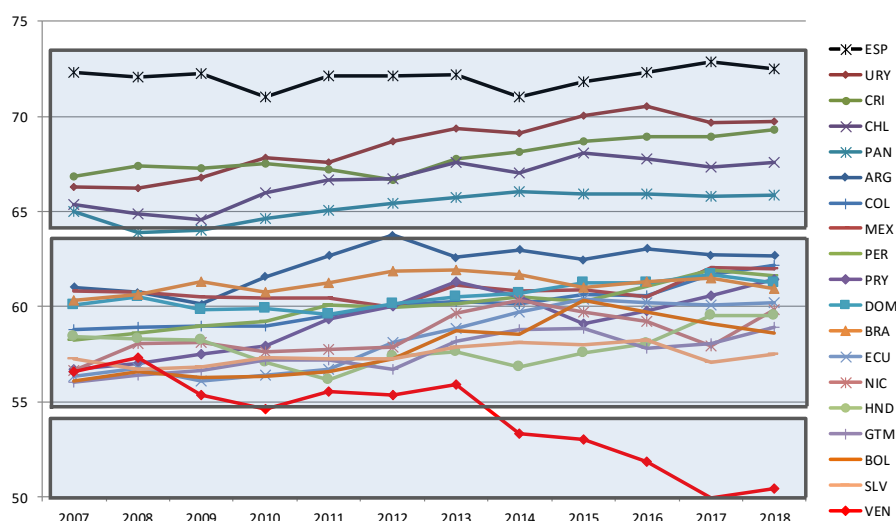


Figure 5. 2018 Cluster analysis results and Prosperity Index Scores.

Figure 5 includes 2018 cluster analysis results based on Figure 2. To ease the visualization, Figure 6 shows an average of Cluster 1 compared with the rest of the countries. Based on 2018 clusters, Figure 7 shows an adjusted linearly trend for the Cluster 1 average and the rest of the countries. It is worth highlighting: a) the almost flat behavior of Spain - $R^2$  low value-, while the rest of the countries of Cluster 3 show a higher slope, a trend of approximation and convergence to it; b) a more pronounced positive trend for Cluster 1; and c) a decreasing behavior -negative slope- for Venezuela (Cluster 2). It could be said that the performance of Spain is very stable over time, a matter that will be expanded onwards.

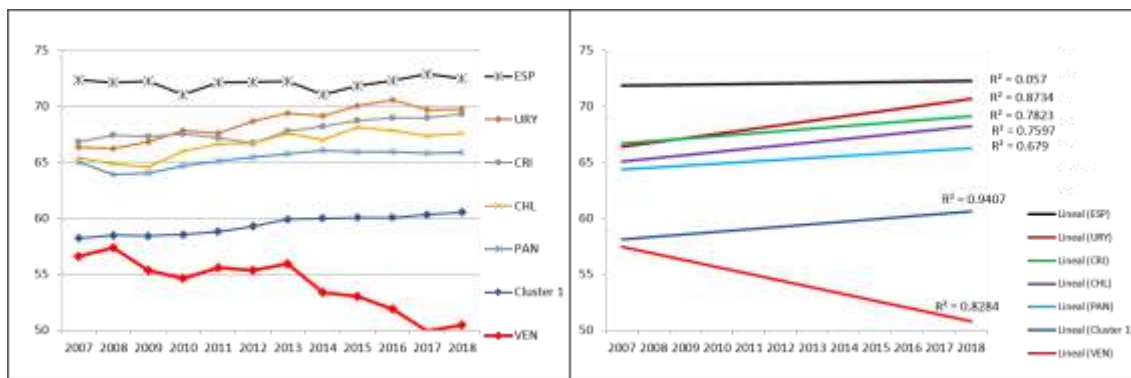


Figure 6. Prosperity Index Scores, 2007-2018

Figure 7. Adjusted linearly trend, 2007-2018

### 3.3. Changes and Stability

We compared the change rate of 2007 and 2018 Property Index scores. Averages and dispersions are calculated for the entire time series. Between 2007 and 2018, Paraguay shows the highest positive change rate, meaning that it has achieved the greatest progress during the years under analysis; Venezuela shows the highest loss of prosperity; while Spain shows the least positive change.

