

Authors:

Oluwole Owoye

Department of Social Sciences/Economics, Western Connecticut State University, Danbury, CT – USA

Olugbenga A. Onafowora

Department of Economics, Susquehanna University, Selinsgrove, PA – USA

DEMOCRATIC PUBLIC GOVERNANCE AND ECONOMIC GROWTH IN LATIN AMERICAN COUNTRIES*

ABSTRACT

This paper uses the six governance indicators developed by the World Bank (2022) to evaluate governance performance in 20 Latin American countries in the first two decades of the 21st century. In doing so, we use the difference-in-mean (DIM) estimation method to quantitatively assess the governance quality and pinpoint the relative position of each Latin American country in the governance-economic growth orbit. In addition to the DIM estimation method, we provide country-specific correlation matrix to show the relationship between the governance indicators and economic growth, and then we estimated a *governance-induced* economic growth model to determine statistically which governance indicators have positive or negative or no impact on economic growth. The analysis of the growth model enables the statistical determination of whether governance is *growth-enhancing* or *growth-retarding* or *growth-neutral* in Latin American countries. The results show that governance is *growth-enhancing* in Chile, Honduras, and Uruguay with a mixture of *growth-enhancing* and *growth-retarding* in Peru. Based on the results of the analyses, the logical recommendation is that governments in Latin American countries should strategically implement policies to improve upon those governance indicators that are *growth-retarding* and/or *growth-neutral* because functionally effective governance is fundamental to sustainable economic growth in the 21st century.

Keywords: Latin America; Political Governance; Economic Governance; Social Governance; Indicators, Progress

JEL Classification: O10; O49

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RIASSUNTO

Governance pubblica democratica e la crescita economica nei paesi dell'America Latina

In questo studio vengono utilizzati sei indicatori di governance sviluppati dalla Banca Mondiale (2022) per valutare la performance governativa in 20 paesi dell'America latina nelle prime due decadi del ventunesimo secolo. A tal fine abbiamo utilizzato il metodo DIM (difference-in-mean) per valutare quantitativamente la qualità della governance e definire le posizioni di ciascun paese dell'America latina rispetto alla relazione governance-crescita economica. Oltre al metodo DIM viene usata la matrice di correlazione di ogni paese per mostrare la relazione tra gli indicatori di governance e la crescita e successivamente viene applicato un modello di crescita economica *governance-induced* per determinare quali indicatori hanno un impatto positivo o negativo o nessun impatto sulla crescita economica. L'analisi del modello di crescita ci consente di determinare statisticamente se la governance favorisce la crescita, se la ritarda o se non ha alcun impatto su di essa nei paesi oggetto di studio. I risultati evidenziano che la governance favorisce la crescita in Cile, Honduras e Uruguay, mentre in Perù vi è un risultato misto. Sulla base di questa analisi pare consigliabile per i governi dell'America latina adottare politiche strategiche al fine di migliorare le forme di governance che determinano ritardi o sono neutrali rispetto alla crescita. Infatti, una governance efficace sotto questo aspetto è fondamentale per il raggiungimento di una crescita economica sostenibile nel ventunesimo secolo.

1. INTRODUCTION

This paper provides a statistical evaluation of the progress in governance performance in 20 Latin American countries in first two decades of the 21st century. In a series of studies by Kaufmann, Kray, Mastruzzi, and Zoido-Lobaton in the late 1990s and early 2000s, they defined governance broadly as the traditions and institutions by which authority in a country is exercised, which includes the process through which governments are selected, monitored and replaced; the capacity of the government to effectively formulate and implement sensible policies; and the respect that citizens and the state have for the institutions that govern economic and social interactions among them. The broad definition of governance and the six clusters of governance indicators provided three interrelated dimensions of governance: political or public governance, economic governance, and social governance. According to Kaufman *et al.* (1999a, 1999b, 2002), political governance is the process by which those in

authority are selected and replaced and that this could be captured by “Voice and Accountability” and “Political Stability and Absence of Violence.” Economic governance deals with capacity of the state to implement prudent policies, which can be measured by “Government Effectiveness” and “Regulatory Quality”. Social governance addresses the respect that citizens and the state have for the rules that govern their interactions, which can be measured using the scores on the “Rule of Law” and the “Control of Corruption”.

The surge of interest about the consequences of effective governance or dysfunctional governance on sustainable economic growth and development outcomes led to the proliferation of studies with respect to the causal relationship between governance and growth in less developed countries. This study contributes to the existing literature in some major ways. First, this study provides a comprehensive country-specific analysis of the progress in governance reforms in 20 Latin American countries where governance issues and challenges relating to the rule of law, civil liberties, freedom of the press, gender equality, and government transparency still exist; therefore, the assessment of outcomes in governance reforms is important. Second, we map out the variations in governance performance in each of the 20 Latin American countries in the first two decades of the 21st century. In doing so, we utilize the difference-in-means estimation method to assess the extent of progress or lack thereof in governance quality in each of these countries. We are unaware of studies that have examined individual Latin American countries from this perspective before. This is important because governance performance is a global issue as manifested by the policies implemented to manage the global COVID-19 pandemic shock, which leaders from the developed countries (DCs) and less developed countries (LDCs) handled from different dimensions and perspectives; therefore, the issue of effective governance is global [Liang *et al.* (2020), Tatar *et al.* (2021), Brauner *et al.* (2021), and Nabin *et al.* (2021)]. In essence, the COVID-19 pandemic showed that government effectiveness or ineffectiveness varied across the DCs and LDCs.

The correlation matrix showed that the relationship between the individual measures of governance and economic growth varies across the Latin American countries. The results of the difference-in-difference growth regressions revealed a few statistically significant positive and negative relationships between the governance indicators and economic growth in the Latin American countries. Among the 20 Latin American countries, Chile, Costa Rica, and Uruguay have the most effective governance performance.

The paper is organized as follows. Section 2 provides a review of relevant studies on the importance of good governance in economic growth. Section 3 provides the trends in the six governance indicators in the Latin American countries over the period 2000-2020. Section 4 provides the methodology of this study as well as the data sets utilized in the estimation of the model and the empirical results. Section 5 summarizes and concludes the paper with important issues on policy implications.

2. LITERATURE REVIEW

In the late 1990s and early 2000s, Kaufmann, Kraay, Zoido-Lobaton, and Mastruzzi developed and quantified governance on six distinct indicators, thereby shaping how growth theorists now explain economic growth and development outcomes in less developed countries. In a series of studies, Kaufmann, Kraay, and Zoido-Lobaton (1999a, 1999b, 2002) used a large sample of countries to document the strong positive relationship between each of the six aggregate governance indicators capturing various dimensions of governance and three development outcomes (measured by *per capita* incomes, infant mortality, and adult literacy) to answer their question about how much governance matters for development outcomes. Their study found that improvements in governance have a very large payoff in terms of development outcomes. Studies by Acemoglu *et al.* (2001), Resnick and Birner (2006), Dixit (2009), and Ahlerup *et al.* (2016) have also confirmed the importance of good governance performance in the formulations and implementations of successful policies that can enhance sustainable economic growth.

The United Nations Department of Economic and Social Affairs (UNDESA, 2007) also emphasized the strong correlation between good governance and economic growth and better development outcomes in their detailed review of the literature about public governance indicators. UNDESA's study provided different definitions of governance, what constitutes "good" governance, why it is necessary to evaluate governance, and how to conduct the evaluation of governance. According to UNDESA (2007), there exist many definitions of governance in the literature due to the inherent diversity in national traditions and public culture, and that this could be distilled into just three main types of governance, which Nzongola-Ntalaja's (2002) study laid out as political or public governance considered to be fundamental to governing political institutions, economic governance needed for governing economic institutions, and social governance necessary for governing social institutions.

According to UNDESA, for political or public governance, the authority is the State, government, or public sector, which relates to the process by which a society organizes its affairs and manages itself. For economic governance, its authority is enhanced by the private sector, which relates to the policies, the processes or organizational mechanisms that are necessary to produce and distribute goods and services.

The UNDESA's distillation of governance suggests that the effectiveness of political or public governance can be evaluated using the scores on two governance indicators: voice and accountability and political stability and absence of violence/terrorism; the effectiveness of economic governance can be evaluated using the scores on two other governance indicators, namely government effectiveness and regulatory quality; while the effectiveness of social governance can be evaluated using the scores on rule of law and the control of corruption. According to UNDESA (2007), governance is "good" when it allocates and manages resources in response to collective problems. In other words, good public governance is the critical foundation for good corporate governance when viewed from the perspective of allocative and management efficiencies, which would ultimately ensure stable and successful economies.

According to Arulrajah (2016), the prevalence of good governance is also important for organizational sustainability, which necessitates the eight major characteristics of good governance namely, participation by both men and women, consensus orientation, accountability, transparency, responsiveness, effectiveness and efficiency, equity and inclusiveness, and the rule of law. Ang (2017), however, citing the success case of China, argues that good governance may not be necessary for economic growth, and that countries should start with what they have, not with what they want. In other words, they should not blindly import global best practices, which may be counterproductive in achieving good governance. Ang (2017) also noted that the institutional changes considered to be weak or wrong in China from 1978 to 2014 led to the building of its emerging markets, which culminated in the stimulation of strong institutions necessary to preserve its markets.

Recent studies of governance in Latin American countries have highlighted the challenges and the need for governance reforms in this era. Mainwaring and Scully (2008) discussed the eight lessons for governance in Latin America and noted that the creation of effective democratic governance in Latin America has proven far more difficult than analysts anticipated in the early

1990s. Furthermore, they pointed out that effective states are fundamental to successful democratic governance, and that Latin America countries continued to experience positive and negative outcomes in the post-1990 period. In a related study, Merke *et al.* (2021) pointed out the importance of regional governance in achieving successful outcomes when confronted with

“a complex set of interlinked social, economic, and political crises”.

These crises are related to social governance, economic governance, and political governance, respectively. In addition, Merke, *et al.* (2021) argued that

“effective regional governance and cooperation in Latin America is necessary for broader conversation on the region’s role in a rapidly changing global order ...,” and that “regional governance is a fundamental instrument to help Latin America overcome its numerous daunting challenges”.

In a regional study, Owoye and Onafowora (2022) pointed out that socio-political and economic governance underpinned the Arab Spring uprisings in the Arab League countries and that the regional protests did not achieve the desired outcomes because the leadership structures in the region continued to undermine the quality of governance.

In a more recent study, Peters and Filgueiras (2022) also pointed out that governance reforms in Latin America countries over the past three decades have faced

“a double challenge” and “a double dimension”. The double challenge and dimension pertain to the issues of how “to organize political regime’s conditions into a system of democratic government” and the importance of “modernizing the administrative State to promote reforms ensuring greater capacity to deliver better public services and better public policies”.

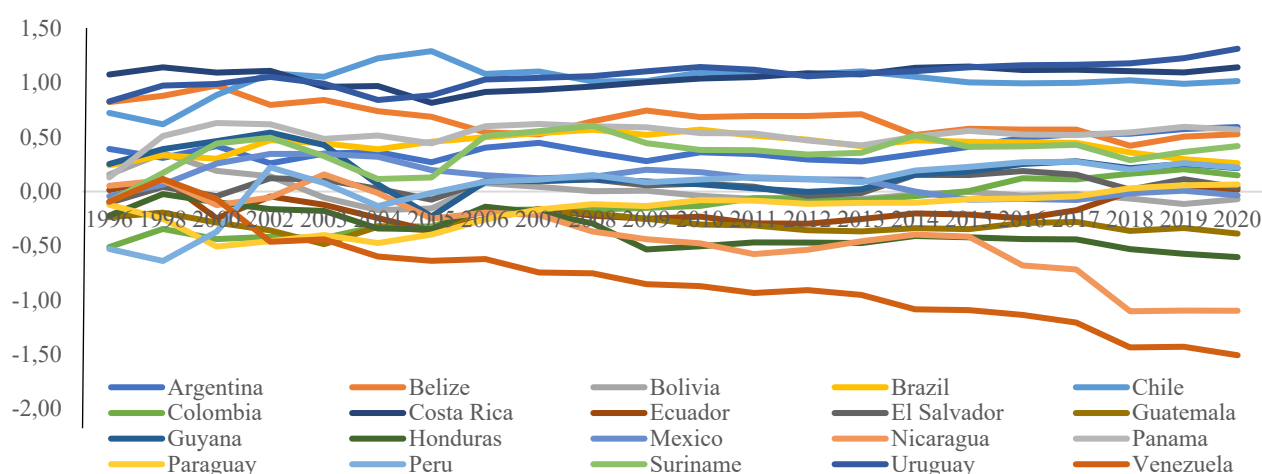
3. TRENDS IN GOVERNANCE PERFORMANCE IN LATIN AMERICAN COUNTRIES

The progress in governance performance/reforms in Latin American countries can be measured by the six governance indicators developed by the World Bank. As earlier noted, the progress made in political/public governance can be assessed using Voice and Accountability (VA) and Political Stability and Absence of Violence (PV); the progress in economic governance can be measured by using Government Effectiveness (GE) and Regulatory Quality (RQ), while the progress in social governance can be measured by the Rule of Law (RL) and Control of

Corruption (CC). We use a country's scores on the six governance indicators to classify it as having functionally effective governance (FEG) or dysfunctional governance (DG). Simply put, countries with scores between 0 and 2.5 on the measure of governance are considered to have FEG while those with scores between 0 and -2.5 are deemed to have DG. Based on the three distilled categories of governance discussed earlier, Figures 1 and 2 illustrate the yearly progress in political/public governance; Figures 3 and 4 show the yearly progress in economic governance; and Figures 5 and 6 show the yearly trends in social governance. For clarity, we provide a short summary of the number of countries in the FEG and DG zones under each figure.

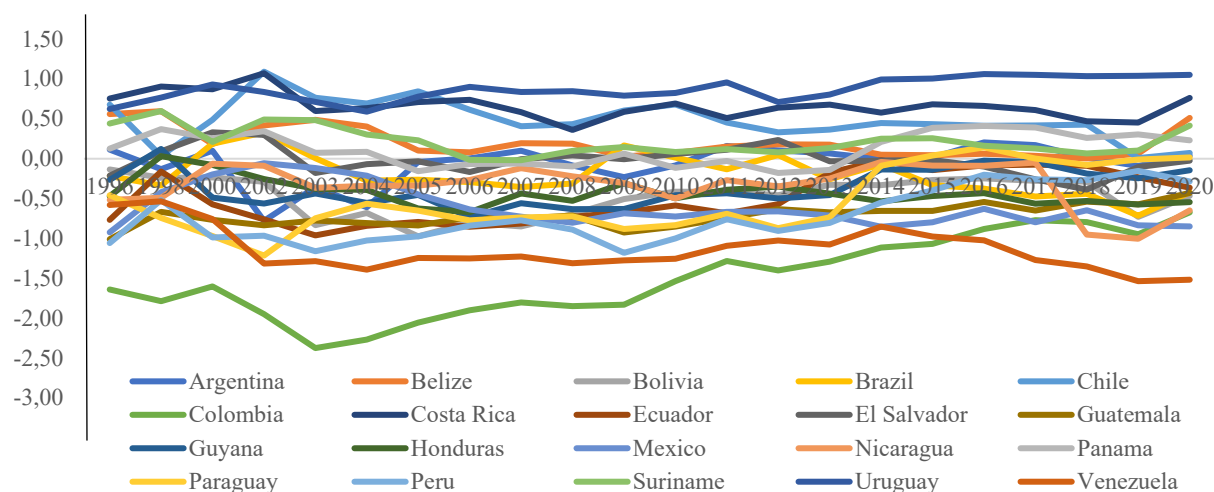
In Figure 1, Uruguay, Costa Rica, Chile, and Belize were the top four among 13 Latin American countries in FEG zone with respect to VA. While Belize experienced slight decline since 2013, Uruguay, Costa Rica, and Chile maintained relatively stable scores in VA. In contrast, Colombia, Ecuador, Guatemala, Honduras, Nicaragua, Panama, and Venezuela remained in the DG zone throughout the entire sample period. As for PV scores shown in Figure 2, Uruguay, Costa Rica, and Chile had positive PV scores while Colombia, Venezuela, Peru, Guatemala, Nicaragua, and Mexico maintained negative PV scores over the sample period.

FIGURE 1 - *Trends in Voice and Accountability in Latin American Countries*



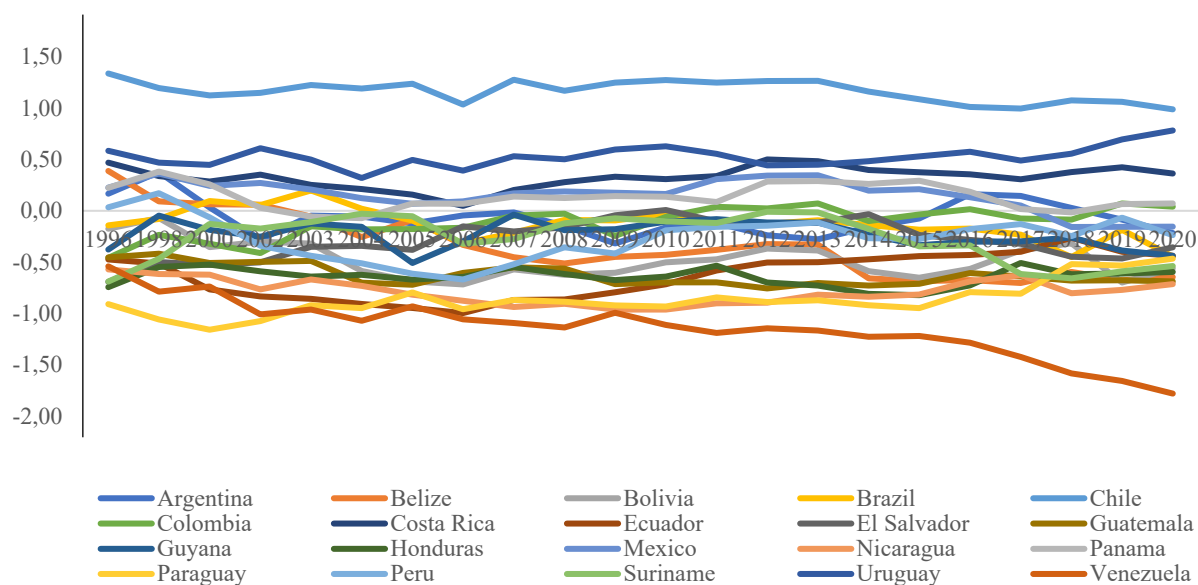
Summary: Countries in the FEG zone = 13 and countries in the DG zone = 7.