That Paraguay has the greatest positive change does not mean that it has the best results for 2018 (see Figure 2), but it "is one of the countries that show a long-term trend towards greater prosperity" (Legatum 2018:10). Venezuela is the opposite case, it has the highest negative variation (in fact, the only negative), that is, the greatest loss of prosperity over time, in addition to the lowest average and high dispersion, which explains its great volatility. It is the worst qualified country for Latin America; it has lost its growth benchmark over the years, pointing towards other horizons. Venezuela, the "model democracy of Latin America, is now unrecognizable, struggling to maintain law and order and feeding a divided people; with a significant emigration of people, seeking to create their paths from poverty to prosperity" (Legatum, 2018:39).

Then we have Spain that, while showing the least positive change, has the highest scores, if compared to Latin American countries. This result, combined with its trends over time (see Figure 7, an almost flat slope) explains the low change and dispersion results. Consequently, Spain experiences great stability. The projection of stability, together with high or favorable results, generates trust and optimism in its citizens and for those who want to follow it up.

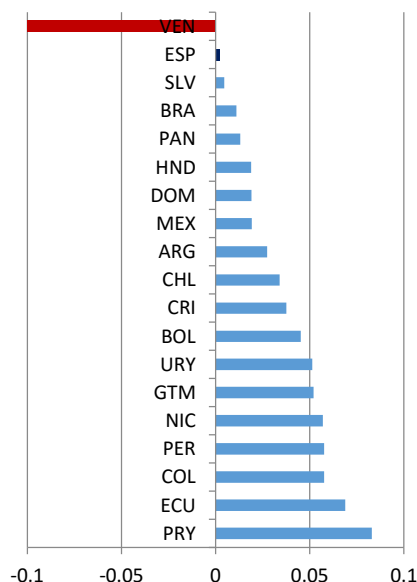


Figure 9. Prosperity Index Scores. Change rate, 2007vs 2018

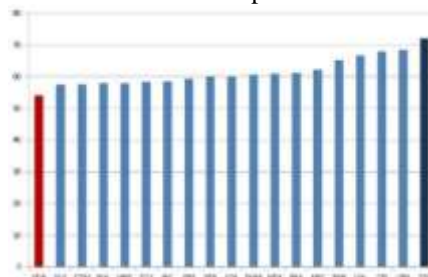


Figure 10. Prosperity Index Scores. Average, 2007-2018

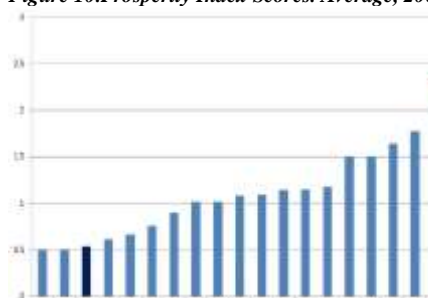


Figure 11. Prosperity Index Scores Dispersion, 2007-2018

However, it is important to keep in mind that stability is a goal after achieving good results. An example of the above is El Salvador, a country that has the lowest dispersion of all, a low positive variation rate, but also a very low average of prosperity. Therefore, it is important to consider stability as a yardstick afterward a minimally acceptable level of prosperity.

Worth insisting, the goal is not only to grow, but to grow in harmony or balanced. Following the structure of the Prosperity Index, it means to improve in the three areas and nine dimensions of the index, instead of having different levels of improvement among dimensions, jeopardizing stability. Deepening in the stability requirement, the improvement must be

harmonious among the dimensions of the index. Therefore, it is necessary to address the analysis of each dimension that makes up the measurement of Progress according to Legatum. This also allows deepening into the situation of each country and its possible explanations.

### 3.4. Prosperity Index Pillars' Evolution

To understand each country's trend, we analyzed the 9 pillars of the index. For this, it is important to review the results presented in Table 3 and Table 4, which represent, like Fig. 9 and Fig. 10, the changes between the first and the last year of the period under analysis, as well as the average results for the time series.