FIGURE 2 - *Trends in the Political Stability and Absence of Violence in Latin American Countries*

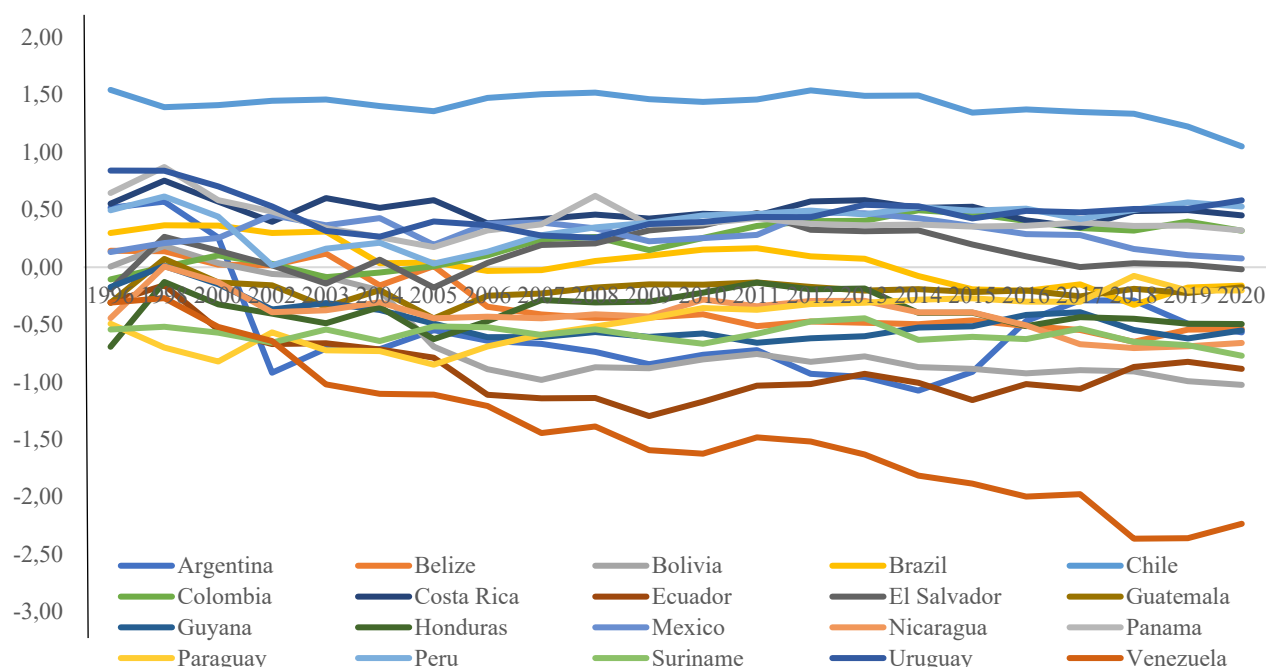


Summary: Countries in the FEG zone = 7 and countries in the DG zone = 13.

FIGURE 3 - *Trends in the Government Effectiveness in Latin American Countries*



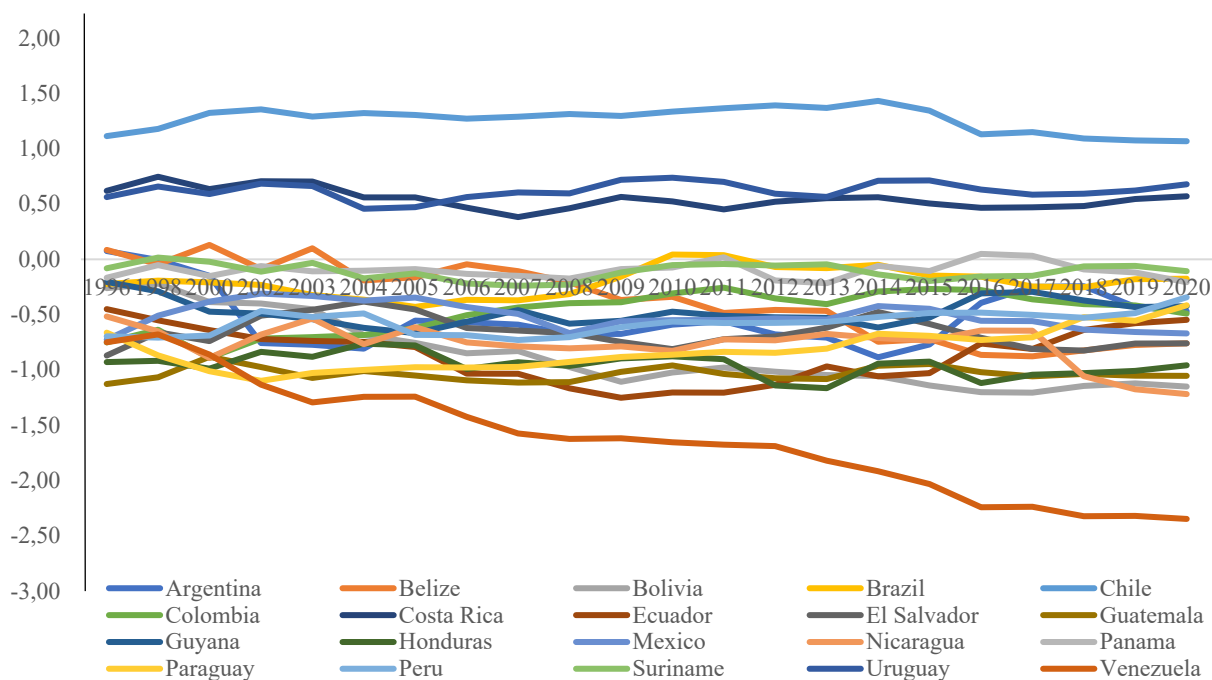
Summary: Countries in the FEG zone = 5 and countries in the DG zone = 15.

FIGURE 4 - *Trends in the Regulatory Quality in Latin American Countries*

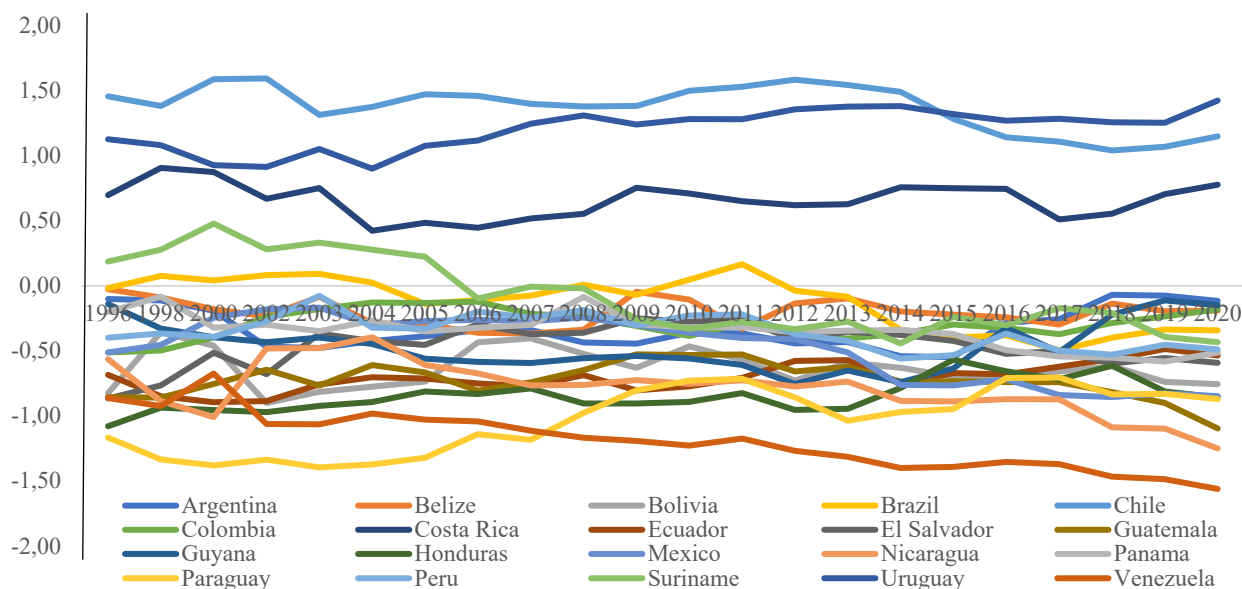
Summary: Countries in the FEG zone = 8 and countries in the DG zone = 12.

With respect to government effectiveness (GE) illustrated in Figure 3, Chile, Uruguay, and Costa Rica clearly displayed positive scores while Venezuela displayed the highest negative scores among 15 of the 20 Latin American countries in the DG zone. For regulatory quality (RQ) illustrated in Figure 4, eight countries displayed positive RQ scores with Chile being the standout among these countries. For the 12 Latin American countries situated in the DG zone with negative RQ scores, Venezuela displayed the highest negative score throughout the period covered.

For the rule of law (RL) and control of corruption (CC) illustrated in Figures 5 and 6, respectively, we observe a similar pattern in terms of the number of countries with positive and negative scores. In both figures, Chile, Uruguay, and Costa Rica are the only three countries that consistently showed positive scores in RL and CC throughout the entire sample period.

FIGURE 5 - *Trends in the Rule of Law in Latin American Countries*

Summary: Countries in the FEG zone = 3 and countries in the DG zone = 17.

FIGURE 6 - *Trends in the Control of Corruption in Latin American Countries*

Summary: Countries in the FEG zone = 3 and countries in the DG zone = 17.

According to UNDESA (2007), RL and CC are governance indicators with which one can assess the progress made in social governance; therefore, one can surmise that 17 of the 20 Latin American countries in the sample exhibit dysfunctional social governance in the first two decades of the 21st century.

The observed trends in governance in Latin American countries raise pertinent questions for further empirical analysis: Did Latin American countries experience positive improvements, negative changes (worsened), or stationary (unchanged) governance performance in the second decade in comparison to the first decade of the 21st century? That is, is their performance in the second decade in any way different from what it was in the first decade of the 21st century? Which countries have functionally effective governance performance? Or which countries are at the forefront of effective governance in the 21st century?

4. METHODOLOGY AND ESTIMATED RESULTS

In this section, we utilize the difference-in-means (DIM) estimator method to provide answers to the questions whether Latin American countries experienced progress or positive improvements, negative changes, and/or stationary governance performance in the first two decades of the 21st century. The DIM or difference-in-differences (DID)¹ estimator method is commonly used in economics and other social sciences as the summary statistics in meta-analysis when measuring outcomes made on the same scale of variables over a period of time, normally before and after.

With the WGI data covering 10 years of the first decade and 10 years of the second decade of the 21st century, the DIM assessment of the public governance performance, economic governance performance, and social governance performance can be written as:

$$\begin{aligned} DIM &= \overline{WGI}_{d2} - \overline{WGI}_{d1} = 0 \text{ or } DIM = \overline{WGI}_{d2} - \overline{WGI}_{d1} \neq 0 \\ &= \Delta \overline{WGI} = 0 \text{ or } \Delta \overline{WGI} \neq 0 \end{aligned} \quad (1)$$

¹ For more about the difference-in-differences or the difference-in-means method, see Athey and Imbens (2006, 2017), Stock and Watson (2019), Wooldridge (2016), Lechner (2011), and Bertrand *et al.* (2004).

where $\overline{WGI}$ and $\Delta\overline{WGI}$ represent the annual average and the change in annual average of each one of the six world governance indicators (VA , PV , GE , RQ , RL , and CC) in the second and first decades of the 21st century. To ascertain the changes or lack thereof with respect to each indicator, we express the DIM in equation (1) in six separate sets of null hypotheses (H_0) and alternative hypotheses (H_A) for each of the 20 Latin American countries in our sample as:

- (i) $H_0 : \overline{VA}_{d2} = \overline{VA}_{d1}$ versus $H_A : \overline{VA}_{d2} \neq \overline{VA}_{d1}$,
- (ii) $H_0 : \overline{PV}_{d2} = \overline{PV}_{d1}$ versus $H_A : \overline{PV}_{d2} \neq \overline{PV}_{d1}$,
- (iii) $H_0 : \overline{GE}_{d2} = \overline{GE}_{d1}$ versus $H_A : \overline{GE}_{d2} \neq \overline{GE}_{d1}$,
- (iv) $H_0 : \overline{RQ}_{d2} = \overline{RQ}_{d1}$ versus $H_A : \overline{RQ}_{d2} \neq \overline{RQ}_{d1}$,
- (v) $H_0 : \overline{RL}_{d2} = \overline{RL}_{d1}$ versus $H_A : \overline{RL}_{d2} \neq \overline{RL}_{d1}$,

and

- (vi) $H_0 : \overline{CC}_{d2} = \overline{CC}_{d1}$ versus $H_A : \overline{CC}_{d2} \neq \overline{CC}_{d1}$.

To find the mean with which to test the changes both in the first and second decades, we let WGI_{d1} and WGI_{d2} represent each of the six governance indicators as expressed in the hypotheses, ΣWGI_{d1} and ΣWGI_{d2} are the sums of each governance indicator for the first decade (subscript $d1$) and second decade (subscript $d2$). Furthermore, the difference is $D = WGI_{d2} - WGI_{d1}$, while D^2 and ΣD^2 are the square difference and the sum of the square difference, respectively.

To make meaningful comparison between the second decade and first decade of the 21st century, we estimate the standard deviation ($S_D = \sqrt{\frac{1}{N} \sum D^2 - (\Delta\overline{WGI})^2}$), the standard error ($S_{\overline{D}} = \frac{S_D}{\sqrt{N-1}}$), and the t -value ($t = \frac{\Delta\overline{WGI}}{S_{\overline{D}}}$) for each Latin American country in the sample given the degree of freedom as

$df = N - 1$. For clarity, $\overline{WGI}_{d2} - \overline{WGI}_{d1}$ (or $\Delta\overline{WGI}$) represents the mean difference between the second and first decades for each governance indicator, t is the estimated t -value with which to confirm or reject the H_0 if the estimated values of the t -statistics are less than or greater than the

critical values, df is the degree of freedom, while N stands for the 10 years covering each of the first two decades of the 21st century.

The results for tests of the H_0 and H_A hypotheses for political/public governance performance outcomes are reported in Tables 1 and 2; Tables 3 and 4 report the results for economic governance performance; and Tables 5 and 6 present the results for social governance outcomes. What is obvious is that while very few Latin American countries maintained positive scores on the six governance indicators, the overwhelming majority maintained negative scores throughout the entire sample period.

For the VA results reported in Table 1, we reject the H_0 in favor of the H_A in 11 of the 20 Latin American countries investigated. Among the 11 countries, minor progress/improvement (that is, $\overline{VA}_{d2} > \overline{VA}_{d1}$) in VA occurred in Argentina, Colombia, Costa Rica, Paraguay, Peru, and Uruguay while VA worsened (that is, $\overline{VA}_{d2} < \overline{VA}_{d1}$) in Belize, Honduras, Mexico, Nicaragua, and Venezuela. In contrast, we confirm the H_0 : $\overline{VA}_{d2} = \overline{VA}_{d1}$ in Bolivia, Brazil, Chile, Ecuador, El Salvador, Guatemala, Guyana, Panama, and Suriname. For the PV results reported in Table 2, we reject the H_0 in favor of the H_A in 12 of the 20 Latin American countries. Among the 12 countries, minor progress in PV (that is, $\overline{PV}_{d2} > \overline{PV}_{d1}$) occurred in Argentina, Bolivia, Colombia, Ecuador, Guatemala, Guyana, Paraguay, Peru, and Uruguay while PV essentially worsened (that is, $\overline{PV}_{d2} < \overline{PV}_{d1}$) in Brazil, Chile, and Mexico. In contrast, we fail to reject the H_0 : $\overline{PV}_{d2} = \overline{PV}_{d1}$ in Belize, Costa Rica, El Salvador, Honduras, Nicaragua, Panama, Suriname, and Venezuela.

With respect to the results reported in Table 3 for GE , we reject the H_0 in favor of H_A in 10 of the 20 Latin American countries. Of the 10 countries, minor progress (that is, $\overline{GE}_{2ndD} > \overline{GE}_{d1}$) in GE happened in Colombia, Costa Rica, Guyana, Ecuador, Paraguay, and Peru while GE worsened (that is, $\overline{GE}_{2ndD} < \overline{GE}_{d1}$) in Belize, Brazil, Guatemala, Suriname, and Venezuela. We confirm the H_0 : $\overline{GE}_{2ndD} = \overline{GE}_{d1}$ in Argentina, Bolivia, Chile, El Salvador, Guyana, Honduras, Mexico, Nicaragua, Panama, and Uruguay. For the RQ results reported in Table 4, we reject H_0 in favor of H_A in 8 countries. Slight improvements in RQ occurred in Colombia, Paraguay, and Peru, while RQ further worsened in Belize, Bolivia, Brazil, Nicaragua, and Venezuela. In 12 Latin American countries (Argentina, Chile, Costa Rica, Ecuador, El Salvador, Guatemala, Guyana, Honduras,

Mexico, Panama, Suriname, and Uruguay), we fail to reject H_0 : $\overline{RQ}_{d2} = \overline{RQ}_{d1}$. These 12 countries showed no progress in regulatory quality.

TABLE 1 - *Voice and Accountability (VA) in Latin American Countries in the 21st Century*

	Countries	$\overline{VA}_{d2}$	S^2_{d2}	$\overline{VA}_{d1}$	S^2_{d1}	$\Delta \overline{VA}$	<i>t-value</i>
1.	Argentina	0.43	0.01	0.35	0.00	0.08	2.25*
2.	Belize	0.58	0.01	0.72	0.02	-0.14	-4.04*
3.	Bolivia	-0.06	0.00	0.00	0.01	-0.06	-1.41
4.	Brazil	0.42	0.01	0.48	0.01	-0.06	-1.23
5.	Chile	1.03	0.00	1.09	0.01	-0.06	-1.28
6.	Colombia	0.05	0.01	-0.27	0.02	0.32	27.41*
7.	Costa Rica	1.11	0.00	0.98	0.01	0.13	3.71*
8.	Ecuador	-0.16	0.02	-0.21	0.01	0.05	0.94
9.	El Salvador	0.08	0.01	0.06	0.00	0.02	0.61
10.	Guatemala	-0.34	0.00	-0.29	0.01	-0.05	-1.81
11.	Guyana	0.16	0.01	0.17	0.05	-0.01	-0.13
12.	Honduras	-0.48	0.00	-0.28	0.02	-0.20	-5.34*
13.	Mexico	0.01	0.01	0.22	0.01	-0.22	-12.79*
14.	Nicaragua	-0.71	0.08	-0.20	0.04	-0.51	-9.97*
15.	Panama	0.52	0.00	0.56	0.00	-0.04	-1.65
16.	Paraguay	-0.04	0.00	-0.30	0.03	0.26	7.46*
17.	Peru	0.20	0.00	0.03	0.03	0.17	3.05*
18.	Suriname	0.34	0.00	0.40	0.03	-0.01	-0.13
19.	Uruguay	1.16	0.01	1.02	0.01	0.14	5.92*
20.	Venezuela	-1.17	0.05	-0.61	0.06	-0.51	-13.41*

Note: * indicates statistically significant *t*-values at the marginal significance level of 5 percent. In summary, minor progress in *VA* occurred in 6 countries, *VA* worsened in 5 countries, and remained unchanged in 9 countries.