Table 3. Change rate, 2007 vs 2018

Countries	Economic Quality	Business Environment	Governance	Education	Health	Safety & Security	Personal Freedom	Social Capital	Natural Environment
ARG	-0.025	0.058	-0.004	0.044	-0.012	-0.017	0.205	-0.037	-0.044
BOL	0.094	0.086	-0.004	0.252	0.043	-0.040	0.308	0.045	0.044
BRA	-0.040	0.029	0.001	0.055	-0.003	-0.009	0.034	-0.043	0.044
CHL	0.055	0.059	-0.011	0.021	0.024	0.005	0.292	-0.044	0.044
COL	0.083	0.014	-0.003	0.083	-0.012	0.009	0.075	-0.052	0.044
CRJ	0.055	0.013	0.048	0.042	0.004	-0.009	0.063	-0.003	0.052
DOM	0.077	0.038	-0.009	0.002	0.008	-0.019	0.042	-0.021	0.078
ECU	0.075	0.051	0.176	0.008	0.003	-0.005	0.059	-0.047	0.002
ESP	-0.005	0.004	-0.012	0.042	0.004	0.048	-0.048	0.020	0.041
GTM	0.014	0.026	0.000	0.040	-0.005	-0.044	0.004	0.034	0.070
HND	0.004	0.030	-0.001	0.072	0.002	-0.000	-0.042	0.001	0.012
MEX	0.022	0.030	-0.000	0.084	0.003	-0.009	0.074	-0.000	0.075
PAC	0.011	0.018	-0.004	0.006	0.005	-0.000	-0.004	0.015	0.000
PAN	0.020	0.005	-0.000	0.039	-0.001	-0.072	0.008	-0.003	0.047
PER	0.002	0.050	0.002	0.078	0.005	-0.028	0.043	-0.000	0.056
PRY	0.006	0.006	0.000	0.002	-0.000	0.000	0.000	0.000	0.004
SLV	0.046	0.078	-0.004	0.038	0.002	-0.009	-0.057	-0.000	0.019
URY	0.013	0.067	0.003	0.040	0.000	0.000	0.079	-0.047	0.000
VEN	-0.040	-0.030	-0.011	0.018	-0.040	-0.001	-0.078	-0.000	-0.078

Table 4. Average, 2007-2018

Countries	Economic Quality	Business Environment	Governance	Education	Health	Safety & Security	Personal Freedom	Social Capital	Natural Environment
ARG	57.430	56.089	48.408	65.313	75.000	77.000	74.000	50.014	62.974
BOL	57.122	41.482	43.368	69.371	65.000	72.289	62.395	48.368	62.961
BRA	64.625	47.189	49.558	58.809	72.480	71.885	66.120	50.678	66.568
CHL	65.002	50.278	67.002	68.818	75.000	69.110	65.604	52.805	68.000
COL	60.170	55.896	43.779	61.575	73.861	55.681	60.637	61.378	68.633
CRJ	64.888	51.731	61.242	75.747	78.667	76.654	61.702	50.440	67.575
DOM	59.387	67.511	49.453	68.770	75.209	66.138	72.362	51.245	68.462
ECU	57.000	64.271	61.929	63.141	74.336	70.388	61.042	47.494	65.497
ESP	67.501	58.654	63.343	74.619	61.145	68.181	65.617	56.396	75.163
GTM	58.086	51.828	43.759	54.517	69.730	67.779	51.948	51.259	68.176
HND	55.000	51.126	41.354	60.542	75.400	66.188	60.697	68.520	65.290
MEX	62.220	57.000	48.504	67.072	75.178	65.111	62.489	48.656	62.954
PAC	55.341	47.536	41.006	55.470	71.740	70.948	68.981	49.729	64.366
PAN	60.000	61.000	51.477	66.598	74.587	75.500	72.840	58.662	65.845
PER	61.978	54.416	48.059	62.317	69.900	70.591	60.057	47.409	65.634
PRY	59.002	47.496	68.861	74.570	75.178	45.512	51.811	62.785	62.785
SLV	59.080	49.924	48.207	68.428	75.187	64.374	60.679	48.408	52.813
URY	65.170	55.221	65.340	68.364	69.800	75.500	57.719	52.719	64.211
VEN	54.804	65.187	27.650	61.170	72.811	68.007	68.825	45.796	61.710

In the following tables, the three lowest values are highlighted in black, and the three highest values among Latin American countries in dark gray. In the case of Spain, it was always highlighted with a light gray. Each of the nine pillars that make up the Prosperity Index is analyzed in the following paragraphs (Figure 12) trying to identify which dimension has had more impact on the prosperity of each country and to determine if they explain the performance observed. It also analyzes whether prosperity has occurred homogeneously among the nine pillars, or on the contrary, it shows an asymmetric evolution. Finally, we will try to expose if any convergence to Spain of the pillars results.

To make the reading of the graphs in each dimension and the analysis easier, we worked with Cluster 1 countries as a group in each dimension. Table 3 and Table 4 will indicate relevant information of a country of this Cluster, if necessary. Then, the results of the three main areas and the nine pillars of the index.



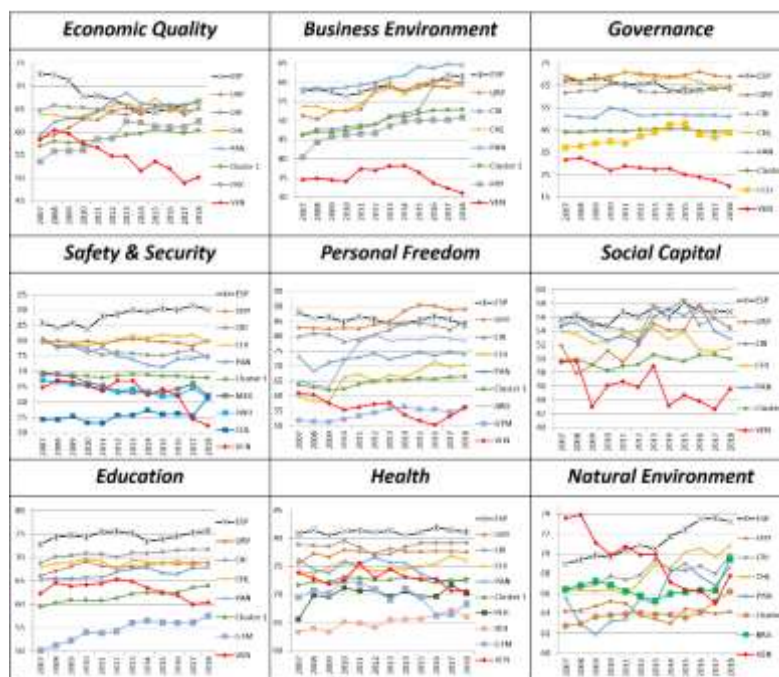


Figure 12. Results of the nine dimensions of the Prosperity Index, 2007-2018

### 3.4.1. Area Open Economies

#### Economic Dimension

According to Legatum (2018), the economic dimension classifies countries following economic living standards, economic inclusion, antitrust policy, participation in the labor force, commercial competitiveness and openness to trade. Seen this way, the economic dimension is key being the tool achieving well-being. A healthy economy in virtuous relationship with people's well-being. A growing and prominent economy that provides opportunities for wealth creation.

In this dimension for Cluster 1, we decided to further illustrate the behavior of Paraguay, being the country that shows the greatest positive change. As for the other countries, Panama displays the second positive change, followed by Uruguay. On the contrary, Costa Rica and Chile, show low positive changes, although they have the best averages in the dimension, meaning that they have managed to maintain their good results over time.

Two countries show negative trends: Spain and Venezuela, the latter with the lowest position of the group of countries under analysis. The Venezuela economic situation, marked by the expropriation of companies, and the nationalization of others to be administered by the State, is well known, along with the continued harassment to the productive sector and the subsequent fall in the price of oil that completed the economic collapse, orchestrated from governments that follow the guidelines of the so-called '21<sup>st</sup> century socialism'. On the other hand, Spain reflects the effects of the economic crisis of 2008.

#### Entrepreneurship and Opportunity Dimension (Business)

This dimension measures the country's business environment: business infrastructure, access to credit, protection for investors, the flexibility of the labor market, and a business and business environment that fosters innovation and growth (Legatum, 2018). The region is an area of opportunities for entrepreneurship. Cluster 1 presents positive changes, and within these, Paraguay has the highest positive change rate. The same is true for Chile, Costa Rica and Uruguay. Particularly interesting is the case of Panama, which displays the best conditions for entrepreneurship, opportunities and innovation, even above Spain. Spain, despite its low results in the economic dimension, remains a country of interest for entrepreneurship and transformation of ideas; and shows an overall growing trend. Venezuela, on the other hand, is very particular, in 2010 shows a rebound until 2014 when it declines steadily. It is placed at the lowest level in the entire region and is the only one country that has a negative change (see Table 3), besides, in this dimension, for 2018, it was ranked the last in the world (Legatum 2018:39).