TABLE 2 - *Political Stability and Absence of Violence (PV) in Latin American Countries in the 21st Century*

	Countries	$\overline{PV}_{d2}$	S^2_{d2}	$\overline{PV}_{d1}$	S^2_{d1}	$\Delta \overline{PV}$	<i>t-value</i>
1.	Argentina	0.07	0.01	-0.20	0.09	0.27	2.98*
2.	Belize	0.13	0.02	0.21	0.03	-0.08	-1.22
3.	Bolivia	-0.38	0.02	-0.63	0.06	0.25	2.46*
4.	Brazil	-0.32	0.05	-0.08	0.06	-0.24	-2.62*
5.	Chile	0.34	0.03	0.66	0.04	-0.32	-3.75*
6.	Colombia	-1.02	0.06	-1.92	0.07	0.90	10.74*
7.	Costa Rica	0.60	0.021	0.68	0.04	-0.08	-1.38
8.	Ecuador	-0.24	0.05	-0.76	0.01	0.52	5.13*
9.	El Salvador	-0.06	0.03	0.03	0.03	-0.09	-1.60
10.	Guatemala	-0.61	0.01	-0.80	0.00	0.19	5.10*
11.	Guyana	-0.23	0.03	-0.55	0.01	0.32	4.42*
12.	Honduras	-0.48	0.01	-0.42	0.03	-0.06	-1.23
13.	Mexico	-0.75	0.01	-0.46	0.08	-0.29	-3.14*
14.	Nicaragua	-0.37	0.14	-0.26	0.02	-0.11	-0.96
15.	Panama	0.18	0.05	0.03	0.03	0.15	1.31
16.	Paraguay	-0.23	0.14	-0.81	0.03	0.58	6.21*
17.	Peru	-0.46	0.08	-0.98	0.02	0.52	6.14*
18.	Suriname	0.17	0.01	0.20	0.03	-0.03	-0.42
19.	Uruguay	0.97	0.01	0.80	0.01	0.17	3.68*
20.	Venezuela	-1.17	0.05	-1.23	0.03	0.06	0.64

Note: * indicates statistically significant *t*-values at the marginal significance level of 5 percent. In summary, minor progress in *PV* occurred in 9 countries, *PV* worsened in 3 countries, and remained unchanged in 8 countries.

TABLE 3 - *Governance Effectiveness (GE) in Latin American Countries in the 21st Century*

	Countries	$\overline{GE}_{d1}$	S^2_{d2}	$\overline{GE}_{d1}$	S^2_{d1}	$\Delta\overline{GE}$	<i>t-value</i>
1.	Argentina	-0.08	0.02	-0.12	0.01	0.04	0.64
2.	Belize	-0.57	0.02	-0.25	0.05	-0.22	-7.10*
3.	Bolivia	-0.50	0.02	-0.53	0.02	0.02	0.61
4.	Brazil	-0.22	0.02	-0.05	0.02	-0.17	-3.19*
5.	Chile	1.22	0.01	1.19	0.01	-0.07	-1.63
6.	Colombia	-0.00	0.00	-0.18	0.01	-0.18	3.43*
7.	Costa Rica	0.39	0.00	0.24	0.01	0.15	5.62*
8.	Ecuador	-0.44	0.01	-0.86	0.01	0.42	10.02*
9.	El Salvador	-0.25	0.02	-0.27	0.03	0.02	0.17
10.	Guatemala	-0.69	0.00	-0.60	0.01	-0.09	-2.50*
11.	Guyana	-0.26	0.01	-0.20	0.02	-0.06	-0.98
12.	Honduras	-0.67	0.01	-0.62	0.00	-0.05	-1.73
13.	Mexico	0.11	0.04	0.17	0.00	-0.06	-0.91
14.	Nicaragua	-0.79	0.01	-0.83	0.02	0.04	0.61
15.	Panama	0.15	0.01	0.08	0.01	0.07	1.07
16.	Paraguay	-0.76	0.03	-0.95	0.01	0.19	3.04*
17.	Peru	-0.18	0.01	-0.41	0.03	0.23	3.84*
18.	Suriname	-0.34	0.06	-0.14	0.01	-0.20	-2.48*
19.	Uruguay	0.55	0.01	0.50	0.01	0.05	1.51
20.	Venezuela	-1.34	0.05	-1.01	0.01	-0.33	-5.79*

Note: * indicates statistically significant *t*-values at the marginal significance level of 5 percent. In summary, minor progress in *GE* occurred in 5 countries, *GE* worsened in 5 countries, and remained unchanged in 10 countries.

TABLE 4 - *Regulatory Quality (RQ) in Latin American Countries in the 21st Century*

	Countries	$\overline{RQ}_{d2}$	S^2_{d2}	$\overline{RQ}_{d1}$	S^2_{d1}	$\Delta \overline{RQ}$	<i>t-value</i>
1.	Argentina	-0.67	0.08	-0.63	0.11	-0.04	-0.30
2.	Belize	-0.52	0.00	-0.20	0.05	-0.32	-5.24*
3.	Bolivia	-0.89	0.01	-0.54	0.17	-0.35	-3.15*
4.	Brazil	-0.10	0.02	0.12	0.02	-0.32	-8.58*
5.	Chile	1.37	0.02	1.45	0.00	-0.08	-1.61
6.	Colombia	0.39	0.00	0.10	0.02	0.29	5.14*
7.	Costa Rica	0.48	0.01	0.48	0.01	0.00	0.10
8.	Ecuador	-0.98	0.01	-0.92	0.07	-0.06	-0.53
9.	El Salvador	0.18	0.03	0.10	0.03	0.08	0.75
10.	Guatemala	-0.20	0.00	-0.20	0.01	0.02	0.97
11.	Guyana	-0.54	0.01	-0.47	0.03	-0.07	-1.11
12.	Honduras	-0.37	0.02	-0.38	0.01	0.01	0.13
13.	Mexico	0.29	0.02	0.33	0.01	-0.04	-0.97
14.	Nicaragua	-0.49	0.03	-0.37	0.01	-0.12	-2.44*
15.	Panama	0.37	0.00	0.39	0.02	-0.03	-0.56
16.	Paraguay	-0.26	0.01	-0.63	0.03	0.37	8.95*
17.	Peru	0.49	0.00	0.25	0.03	0.24	4.98*
18.	Suriname	-0.60	0.01	-0.59	0.00	-0.01	-0.43
19.	Uruguay	0.49	0.00	0.39	0.02	0.10	1.96
20.	Venezuela	-1.93	0.11	-1.17	0.14	-0.76	-16.12*

Note: * indicates statistically significant *t*-values at the marginal significance level of 5 percent. In summary, minor progress in *RQ* occurred in 3 countries, *RQ* worsened in 5 countries, and remained unchanged in 12 countries.

The results for *RL* reported in Table 5 show that we can reject the null hypotheses in 11 of the 20 Latin American countries in our sample. While Brazil, Colombia, Guyana, Paraguay, and Peru experienced slight improvements (that is, $\overline{RL}_{d2} > \overline{RL}_{d1}$) among these 11 countries, *RL* worsened (that is, $\overline{RL}_{d2} < \overline{RL}_{d1}$) in Belize, Bolivia, El Salvador, Honduras, Mexico, and Venezuela. We fail to reject H_0 in Argentina, Chile, Costa Rica, Ecuador, Guatemala, Nicaragua, Panama, Suriname, and Uruguay. Finally, for the results of *CC* reported in Table 6, we reject the H_0 in favor of H_A in 12 of the 20 Latin American countries. While minor progress in *CC* occurred in Ecuador,

Honduras, Paraguay, and Uruguay, it actually worsened in Brazil, Chile, Mexico, Nicaragua, Panama, Peru, Suriname, and Venezuela.

TABLE 5 - *Rule of Law (RL) in Latin American Countries in the 21st Century*

	Countries	$\overline{RL}_{d2}$	S^2_{d2}	$\overline{RL}_{d1}$	S^2_{d1}	$\Delta \overline{RL}$	<i>t-value</i>
1.	Argentina	-0.54	0.05	-0.61	0.03	-0.07	0.94
2.	Belize	-0.70	0.03	-0.13	0.03	-0.57	-12.21*
3.	Bolivia	-1.11	0.01	-0.75	0.07	-0.36	-5.50*
4.	Brazil	-0.13	0.01	-0.27	0.02	0.14	2.71*
5.	Chile	1.24	0.02	1.31	0.00	-0.07	-1.51
6.	Colombia	-0.35	0.01	-0.57	0.03	0.22	2.73*
7.	Costa Rica	0.51	0.00	0.56	0.01	-0.05	-1.43
8.	Ecuador	-0.87	0.06	-0.93	0.05	0.06	0.41
9.	El Salvador	-0.70	0.01	-0.60	0.02	-0.10	-3.50*
10.	Guatemala	-1.03	0.00	-1.03	0.01	0.00	-0.14
11.	Guyana	-0.45	0.01	-0.54	0.00	0.09	2.70*
12.	Honduras	-1.02	0.01	-0.89	0.01	-0.13	-3.80*
13.	Mexico	-0.56	0.01	-0.44	0.01	-0.12	-4.65*
14.	Nicaragua	-0.83	0.05	-0.74	0.01	-0.09	-1.33
15.	Panama	-0.09	0.01	-0.11	0.00	0.02	0.60
16.	Paraguay	-0.68	0.02	-0.97	0.00	0.29	11.21*
17.	Peru	-0.51	0.00	-0.61	0.01	0.10	2.76*
18.	Suriname	-0.10	0.00	-0.13	0.01	0.03	1.40
19.	Uruguay	0.64	0.00	0.61	0.01	0.03	0.71
20.	Venezuela	-2.06	0.07	-1.37	0.07	-0.69	-22.28*

Note: * indicates statistically significant *t*-values at the marginal significance level of 5 percent. In summary, slight improvements in *RL* occurred in 5 countries, *RL* worsened in 6 countries, and remained unchanged in 9 countries.