### 3.4.2 Area Inclusive Society

#### Governance dimension

This dimension measures the performance of a country in four areas: rule of law, government integrity, government performance, and political participation. A truthful and effective government that preserves order and impulses to achieve productive citizenship (Legatum, 2018).

The best performances in terms of accountability, transparency, and rule of law are Uruguay, Costa Rica and Chile, very close to Spain. In this case, Panama moves away from the group and is more associated with Cluster 1. Of this Cluster, Ecuador must be highlighted, showing the best positive change in the region. The rest of the countries in Cluster 1 do not show substantial

changes since 2007 improving governance. Finally, Venezuela, very far from the rest of the countries, has an evident tendency to move away and deteriorate in the dimension and its components, including the results for this dimension also "*has left it in the worst position in the world for 2018*" (Legatum, 2018; 39).

#### **Security Dimension**

The security and protection pillar classifies countries according to national security, personal security and the security of living conditions; security in both national or macro terms and personal or micro terms offers the conditions to carry out activities in a favorable environment of peace and freedom, key elements for social reproduction (Legatum, 2018).

Despite internationally high levels of intentional homicides in Latin America, some countries have improved. Colombia stands out with the greatest positive change, and on contrary Venezuela with the greatest negative change: according to Legatum (2018) is the dimension in which Venezuela has the most significant decline (see Table 3). The two countries went in opposite directions for the first time in 2017. The tendency of the countries of Cluster 1 is decreasing. The cases of Mexico and Honduras are significant. Mexico faces significant challenges, especially in Security and Protection, where it occupies the 127th position in the world, mainly because of the homicide rates, which is among the highest in the world (Legatum, 2018). Figure 12 shows that Mexico, Honduras, and Venezuela show the greatest negative change.

On the other hand, Uruguay and Chile are the countries on the best placements for 2018, also the best averages over time and the greatest stability. Costa Rica and Panama, although with good results, have had slight setbacks during the years under analysis. Spain shows relevant improvements over time, increasing the gap after 2010 with the nearest group of countries of Latin America. The only country that has similar behavior is Chile, but not significant enough to reduce its gap with Spain.

#### **Personal Freedom Dimension**

This dimension is associated with personal freedom. Measures national progress towards basic legal rights, individual freedoms and social tolerance. The dimension measures personal freedom in terms of expression, circulation, and coexistence with the other. Freedom is a necessary condition to lead and build a dignified life (Legatum, 2018).

In this dimension, Spain, since 2013, is surpassed by Uruguay. This is one of the three dimensions in which Spain presents negative changes with a slightly decreasing trend. Costa Rica follows the path of Uruguay and manages to overcome Spain promptly in a couple of years of the time under analysis. Both countries: Costa Rica and Uruguay have become a good positive reference for the rest of Latin America. Also, Argentina and Chile show high results, with the most positive changes. Panama has remained very stable over time. Cluster 1 had a slight improvement in dimension.

The lowest results are those of Guatemala and Venezuela; the latter with the highest negative variation, as a result of a government that has been fading the rule of law, fundamental rights, and civil and political freedoms.

#### **Social Capital Dimension**

The Social Capital dimension is measured by the strength of personal and social relationships, social norms and civic participation in a country. Social capital is measured in terms of social cohesion, trust and the existence of networks that make up the social fabric creating the basis for coexistence and exchange. It is a framework based on trust with others (Legatum, 2018).

At first glance, this dimension shows random or chaotic behavior, however, with interesting trends to analyze. Spain maintains a positive and stable growth. Costa Rica, Uruguay, and Panama, although exceeds Spain in a couple of years, maintain an irregular trend with ups and downs and with no consistency over time. Uruguay shows a growing trend, not is the case for Costa Rica and Panama, whose negative trend approaches them to Cluster 1. It is noteworthy the case of Chile, a country that starts in 2007 along with Spain and then follows a negative trend getting close to Cluster 1.

Venezuela shows a decreasing trend that, although it has volatility, is the country in the region with the greatest negative change. It has completely and alarmingly lost the concept of trust, coexistence and social fabric. Legatum (2018, 60) mentions that among the indicators only "*24% of Venezuelans trust the police force*", or in other words, 3 out of 4 distrust institutions and the social fabric.