TABLE 6 - *Control of Corruption (CC) in Latin American Countries in the 21st Century*

	Countries	$\overline{CC}_{d2}$	S^2_{d2}	$\overline{CC}_{d1}$	S^2_{d1}	$\Delta \overline{CC}$	<i>t-value</i>
1.	Argentina	-0.31	0.03	-0.39	0.01	0.08	1.18
2.	Belize	-0.21	0.01	-0.23	0.01	0.02	0.68
3.	Bolivia	-0.67	0.00	-0.61	0.03	-0.06	-0.92
4.	Brazil	-0.26	0.04	-0.01	0.01	-0.25	-4.83*
5.	Chile	1.29	0.05	1.44	0.01	-0.15	-2.30*
6.	Colombia	-0.31	0.01	-0.23	0.01	-0.08	-1.62
7.	Costa Rica	0.67	0.01	-0.62	0.02	0.05	0.86
8.	Ecuador	-0.62	0.01	-0.77	0.00	-0.15	4.27*
9.	El Salvador	-0.46	0.01	-0.40	0.02	-0.06	-0.88
10.	Guatemala	-0.76	0.02	-0.67	0.01	-0.09	-1.17
11.	Guyana	-0.47	0.06	-0.51	0.01	0.04	0.37
12.	Honduras	-0.77	0.02	-0.89	0.00	0.12	3.62*
13.	Mexico	-0.69	0.03	-0.26	0.00	-0.43	-9.41*
14.	Nicaragua	-0.92	0.03	-0.67	0.03	-0.25	-3.60*
15.	Panama	-0.44	0.01	-0.29	0.01	-0.15	-3.12*
16.	Paraguay	-0.85	0.01	-1.16	0.01	0.31	4.02*
17.	Peru	-0.44	0.01	-0.26	0.01	-0.18	-3.98*
18.	Suriname	-0.31	0.01	0.09	0.07	-0.40	-4.78*
19.	Uruguay	1.32	0.00	1.10	0.02	0.22	3.66*
20.	Venezuela	-1.38	0.01	-1.06	0.02	-0.33	-11.82*

Note: * indicates statistically significant *t*-values at the marginal significance level of 5 percent. In summary, minor progress in *CC* occurred in 4 countries, *CC* worsened in 8 countries, and remained unchanged in 8 countries.

Our results are in concordance with earlier studies that pointed to the 1990s as the era in which Latin American countries recognized the problems that poor governance posed to their economies, which compelled them to implement governance reforms [Mainwaring and Scully (2008, 1996), Mainwaring (2018, 2003), Merke *et al.* (2021), and Peters and Filgueiras (2022)]. In addition, Table 7 provides a summary of how each of the Latin American countries fared in each of the three categories of governance (political, economic, and social) in the first and second decades of the 21st century. From Table 7, it is clear that Chile, Costa Rica, and Uruguay are the only three countries that consistently remained in the functionally effective governance (FEG) zone during the period of analysis. In contrast, Bolivia, Ecuador, Guatemala, Honduras,

Nicaragua, Paraguay, and Venezuela consistently remained in the dysfunctional governance (DG) zone. A plausible explanation for the standout of Chile, Costa Rica, and Uruguay as the only three countries consistently in the FEG zone may be the fact that they are the only three fully democratic countries in Latin America [Ramirez (2022)]. In addition, these three Latin American countries are also at the forefront at the regional and global levels with respect to education, transparency, the ease of doing business, and press freedom.

In addition, Table 7 shows that Argentina, Belize, Bolivia, Brazil, Colombia, El Salvador, Guyana, Mexico, Panama, Peru, and Suriname operated under functionally effective governance (FEG) in some cases and dysfunctional governance (DG) in other cases with respect to the six governance indicators. For example, Panama exhibited functionally effective governance with respect to public/political and economic governance but remained plagued with dysfunctional governance with respect to social governance throughout the period of analysis. Interpretatively, the results in Tables 1 through 7 indicate that majority of the Latin American countries still face the challenges of governance despite the governance reforms implemented in the 1990s.

After Table 7, we provide the country-specific correlation matrix to show the link between the six governance indicators and real GDP, normally used to measure economic growth. These results showed that the relationship between the six governance indicators and real GDP varies across the 20 Latin American countries in the sample. The variations indicated by correlation results lend credence to country-specific assessments because these countries are not homogeneous with respect to governance.

TABLE 7 - *Summary of Governance Performance Outcomes*

Countries	<i>Political/Public Governance</i>				<i>Economic Governance</i>				<i>Social Governance</i>			
	<i>VA</i>		<i>PV</i>		<i>GE</i>		<i>RQ</i>		<i>RL</i>		<i>CC</i>	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
1. Argentina	FEG	FEG	DG	FEG	DG	DG	DG	DG	DG	DG	DG	DG
2. Belize	FEG	FEG	FEG	FEG	DG	DG	DG	DG	DG	DG	DG	DG
3. Bolivia	FEG	DG	DG	DG	DG	DG	DG	DG	DG	DG	DG	DG
4. Brazil	FEG	FEG	DG	DG	DG	DG	DG	DG	DG	DG	DG	DG
5. Chile	FEG	FEG	FEG	FEG	FEG	FEG	FEG	FEG	FEG	FEG	FEG	FEG
6. Colombia	DG	FEG	DG	DG	DG	DG	FEG	FEG	DG	DG	DG	DG
7. Costa Rica	FEG	FEG	FEG	FEG	FEG	FEG	FEG	FEG	FEG	FEG	FEG	FEG
8. Ecuador	DG	DG	DG	DG	DG	DG	DG	DG	DG	DG	DG	DG
9. El Salvador	FEG	FEG	FEG	DG	DG	FEG	FEG	FEG	DG	DG	DG	DG
10. Guatemala	DG	DG	DG	DG	DG	DG	DG	DG	DG	DG	DG	DG
11. Guyana	FEG	FEG	DG	DG	DG	DG	DG	DG	DG	DG	DG	DG
12. Honduras	DG	DG	DG	DG	DG	DG	DG	DG	DG	DG	DG	DG
13. Mexico	FEG	FEG	DG	DG	FEG	FEG	FEG	FEG	DG	DG	DG	DG
14. Nicaragua	DG	DG	DG	DG	DG	DG	DG	DG	DG	DG	DG	DG
15. Panama	FEG	FEG	FEG	FEG	FEG	FEG	FEG	FEG	DG	DG	DG	DG
16. Paraguay	DG	DG	DG	DG	DG	DG	DG	DG	DG	DG	DG	DG
17. Peru	FEG	FEG	DG	DG	DG	FEG	FEG	FEG	DG	DG	DG	DG
18. Suriname	FEG	FEG	FEG	FEG	DG	DG	DG	DG	DG	DG	DG	DG
19. Uruguay	FEG	FEG	FEG	FEG	FEG	FEG	FEG	FEG	FEG	FEG	FEG	FEG
20. Venezuela	DG	DG	DG	DG	DG	DG	DG	DG	DG	DG	DG	DG

Note: 1st and 2nd refer to the first and second decades of the 21st century while FEG = functionally effective governance, and DG = dysfunctional governance.

Argentina

	<i>Real GDP</i>	<i>VA</i>	<i>PV</i>	<i>GE</i>	<i>RQ</i>	<i>RL</i>	<i>CC</i>
<i>Real GDP</i>	1						
<i>VA</i>	-0.05	1					
<i>PV</i>	0.22	0.39	1				
<i>GE</i>	0.40	0.33	0.29	1			
<i>RQ</i>	0.14	0.23	0.24	0.81	1		
<i>RL</i>	0.09	0.38	0.42	0.76	0.95	1	
<i>CC</i>	-0.09	0.64	0.32	0.56	0.77	0.87	1

Belize

	<i>Real GDP</i>	<i>VA</i>	<i>PV</i>	<i>GE</i>	<i>RQ</i>	<i>RL</i>	<i>CC</i>
<i>Real GDP</i>	1						
<i>VA</i>	0.48	1					
<i>PV</i>	-0.04	0.56	1				
<i>GE</i>	0.46	0.83	0.67	1			
<i>RQ</i>	0.52	0.81	0.69	0.92	1		
<i>RL</i>	0.59	0.75	0.54	0.86	0.83	1	
<i>CC</i>	-0.09	0.40	0.30	0.34	0.26	0.08	1

Bolivia

	<i>Real GDP</i>	<i>VA</i>	<i>PV</i>	<i>GE</i>	<i>RQ</i>	<i>RL</i>	<i>CC</i>
<i>Real GDP</i>	1						
<i>VA</i>	-0.05	1					
<i>PV</i>	0.02	0.45	1				
<i>GE</i>	0.14	0.60	0.58	1			
<i>RQ</i>	-0.03	0.60	0.24	0.70	1		
<i>RL</i>	-0.05	0.66	0.04	0.61	0.94	1	
<i>CC</i>	0.23	0.41	-0.04	-0.01	-0.11	-0.01	1

Brazil

	<i>Real GDP</i>	<i>VA</i>	<i>PV</i>	<i>GE</i>	<i>RQ</i>	<i>RL</i>	<i>CC</i>
<i>Real GDP</i>	1						
<i>VA</i>	0.27	1					
<i>PV</i>	0.15	0.30	1				
<i>GE</i>	0.29	0.18	0.63	1			
<i>RQ</i>	0.35	-0.04	0.67	0.76	1		
<i>RL</i>	-0.29	0.09	0.24	0.00	0.05	1	
<i>CC</i>	0.56	0.20	0.60	0.68	0.87	0.02	1

Chile

	<i>Real GDP</i>	<i>VA</i>	<i>PV</i>	<i>GE</i>	<i>RQ</i>	<i>RL</i>	<i>CC</i>
<i>Real GDP</i>	1						
<i>VA</i>	0.15	1					
<i>PV</i>	0.29	0.43	1				
<i>GE</i>	0.17	0.02	0.33	1			
<i>RQ</i>	0.33	0.00	0.45	0.68	1		
<i>RL</i>	0.15	0.44	0.44	0.49	0.62	1	
<i>CC</i>	0.36	0.12	0.46	0.66	0.67	0.80	1