#### **3.4.3 Area Empowered People**

##### **Education Dimension**

This dimension classifies countries by access to education, quality of education and human capital. Education is a pillar and a fundamental right for progress, in terms of access, opportunities, quality, and capabilities (Legatum, 2018).

Spain is a reference without a doubt in this dimension. Its behavior has been stable over time and with good results. Costa Rica follows, and very closely: Chile, Uruguay, and Panama. Chile is the country with the lowest positive change in the region. The general trend of the countries that make up Cluster 1 is growing, and we must highlight Guatemala with the greatest positive change. Again, Venezuela is the only country with a decreasing trend for the last years of the series, presenting in Table 3 the lowest and only negative change rate.

##### **Health Dimension**

Health is another of the pillars and fundamental rights for the progress of a country, in terms of basic care, adequate infrastructure, accessibility and satisfaction of the citizens. Health includes physical, emotional and mental domains. The dimension measures the performance of a country in three areas: health outcomes (physical and mental health), health systems, diseases and risk factors (Legatum, 2018).

In this dimension, Spain, as in the Education dimension, is a reference for Latin America, with a good and stable performance in time. Costa Rica, Uruguay, and Chile stand out with the highest scores and the best performances. Panama presents the highest negative change. The other negative trends are shown by Guatemala and Venezuela.

#### **Environmental Dimension**

The Natural Environment measures the performance of a country in three areas: quality of the natural environment, environmental pressures and preservation efforts. Increasingly, the environment, as part of human life, has become important in the conception of well-being and progress of countries. In the quality of the environment, it includes fundamental elements such as water and air (Legatum, 2018).

In most Latin American countries, there is a tendency to improve. In the cases of Brazil and Chile, the increase is explained by the protection of their maritime areas (Legatum 2018). In other countries, the improvement is a result of wastewater treatment. Despite observing a growing trend, there are also declines, one of these is the case of Venezuela with the greatest negative variation, while from 2007 to 2011 it was ranked the first. The sharp fall from 2013 is a result of the deterioration in environmental preservation and the uncontrolled exploitation of natural resources of gold, coltan and other minerals in the Venezuelan Amazon.

Spain has surpassed Venezuela since 2012 with a growing trend, which makes it a reference for the rest of Latin America. Following closely and with similar trends, we find Chile, Costa Rica and to a lesser extent Panama. Uruguay shows low values in this dimension. The general trend of the countries that make up Cluster 1 is growing, and Brazil stands out from all of them.

#### **3.5. The nine dimensions for the 19 countries**

Spain is, without a doubt, the top performance country of the sample in most of the dimensions, especially in Education, Health and Safety, related to fundamental rights. The remaining six dimensions, while showing good results, do not reach leadership positions. The performance on these dimensions is the result of events, decisions and social debts remaining in its society. Spain is a young but stable democracy, with solid institutions committed to overcoming difficulties such as economic crisis, corruption, migration crisis, and nationalism. At the other extreme, we find Venezuela, a country showing all negative rate changes, occupying the lowest positions in most of the pillars or dimensions. A country that for decades enjoyed economic prosperity today is plunged into a fragile state condition, with the worst result that a nation can show, as it expels millions of its citizens.

Chile, another country with good results, has five dimensions among the three best average scores, and only two with negative changes. Of the two negatives, social capital also has the lowest average compared to the rest of the dimensions. That is, besides having change negatively, it has the lowest score. The weakness of the social fabric is tried to compensate with high levels of personal freedom, but it is not enough to close the gap in opportunities or access to fundamental rights, such as education and health.

Other countries with good results are Costa Rica and Uruguay, placed very close to Spain. Their improvements are linked to the security dimension in the first case, and with environmental aspects in the second one. Panama, with good performance in the economic dimension, keeps pending tasks in the social dimension, such as health and education.

Within Cluster 1, the case of Paraguay is interesting, because despite not being among the best performances, it shows the most positive changes in six of the nine dimensions. Although Nicaragua has had negative changes in governance and freedoms, it shows advances in the economic and social pillars, contributing to offset the effects of a regime with an authoritarian bias.