Colombia

	<i>Real GDP</i>	<i>VA</i>	<i>PV</i>	<i>GE</i>	<i>RQ</i>	<i>RL</i>	<i>CC</i>
<i>Real GDP</i>	1						
<i>VA</i>	-0.17	1					
<i>PV</i>	-0.37	0.85	1				
<i>GE</i>	0.03	0.80	0.54	1			
<i>RQ</i>	-0.10	0.85	0.80	0.78	1		
<i>RL</i>	0.01	0.79	0.58	0.76	0.85	1	
<i>CC</i>	0.24	0.08	-0.30	0.18	-0.15	-0.05	1

Costa Rica

	<i>Real GDP</i>	<i>VA</i>	<i>PV</i>	<i>GE</i>	<i>RQ</i>	<i>RL</i>	<i>CC</i>
<i>Real GDP</i>	1						
<i>VA</i>	-0.20	1					
<i>PV</i>	-0.04	0.21	1				
<i>GE</i>	-0.36	0.74	-0.04	1			
<i>RQ</i>	-0.02	0.06	0.20	0.25	1		
<i>RL</i>	-0.33	0.21	0.64	0.17	0.61	1	
<i>CC</i>	-0.27	0.61	0.35	0.47	0.43	0.57	1

Ecuador

	<i>Real GDP</i>	<i>VA</i>	<i>PV</i>	<i>GE</i>	<i>RQ</i>	<i>RL</i>	<i>CC</i>
<i>Real GDP</i>	1						
<i>VA</i>	-0.43	1					
<i>PV</i>	-0.33	0.27	1				
<i>GE</i>	-0.41	0.44	0.84	1			
<i>RQ</i>	0.03	0.58	-0.05	0.08	1		
<i>RL</i>	-0.29	0.70	0.17	0.30	0.80	1	
<i>CC</i>	-0.18	0.13	0.41	0.60	-0.23	0.13	1

El Salvador

	<i>Real GDP</i>	<i>VA</i>	<i>PV</i>	<i>GE</i>	<i>RQ</i>	<i>RL</i>	<i>CC</i>
<i>Real GDP</i>	1						
<i>VA</i>	0.23	1					
<i>PV</i>	-0.18	-0.14	1				
<i>GE</i>	0.09	0.33	0.11	1			
<i>RQ</i>	0.07	0.16	0.46	0.72	1		
<i>RL</i>	0.24	0.15	0.17	0.11	-0.12	1	
<i>CC</i>	0.18	0.25	0.08	0.88	0.53	0.24	1

Guatemala

	<i>Real GDP</i>	<i>VA</i>	<i>PV</i>	<i>GE</i>	<i>RQ</i>	<i>RL</i>	<i>CC</i>
<i>Real GDP</i>	1						
<i>VA</i>	0.29	1					
<i>PV</i>	-0.19	-0.25	1				
<i>GE</i>	0.12	0.33	-0.28	1			
<i>RQ</i>	-0.07	0.33	0.23	0.18	1		
<i>RL</i>	-0.07	-0.28	0.00	-0.18	0.25	1	
<i>CC</i>	0.17	0.04	-0.54	-0.30	0.02	0.22	1

Guyana

	<i>Real GDP</i>	<i>VA</i>	<i>PV</i>	<i>GE</i>	<i>RQ</i>	<i>RL</i>	<i>CC</i>
<i>Real GDP</i>	1.00						
<i>VA</i>	-0.05	1.00					
<i>PV</i>	0.10	0.31	1.00				
<i>GE</i>	-0.34	0.08	-0.23	1.00			
<i>RQ</i>	-0.25	0.63	0.39	0.05	1.00		
<i>RL</i>	0.18	0.49	0.63	-0.08	0.48	1.00	
<i>CC</i>	0.39	0.49	0.39	-0.42	0.41	0.63	1.00

Honduras

	<i>Real GDP</i>	<i>VA</i>	<i>PV</i>	<i>GE</i>	<i>RQ</i>	<i>RL</i>	<i>CC</i>
<i>Real GDP</i>	1						
<i>VA</i>	0.41	1					
<i>PV</i>	-0.07	0.50	1				
<i>GE</i>	-0.06	0.26	0.31	1			
<i>RQ</i>	-0.03	0.01	0.52	0.27	1		
<i>RL</i>	0.04	0.29	0.08	0.14	-0.16	1	
<i>CC</i>	0.35	-0.39	-0.41	-0.16	-0.15	-0.17	1

Mexico

	<i>Real GDP</i>	<i>VA</i>	<i>PV</i>	<i>GE</i>	<i>RQ</i>	<i>RL</i>	<i>CC</i>
<i>Real GDP</i>	1						
<i>VA</i>	0.16	1					
<i>PV</i>	0.15	0.80	1				
<i>GE</i>	0.42	0.34	0.28	1			
<i>RQ</i>	0.25	0.40	0.31	0.61	1		
<i>RL</i>	0.21	0.67	0.78	0.34	0.56	1	
<i>CC</i>	0.39	0.87	0.61	0.54	0.40	0.52	1

Nicaragua

	<i>Real GDP</i>	<i>VA</i>	<i>PV</i>	<i>GE</i>	<i>RQ</i>	<i>RL</i>	<i>CC</i>
<i>Real GDP</i>	1						
<i>VA</i>	0.49	1					
<i>PV</i>	0.66	0.47	1				
<i>GE</i>	0.10	0.21	-0.05	1			
<i>RQ</i>	0.40	0.71	0.37	0.03	1		
<i>RL</i>	0.66	0.73	0.60	0.18	0.45	1	
<i>CC</i>	0.41	0.76	0.36	-0.07	0.35	0.74	1

Panama

	<i>Real GDP</i>	<i>VA</i>	<i>PV</i>	<i>GE</i>	<i>RQ</i>	<i>RL</i>	<i>CC</i>
<i>Real GDP</i>	1						
<i>VA</i>	-0.09	1					
<i>PV</i>	-0.27	0.15	1				
<i>GE</i>	0.21	-0.21	0.04	1			
<i>RQ</i>	0.01	-0.15	0.27	0.52	1		
<i>RL</i>	0.28	0.13	0.46	-0.18	-0.02	1	
<i>CC</i>	0.27	-0.18	-0.34	0.37	0.61	-0.20	1

Paraguay

	<i>Real GDP</i>	<i>VA</i>	<i>PV</i>	<i>GE</i>	<i>RQ</i>	<i>RL</i>	<i>CC</i>
<i>Real GDP</i>	1						
<i>VA</i>	0.05	1					
<i>PV</i>	-0.11	0.66	1				
<i>GE</i>	0.01	0.71	0.62	1			
<i>RQ</i>	-0.02	0.90	0.66	0.65	1		
<i>RL</i>	-0.17	0.84	0.75	0.78	0.82	1	
<i>CC</i>	0.08	0.86	0.52	0.53	0.84	0.62	1

Peru

	<i>Real GDP</i>	<i>VA</i>	<i>PV</i>	<i>GE</i>	<i>RQ</i>	<i>RL</i>	<i>CC</i>
<i>Real GDP</i>	1						
<i>VA</i>	0.05	1					
<i>PV</i>	-0.39	0.38	1				
<i>GE</i>	-0.41	-0.39	0.35	1			
<i>RQ</i>	-0.52	-0.12	0.56	0.79	1		
<i>RL</i>	-0.54	0.59	0.48	0.06	0.15	1	
<i>CC</i>	0.55	-0.08	-0.67	-0.43	-0.58	-0.39	1

Suriname

	<i>Real GDP</i>	<i>VA</i>	<i>PV</i>	<i>GE</i>	<i>RQ</i>	<i>RL</i>	<i>CC</i>
<i>Real GDP</i>	1						
<i>VA</i>	-0.05	1					
<i>PV</i>	-0.29	-0.46	1				
<i>GE</i>	0.18	0.23	-0.14	1			
<i>RQ</i>	0.54	-0.17	-0.11	0.31	1		
<i>RL</i>	-0.03	-0.41	0.39	-0.03	0.10	1	
<i>CC</i>	0.25	-0.36	0.50	0.15	0.29	0.12	1

Uruguay

	<i>Real GDP</i>	<i>VA</i>	<i>PV</i>	<i>GE</i>	<i>RQ</i>	<i>RL</i>	<i>CC</i>
<i>Real GDP</i>	1						
<i>VA</i>	-0.38	1					
<i>PV</i>	-0.25	0.82	1				
<i>GE</i>	-0.35	0.63	0.44	1			
<i>RQ</i>	-0.28	-0.08	0.06	0.21	1		
<i>RL</i>	-0.32	0.58	0.38	0.55	0.09	1	
<i>CC</i>	0.06	0.70	0.48	0.38	-0.10	0.38	1

Venezuela

	<i>Real GDP</i>	<i>VA</i>	<i>PV</i>	<i>GE</i>	<i>RQ</i>	<i>RL</i>	<i>CC</i>
<i>Real GDP</i>	1						
<i>VA</i>	0.63	1					
<i>PV</i>	0.30	0.62	1				
<i>GE</i>	-0.03	0.37	0.53	1			
<i>RQ</i>	0.62	0.98	0.58	0.30	1		
<i>RL</i>	0.61	0.98	0.55	0.25	0.99	1	
<i>CC</i>	0.70	0.95	0.49	0.30	0.93	0.95	1

On a cautionary note, correlation does not imply causation; therefore, it is important to assess the impact of each of the six governance indicators and other macroeconomic indicators on economic growth in the Latin American countries. In this regard, we follow the specification by Kaufmann, Kray, and Zoido-Lobaton (1999b, 2002) in which they expressed the logarithm of real GDP *per capita* as a linear function of governance and an error term. The growth equation can be expressed as:

$$Y_{it} = f(WGIs, Z) \quad (2)$$

where Y_{it} is the growth rates of real GDP *per capita*, adjusted for purchasing power parity, and taken as the relevant dependent variable for country i in period t , $WGIs$ are as defined earlier, and Z is a vector of other explanatory variables that studies consider as significant determinants of economic growth.

Since the Harrod-Domar growth model of 1939 and 1946 [Harrod (1939) and Domar (1946)] and the emergence of the exogenous growth model, which Solow (1956) and Swan (1956) amplified, the consensus among economic growth theorists is that physical capital, human capital, investment² and savings, trade openness, inflation rate, and technology are fundamental to economic growth. Given the voluminous replications over the past several decades using these explanatory variables, this study focuses exclusively on governance performance thus we rewrite equation (2) in linear form by replacing $WGIs$ with the governance indicators: VA , PV , GE , RQ , RL , and CC . We follow Kaufman *et al.* (1999a, 1999b), Kaufman and Kraay (2002), and other studies (Beyene, 2022) by specifying what we consider to be the *governance-induced* growth model; therefore, the country-specific *governance-induced* growth model can be expressed as:

$$Y_{it} = \beta_0 + \beta_1 VA_{it} + \beta_2 PV_{it} + \beta_3 GE_{it} + \beta_4 RQ_{it} + \beta_5 RL_{it} + \beta_6 CC_{it} + e_{it} \quad (3)$$

where the pertinent explanatory variables in equation (3) are as defined earlier. While e_{it} is the error term for country i in period t with $E(e_{it}) = 0$ and $E(e_{it}^2) = \sigma_{e_t}^2$, the main issue is whether

² Foreign direct investment and foreign portfolio investment are also considered as fundamental to growth.

the estimated coefficients (β_1 , β_2 , β_3 , β_4 , β_5 , and β_6) are positive or negative and statistically significant or insignificant at the standard marginal significance level³.

For clarity and comprehension, we view the *governance-induced* growth model in equation (3) from three different perspectives or considerations. First, we consider governance, in these 20 Latin American countries, to be *growth-enhancing* if the estimated coefficients are positive and statistically significant. Second, we consider governance to be *growth-retarding* if the estimated coefficients are negative and statistically significant. Third, we regard governance to be *growth-neutral* if the estimated coefficients are statistically insignificant. The estimated results reported in Table 8 show that the statistically significant positive and negative relationships between the six governance performance indicators and real GDP growth vary widely among 20 Latin American countries.

For example, *PV* has statistically significant negative effect on economic growth in Belize, whereas for Brazil, *CC* has statistically significant negative impact on economic growth. In essence, Belize and Brazil are two countries where political governance and social governance are *growth-retarding*, respectively. In Chile (one of the three countries that remained in FEG zone throughout the entire period), *RL* and *CC* have statistically significant positive effects on economic growth. In other words, social governance is *growth-enhancing* in Chile. For Ecuador, *RQ* has statistically significant positive effect on economic growth while *RL* has negative impact. Simply put, economic governance is *growth-enhancing* and social governance is *growth-retarding* in Ecuador. In Honduras and Uruguay, *VA* and *CC* have statistically significant positive effects on real GDP growth. The *VA* and *CC* results suggest that political governance and social governance are *growth-enhancing* in both countries. In Peru, *VA* has statistically significant positive effect on real GDP growth while the impact of *RL* is negative. The *VA* and *RL* results indicate that political governance is *growth-enhancing* while social governance is *growth-retarding* in Peru. For the remaining countries where the coefficients of the six governance indicators are either positive or negative and statistically insignificant in relationship to economic growth, this implies that political, economic, and social governance are *growth-neutral*. Importantly, these country-specific estimated results further confirm the heterogeneity in the region of Latin America.

³ The correlation matrix shows the variations in the correlations between governance indicators and real GDP growth rates in 20 Latin American countries while the growth regression is intended to show the effects of governance.

TABLE 8 - *Estimated Results of the Regressions*

Countries	<i>Political/Public Governance</i>				<i>Economic Governance</i>				<i>Social Governance</i>				R^2
	<i>VA</i>		<i>PV</i>		<i>GE</i>		<i>RQ</i>		<i>RL</i>		<i>CC</i>		
	β_1	SE_1	β_2	SE_2	β_3	SE_3	β_4	SE_4	β_5	SE_5	β_6	SE_6	
1. Argentina	-12.1	28.6	8.1	8.8	33.2	18.1	-1.0	15.2	-10.2	30.4	-6.5	32.6	0.36
2. Belize	7.2	11.3	-19.8*	5.9	-4.3	8.2	15.5	8.5	6.4	5.3	-5.4	9.8	0.66
3. Bolivia	-20.0	20.3	1.2	8.9	10.0	10.0	-0.9	1.6	2.0	15.9	13.2	9.2	0.19
4. Brazil	5.8	10.0	-2.6	4.6	-0.1	7.8	-6.2	11.0	-8.2	5.9	-18.1*	8.7	0.49
5. Chile	23.3	12.7	2.4	6.3	23.3	17.4	33.2	18.4	57.7*	24.2	38.4*	14.9	0.41
6. Colombia	2.0	15.8	-5.5	5.6	1.0	10.9	6.7	12.0	0.8	10.7	1.1	11.1	0.25
7. Costa Rica	13.0	145	5.6	6.2	-16.9	10.6	19.2	10.3	-26.4	13.5	-3.5	8.1	0.38
8. Ecuador	-10.5	9.2	4.7	5.1	-13.5	9.0	16.6*	5.8	-15.2*	6.9	19.8	11.3	0.51
9. El Salvador	6.8	9.6	-8.5	5.4	-15.1	11.0	11.3	7.6	8.0	6.0	10.4	10.0	0.27
10. Guatemala	10.5	8.6	3.1	6.6	4.6	7.4	-6.8	7.5	2.6	10.1	5.0	6.1	0.16
11. Guyana	2.2	15.4	1.1	11.3	-6.5	18.6	-24.4	14.4	6.6	26.2	24.5	16.3	0.36
12. Honduras	21.4*	5.6	-9.1	6.4	-7.5	9.0	7.4	6.2	-0.9	7.4	18.6*	6.6	0.39
13. Mexico	-33.8	19.7	4.3	7.2	0.4	8.5	3.5	10.5	3.9	12.6	17.8	9.0	0.35
14. Nicaragua	-1.1	4.6	5.4	3.2	1.7	6.9	2.9	6.3	9.3	6.9	-0.5	6.7	0.55
15. Panama	19.7	13.1	-13.5	10.3	18.7	12.9	-9.1	16.2	53.5	21.3	12.5	17.4	0.41
16. Paraguay	19.1	16.6	-0.1	4.2	6.4	8.7	0.1	10.9	-21.7	13.3	-2.6	8.6	0.21
17. Peru	10.3*	4.7	0.7	3.5	7.0	6.7	-13.9	8.1	-34.7*	9.8	6.1	8.2	0.66
18. Suriname	-1.7	11.4	-20.6	11.8	-1.4	7.2	37.6	22.5	6.3	23.4	9.3	6.7	0.43
19. Uruguay	57.9*	2.7	19.5	11.7	5.5	12.1	-11.2	5.8	1.2	14.5	21.5*	7.7	0.52
20. Venezuela	-7.5	41.6	9.7	12.6	-21.5	18.6	-26.3	25.9	31.5	34.2	56.9	35.8	0.61

Note: SE_j = estimated standard error for each of the six governance indicators ($j = 1, 2, \dots, 6$); therefore, the estimated t -statistics = $\frac{\hat{\beta}_j}{SE_j}$, and R^2 is the coefficient of determination or variations.

5. CONCLUSIONS AND POLICY IMPLICATIONS

This paper adds to the existing studies that have examined the importance of good governance in economic growth and development outcomes in less developed countries. The study evaluates the impact of governance performance on economic growth in 20 Latin American countries between the period 2000 and 2020 and shows their governance performance trajectories using the DIM methodology most often used in economics and the social sciences.

The results of the empirical analysis reveal that among the 20 countries included in the sample, only Chile, Costa Rica, and Uruguay consistently operated under functionally effective governance (FEG), while Colombia, Ecuador, Guatemala, Honduras, Nicaragua, Paraguay, and Venezuela consistently operated in the dysfunctional governance zone. The results further revealed that Argentina, Belize, Bolivia, Brazil, El Salvador, Guyana, Mexico, Panama, Peru, and Suriname operated with a mixture of functionally effective governance and dysfunctional governance. For example, several of these countries showed functionally effective governance (FEG) with respect to political/public governance measured by *VA* and *PV*. The progress in political/public governance is in consonant with Peters and Filgueiras' (2022) argument that

“Latin American countries have made progress in accountability and transparency”.

However, the overwhelming majority of these countries still operate in the dysfunctional governance (DG) zone when viewed from the dimension of economic governance assessed by *GE* and *RQ*, and social governance gauged by *RL* and *CC*. In essence, the turbulence in governance in Latin American countries is still manifesting through political governance, economic governance, and social governance.

The country-specific estimated correlation matrix and the multiple regression results reveal wide variations in the relationships between governance and economic growth in Latin American countries. These results have important policy implications in an era where it is well established, by growth theorists, that good governance is fundamental to sustainable economic growth and better development outcomes. In terms of policy implications, governments in Latin American countries need to show improvements in governance reforms through effective coordination and collaboration in leaderships at the political, economic, and social institutions, especially for those countries where governance is *growth-retarding* or *growth-neutral*.

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