Ultimately, this analysis shows that of the nine pillars of the index, Social Capital and Entrepreneurship are those that have the lowest scores and performance for Latin America. This gives us hints to say that inequality of opportunities, social disparities, administrative corruption, are still pending issues in many of the countries of the region, in the understanding that progress must be understood as symmetric or harmonic advance among the nine pillars. Spain as a Hispanic model shows somehow that scheme, followed very closely by Costa Rica and Uruguay.

#### **Conclusions**

The analysis of the Legatum Prosperity Index, through its time series, allowed us to observe and compare 18 Latin American countries, using Spain. In the analysis of 12 years, we identified the countries with the best results and their significant changes, both positive and negative.

Based on the results of the index, we identified three groups of Latin American countries. The first formed by, Uruguay, Costa Rica, Chile, and Panama, with results close to Spain. A second group consisting of thirteen countries, with results that indicate positive behavior. The third, with just Venezuela with a negative trend, separating itself from the entire region.

The cluster analysis carried out with the nine index pillars, statistically confirms the three groups initially identified for 2007 and 2018. Within the cluster of countries showing the most positive results, three of them: Costa Rica, Chile, and Panama, are members of the Pacific Alliance. In the case of Venezuela, promoter of the Bolivarian Alliance for the Peoples of America

(ALBA) and with a development model based on the 'Socialism of the 21st Century', shows negative results in almost all the pillars analyzed.

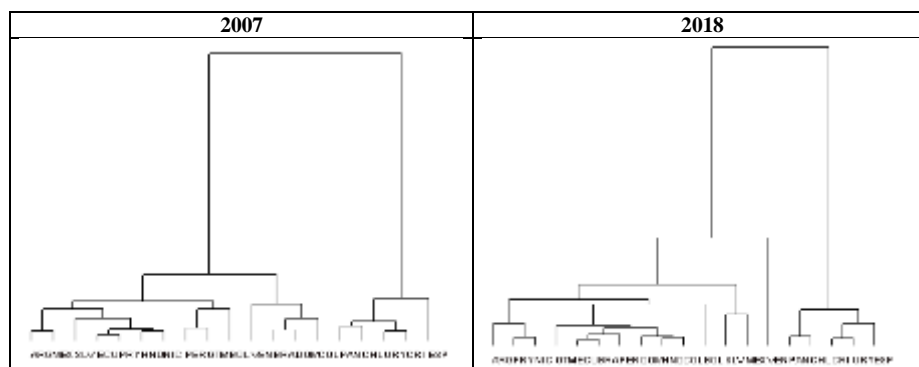
From the multidimensional approach and the scoring of the index, interesting aspects of each dimension can be concluded in terms of their changes and averages. Paraguay is the country that shows a statistically significant improvement in prosperity over time, with the highest variations in six of the nine dimensions. This does not mean that it had good results, but the highest improvement. On the other hand, Venezuela is the country that has remarkably declined in all the nine dimensions.

Although showing signs of progress, the analyzed countries still maintain inequities and inequalities with important challenges on rights and freedom, showing the asymmetric progress among the pillars of the index. Because progress or well-being will hardly be achieved if some dimensions advance to the detriment of others, this seems to be the biggest dare in the region. Though we see countries with good scores and advances in key dimensions such as health and education, this is not the case in other dimensions, such as governance or freedoms. Progress must be faced on the macro and the micro-level, accounted with objective and subjective measures, and this is another great challenge. Macro policies are necessary, but also the subjective evaluation of citizenship on those policies. Likewise, these countries show important differences among them, being barriers to their integration in diverse fields. This will be a challenge for the new regional integration organizations, such as the Forum for Progress of South America (PROSUR), signed in March 2019 by eight Latin American countries and chaired first by Chile, and to be followed by Paraguay in 2020 (PROSUR, 2019).

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## Appendix DENDOGRAMS



## INERTIAS



Cluster	Inertia	Countries	Distance of Centroids to origin	Coordinates of centroids		
				Factor 1	Factor 2	Factor 3
Inter-classes	4.72302					
Intra-classe						
Classe 1/ 3	2.25662	10	2.30801	-1.40853	0.54000	-0.00372
Classe 2/ 3	0.89451	4	3.19327	-0.55573	-1.62168	0.23284
Classe 3/ 3	1.12584	5	10.77680	3.26164	0.21735	-0.17884

Clusters for 2007, with 3 classes.

Cluster	Inertia	Countries	Distance of Centroids to origin	Coordinates of centroids		
				Factor 1	Factor 2	Factor 3
Inter-classes	5.27945					
Intra-classe						
Classe 1/ 4	2.25662	10	2.30801	-1.40853	0.54000	-0.00372
Classe 2/ 4	0.89451	4	3.19327	-0.55573	-1.62168	0.23284
Classe 3/ 4	0.56941	4	7.13883	2.60081	0.29540	-0.11783
Classe 4/ 4	0.00000	1	35.90110	5.90497	-0.09485	-0.42288

Clusters for 2007, with 4 classes.

Cluster	Inertia	Countries	Distance of Centroids to origin	Coordinates of centroids		
				Factor 1	Factor 2	Factor 3
Inter-classes	4.86483					
Intra-classe						
Classe 1/ 3	3.28020	13	0.68101	-0.79781	-0.05031	-0.14175
Classe 2/ 3	0.00000	1	33.39510	-5.43745	0.37928	1.43636
Classe 3/ 3	0.85496	5	10.03670	3.16179	0.05496	0.08127

Clusters for 2018.

**VALUE-TEST.** D1: Economic Quality; D2: Business Environment; D3: Governance; D4: Education; D5: Health; D6: Safety & Security; D7: Personal Freedom; D8: Social Capital; D9: Natural Environment. Statistically significant only if  $\geq 1.96$  or  $\leq -1.96$ .

Cluster 1			Cluster 2			Cluster 3		
Characteristic Variables	Value-Test	Probability	Characteristic Variables	Value-Test	Probability	Characteristic Variables	Value-Test	Probability
D6	-0.83	0.203	D9	2.07	0.019	D3	3.61	0.000
D2	-1.16	0.123	D8	1.07	0.143	D6	3.18	0.001
D4	-1.73	0.042	D1	0.19	0.424	D4	2.95	0.002
D5	-2.00	0.023	D7	-0.04	0.483	D8	2.95	0.002
D3	-2.30	0.011	D5	-0.24	0.405	D7	2.79	0.003
D7	-2.43	0.008	D4	-1.06	0.144	D1	2.63	0.004
D1	-2.48	0.007	D3	-1.08	0.139	D2	2.50	0.006
D9	-2.78	0.003	D2	-1.28	0.100	D5	2.48	0.006
D8	-3.47	0.000	D6	-2.42	0.008	D9	1.24	0.107

Clusters for 2007, with 3 classes.

Cluster 1			Cluster 2			Cluster 3		
Characteristic Variables	Value-Test	Probability	Characteristic Variables	Value-Test	Probability	Characteristic Variables	Value-Test	Probability
D6	-0.83	0.203	D9	2.07	0.019	D3	2.86	0.002
D2	-1.16	0.123	D8	1.07	0.143	D6	2.38	0.009
D4	-1.73	0.042	D1	0.19	0.424	D8	2.27	0.012
D5	-2.00	0.023	D7	-0.04	0.483	D4	2.07	0.019
D3	-2.30	0.011	D5	-0.24	0.405	D2	1.78	0.037
D7	-2.43	0.008	D4	-1.06	0.144	D7	1.72	0.043
D1	-2.48	0.007	D3	-1.08	0.139	D5	1.65	0.050
D9	-2.78	0.003	D2	-1.28	0.100	D1	1.26	0.104
D8	-3.47	0.000	D6	-2.42	0.008	D9	0.73	0.232

Clusters for 2007, with 4 classes. Note: The fourth class or Cluster 4 is not shown, as it is a single country: Spain.

Cluster 1			Cluster 3		
Characteristic Variables	Value-Test	Probability	Characteristic Variables	Value-Test	Probability
D2	-0.78	0.217	D3	3.34	0.000
D9	-1.27	0.102	D7	3.07	0.001
D1	-1.49	0.068	D1	2.97	0.001
D8	-1.60	0.054	D6	2.93	0.002
D6	-1.74	0.041	D4	2.77	0.003
D5	-1.86	0.031	D8	2.51	0.006
D3	-1.96	0.025	D5	2.41	0.008
D4	-2.10	0.018	D2	2.27	0.012
D7	-2.18	0.014	D9	1.26	0.103

Clusters for 2018. Note: The second class or Cluster 2 is not shown, as it is a single country: Venezuela.



